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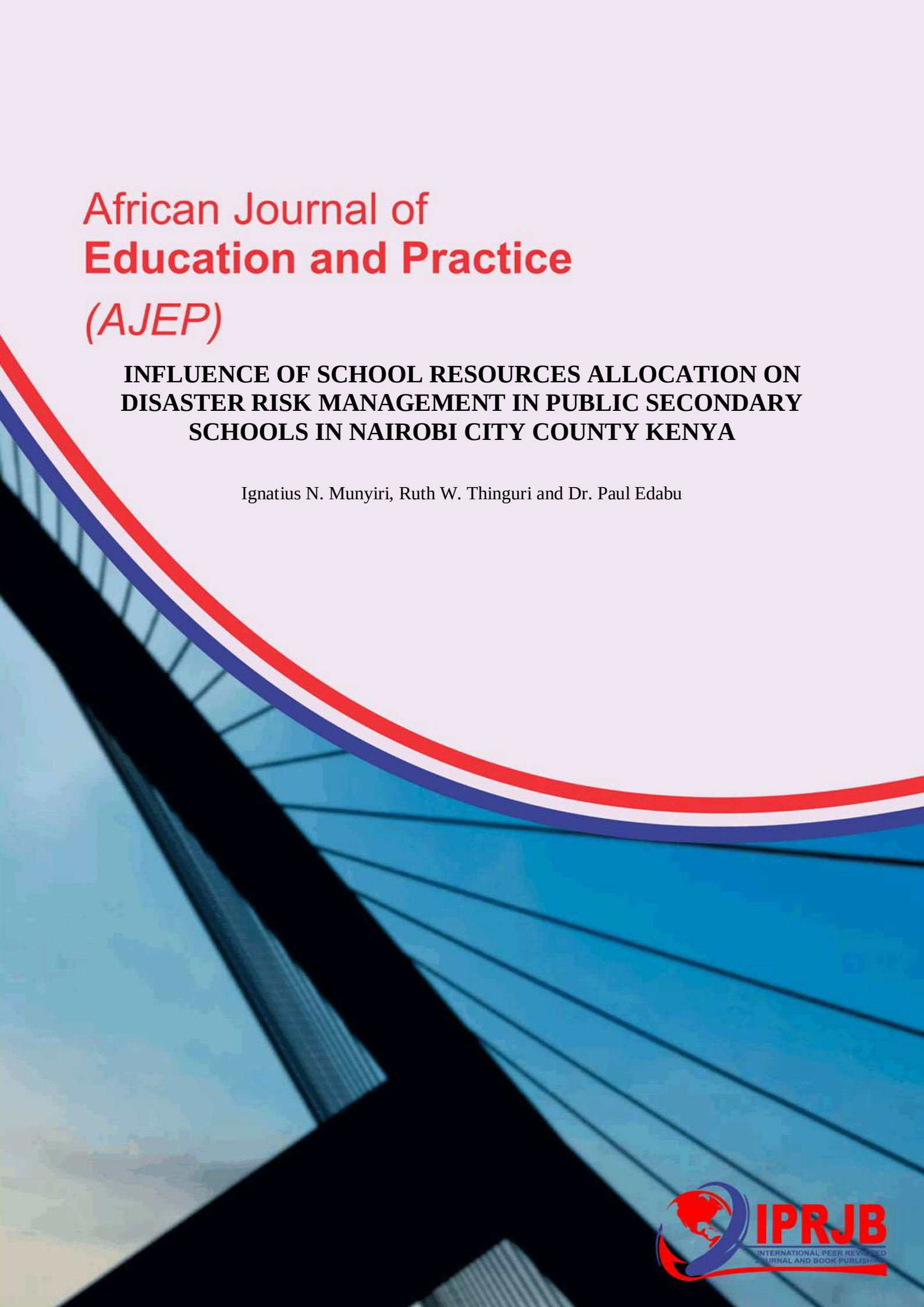

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INFLUENCE OF SCHOOL RESOURCES ALLOCATION ON DISASTER RISK MANAGEMENT IN PUBLIC SECONDARY SCHOOLS IN NAIROBI CITY COUNTY KENYA

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Abstract

Purpose: The purpose of this study was to investigate how allocation of resources influenced disaster risk management (DRM) in Nairobi public secondary institutes of Kenya. The study was guided by the Emergent Norm theory and Risk Management theory.

Methodology: A mixed methodology and a concurrent triangulation study design were used in carrying out this study. The study population comprised of 282 individuals and sample size of 167 respondents (principals, heads of departments (HODs), boards of management (BOM) and Sub-County quality assurance and standards officers (Sub-QASOs)). Quantitative data was collected using questionnaires while qualitative data was gathered using interview guides. Closed ended answers were analysed descriptively using frequencies and percentages as well as inferential statistics which were tested at 95% confidence level using linear regression and results presented in figures and tables. However, qualitative data was analysed thematically and results presented narrative form based on themes derived from objectives.

Findings: Study results on the extent of availability of resources for management of disaster risks established that most public secondary schools had security personnel, had adequate space in classes, and did not have safe classrooms and dormitories while most schools in Nairobi County did not have any fire extinguisher. On the other hand, the study found that in public secondary schools of Nairobi County, hiring of security personnel was the aspect of disaster risk management most influenced by schools resource allocation, followed by fencing of school compounds, regular disaster management drills for staff and students, introduction of DRM in the school curricula, fitting rooms with grill free door and windows with provision of manuals on DRM having the least influence.

Unique contributions theory, practice and policy: The Emergent Norm Theory proposed observes that during emergency/disaster, people come together with one objective in mind; that is to successfully manage the said catastrophe. Through this process the individuals in a collective action work for better ways of not only to manage the disaster after occurrence but also best preventive measures. This study shows that one of the preventive measures for DRM is resource allocation by the school managers. On practice, the study recommends that the government should provide adequate funding and other requisite resources for management of disaster risk in schools throughout the country. Lastly, with regards to policy, the study recommends that teachers' service commission of Kenya should also revise the policy on appointment of school managers' to focus more on merit.

Keywords: *School resources allocation, Disaster risk management, Influence of resources allocation, Availability of resources*

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1.0 INTRODUCTION

Disasters are both natural and human-made catastrophes that cause significant physical damage and are not merely ornamental or interesting events that adorn our lives; they have undesirably continued to affect human beings since the dawn of our existence. They damage solid work, progress achievements; destroy lives and occupations, ensnaring countless societies into paucity. In response, persons and communities as well, have made frantic efforts to reduce their exposure to the risks by developing measures to minimize their initial impacts including post catastrophic reaction. Management of risks arising from Disaster is also highly dependent on resource availability and allocation. Governments are mandated to allocate resources in preparation for DRM at national, local and school levels (United Nations International Secretariat for Disaster Reduction [UNISDR], 2013).

Allocation of Resources in national budgets around the world are multifaceted and are sometimes not guided by clearly stipulated regulations, but often happen under the over-all processes of financial management of government (Gordon, 2013). Making recommendations and keeping in tune with monetary obligations of lessening peril should be a valuable principle in making advancement (Kellett, Caravani & Pichon, 2014). After the disaster of 1993 when several school children were held captive by terrorists in Neuilly-sur-seine; a French commune just west of France, the police authorities have since undertaken to partner with school officials to coordinate security measures in schools. They convene every start of a new school session to map out the security plans. Entrance to public learning institutions in the capital city of Paris are manned by police officers who are able to regulate the movement of people, check doubtful behavior, conduct search of all persons, luggage and vehicles, and provide security (Kellett, et al., 2014).

In order for the schools in South Africa to realize the effort of preparing for management of disaster risks, the 2002 Act stipulating the management of disasters, obliges the National Centre for Management of Disasters (NDMC) to endorse training education and capability structure for management of disaster risks in all schools through the republic (United Nations Educational Scientific and Cultural Organization [UNESCO], 2010). Emphasis on integrating education on reduction of risks prompted by disasters into primary and secondary school curricula in South Africa is highlighted in segment 6.3.3 of the National Framework for management of disasters of 2005.

In 2013, the Government of South Africa published a document giving legal details about school structural standards and norms. It made into law the requirement for provision of basics in all schools. These include: safe classrooms to accommodate a maximum of 40 students, enough toilets, internet, clean water, and reliable electricity (Davis, Bender, Krimgold & McDonald, 2014). Although the document did not lay down concrete timeframes, it holds the government accountable in case the schools fall short of the legal minimum.

According to the safety standards manual provided by the government of Kenya, students expend the lengthiest nonstop time in a day within a dorm, which is the single most important physical infrastructure in a school set- up. Therefore, keeping them well lighted, ventilated and satisfactorily clean is paramount. The manual gives the following specifications for dormitories; 1.2 meters wide space between beds, 2 meters wide corridor, admission to be based on bed capacity, doors to be at each end, be 5 meters wide and open outwards among others, Ministry of Education Science and Technology (MOEST, 2012). Preparedness for disasters in the institutions of learning is hampered by absence of requisite resources, acquaintance and cognizance of the peril dynamics associated with disasters

1.1 Statement of the problem

Schools around the globe have for a long time experienced various forms of disasters, including rape, fires, arson, road-accidents, terror-attacks, gang wars, especially in Nigeria and USA and strikes across Kenya secondary schools (Federal Emergency Management Agency [FEMA], 2010). School managers are central in disaster risk management and therefore, their knowledge and experience in DRM as well as governments' support for DRM in schools are crucial for enhancing resource allocation for disaster management. Such resources include funds, firefighting equipment, closed circuit televisions (CCTV), DRM pamphlets and curriculum among others. Availability of these and other resources are essential for effective DRM in schools. However, this is not the case as in Kenya; management of public secondary schools has remained a challenge to most school managers for a long time especially with respect to management of disaster risks.

No DRM policy for schools is available, as only Schools' Safety and Standards Manual exists to guide school managers on DRM. This has left most managers lacking the needed knowhow and all the obligatory resources for DRM. Further, school managers are hardly trained on DRM in teacher training colleges which limits their knowledge and competence in preparing for and managing disasters within schools. This has resulted in cases of disaster in schools that have proved too costly, claiming learners' lives, and health, destroying properties and interfering with school calendar of events. In 2018, 63 schools had experienced riots and arson targeting school dormitories and administration blocks in two months (Nyakundi, 2018). Fifty of them reported fires. The unrest hit 32 counties, with the highest number of cases recorded in Siaya (six), Muranga (four), Nairobi (five), Nyeri (four) and Kakamega (four) (Nyakundi, 2018).

Wanjala and Onyango (2018) showed that most high schools in Homabay County experienced rain related disasters occasioned by heavy rains which cause floods and also strong windstorms, thunder and lightning. However, disaster response planning in schools was also found to be inadequate and cannot aid in effective management of disaster risks implying that school managers' level of disaster preparedness was poor. A study by Ruto (2009), pointed out that Kenyan institutions of learning had shamefully become boulevards of indecency starting with the notorious, St. Kizito mixed secondary school instance of school strike when the male students attacked the girls and raped 70 of them while 19 others were left dead. Further, Nderitu (2009) found out that head teachers and teachers were of the opinion that the fences surrounding their schools could not prevent entry into the school since they were not adequately firm. These respondents further disagreed that schools had adequate security lighting and further said that schools had not established school security committees. The study also found out that most schools were rarely inspected.

1.2 Purpose of the study

To investigate how allocation of resources influence management of disaster risk in Nairobi public secondary institutes of Kenya.

1.3 Research objectives

i. To investigate the extent of availability of the resources allocated on disaster risk managing in the institutions of learning in Nairobi City Kenya.
ii. To investigate aspects of disaster risk management practices most influenced by resources allocation in Nairobi City public secondary schools in Kenya.
iii. To find out how resources allocation on disaster risk management influences management of disaster risk in Nairobi City public secondary institutes.

2.0 LITERATURE REVIEW

School Resources Allocation for Disaster Risk Management

Management of risks arising from disaster is highly dependent on resource availability and allocation. Governments are mandated to allocate resources in preparation for DRM at national, local and school levels (UNISDR, 2013). Allocation of Resources in national budgets around the world are multifaceted and are sometimes not guided by clearly stipulated regulations, but often happen under the over-all processes of financial management of government (Gordon, 2013). Making recommendations and keeping in tune with monetary obligations of lessening peril should be a valuable principle in making advancement (Kellett, Caravani & Pichon, 2014).

Extent of availability of resources for disaster risk management in schools.

According to studies conducted in Kenya, the issue of availability of funds has not been left out as a reason for not complying or partial compliance with the financial regulations. Examples of such studies include the ones conducted in Kisii, Githunguri, Kikuyu, Kisumu and Limuru (Mburu, 2012). Kirui et al. (2011) found out that the budgetary allocation for school safety in most schools was below 10% of the total school budget. The main cause was the distribution of the scarce resources to multiple areas of great need. Delay in releasing the money also caused by the complexity of government procedures sometimes makes the whole situation of management very difficult. Omolo et al. (2010) found that of the 30 schools under the study, 28 had constructed firm gates and maintained protected boundaries. They further found that 25% lacked a library, 40% of the schools lacked alarm/warning systems and 40% lacked safety notices displayed. To some level, the degree of exposure to disasters can be attributed to the administrative structure of the school. For example the lack of an early warning system/alarm system and lack of safety notices displayed prominently expose schools to disaster risks.

In another study by Wangui (2014) on availability of school funds and their adequacy, the respondents gave a majority of 35% and 30% respectively. This implied that though the funds were available they were inadequate. Majority of the respondents (95%) on the question on availability of NGO funding revealed that NGO funds had enabled their schools to fund disaster risk management activities. These findings on availability of school funds revealed that though the MOEST sent funds to schools for disaster risk management preparedness, most schools required more funds for it. Funds from school sponsors and fundraisings assisted schools mainly after disasters had struck to rebuild school structures.

Aspects of disaster risk management most influenced by resource allocation

Fiscal constrictions give rise to departmental incapacitation in responding effectively owing to limitation in resource availability (Nabutola, 2012). In Pakistan, the government has seen the need to increase funding to learning institutions to cater for security needs due to the frequent terror attacks in schools. This was especially after the Peshawar school attack which left 130 pupils and teachers dead and scores injured in December 2014. Financial allocations earlier intended for repairs and maintenance, procuring furniture items, learning resources, meeting the current expenses have been redirected to structural refurbishment and safety measures in schools. Finances amounting to about $ 15 million dollars initially intended for provision of water and sanitation facilities in the Khyber Pakhtunkhwah region, later on got channeled to assisting in the implementation of safety concerns in the institutions of learning (The Department for International Development (DFID, 2015).

Leandri (2011) investigated the aspects of security and safety in the South African Secondary Schools of the Tswana region. He concluded that finance was required for the purpose of installing security contraptions in institutions of learning; provide policies and plans for security and

procedures for monitoring and evaluation. There is a strong collaboration between government, UN security agencies, donors and business leaders in Nigeria, in an effort to sustainably introduce an Initiative for Safe-School with an inventive exemplary funding that combines funds from international donor agencies, government, and the private sector (DFID, 2017).

The Education, Science and Technology Ministry in Kenya (2006) distributed funds for purchase of equipment to fight fires to every Boarding Secondary school in the country to the tune of 810 million Kenyan shillings. Schools at National level did not get the allocation since they had received similar funding earlier on. Sub-County allocation was also declined for the simple reason that at this level schools are mainly day. The move was strongly criticized since Sub-County schools are the majority schools in all counties in Kenya and equally at risk of fire disaster (Nyakundi, 2012). Of the visited 20 schools, only 3 were boarding schools while 17 were day schools. Data obtained revealed that the available funds were used to put up classrooms, toilets, kitchens, water tanks, First Aid kits, Fire extinguishers and a telephone. Furthermore, 37.1% of the school staff felt that sponsor funds and 34% school fundraisings assisted to fund disaster risk management preparedness in their schools.

In her study, Wangui (2014) indicates that the aspects of disaster risk management most influenced by school resource allocation depend on MOEST funds (56.6%) and school fundraisings (23.3%). However, the funds are mainly used to facilitate disaster risk management preparedness. Further, school stakeholders are partially involved in the budgetary process in their schools and they thus, lack awareness on how school funds are utilized (40%).

Influence of resource Allocation on Disaster Risk Management.

Globally, only 19 representing 2/3 of the countries sampled out by Gordon, (2013), packaged DRR in their national budgets. This was whether through decree or procedure. In the United States of America (USA), such funding is channeled through the general budget and directed to FEMA which is also responsible for managing other explicit extenuation finances. In some other countries, disaster risk management programs are financed through the main budget such as in: Viet Nam; the People's Republic; Mexico, the Philippines, South Africa, Costa Rica, and Indonesia, provide good indicators of countries that have managed to allocate funds through their national budgets for management of disaster risks (The International Federation of Red Cross and Red Crescent Societies (IFRC, 2012).

The fund aims to cover a broad spectrum of activities regarding the development and management of disaster risks in the country. Nevertheless, the funding is never sufficient to enable the handling of fundamental areas of DRM such as: personnel training, acquisition of the requisite equipment and facilities, community outreach work, and capacity building (United Nations Development Program (UNDP, 2013). The same study revealed that even though there was money allocated for DRM in Madagascar, people testified that neither the rescue backing nor the resources for managing disaster risk was provided to them by their native establishments (IFRC, 2013).

They exhibit the articulate influence of countrywide funding for management of disaster risks, with "guiding principle to funding particular mediations and state organizations to accomplish the execution of allotted funds (Kellett, et al., 2014). In Nepal, school buildings have become much safer following the introduction of an extensively used upshot oriented funding program by NGOs in the country. A study by IFRC revealed that even though there was money allocated for DRM in Madagascar, people testified that neither the rescue backing nor the resources for managing disaster risk was provided to them by their native establishments; thus implying that there was little or negative influence on management of disaster risk (IFRC, 2013).

Kenya's 2009 policy on disaster risk reduction, recommends the allocation of 5% for DRM through the annual national budget alongside the budget line article in all ministries. Physical structures can also be used in managing disasters at school level. There should be integration of early childhood development and education (ECDE) and erecting buildings that can withstand adversity for the meeting place of children and the caregivers (United Nations International Children Education Fund (UNICEF, 2009). To ensure safety inside the buildings, there should be proper prearrangement of equipment and resources, a removal strategy, make-shift emergency shelters and provision for emergency fundamentals such as supplies. For first-aid, stepladders, paraphernalia necessary in salvage and migration plans should be made available (UNICEF, 2009).

In another sturdy by Wangui (2014) indicates that, 20% of the respondents stated that an all-inclusive school contingency plan against disasters was majorly influenced by the allocated resources as a main strategy to improve coordination of management of risks caused by disasters. In relation to the building of capacity, the results also support the findings of Omolo and Simatwa (2010) that, the approaches of attending training, acquisition of the requisite resources and equipment and organizing workshops on disaster risk management facilitates capacity building which helps the school community manage the multiplicity of diverse school duty requirements. Further, most of the school staff respondents (32%) felt that M.O.E funds moderately enabled the schools to finance management of risks arising from disaster. With regard to the influence of school sponsor funds, a minority (32%) agreed there was none extent of influence by school sponsor funds on preparedness in disaster risk management. Most of the respondents 38% felt that school fundraisings had a small extent of influence on disaster risk management. In addition a majority of 38% of the respondents reported that school entrepreneurial activities had no influence on funding of disaster risk management.

2.1 Theoretical Framework

Risk Management Theory

The adoption of the contingency theory as proposed by Boehm and Howard in 1997 was informed by the fact that best management operations are necessitated by circumstances. It stresses that one needs to weigh options and decide on the most likely occurrence. Therefore, in disaster risk management, this theory opines that circumstances dictate which management practices to employ. A school manager therefore needs to assess the potential for a particular form of disaster and adequately prepare for it if its effects and consequences are to be managed effectively and efficiently. Such assessments can only be made by the managers having appropriate training and attitudes towards disaster management as well as complying with the available school safety policies and availability of requisite and appropriate resources.

Emergent Norm Theory (ENT)

The researcher has also adopted the Emergent Norm Theory proposed by Tuner in 1964, revised in 2007 and 2006 in this study. The theory observes that during emergency/disaster, people come together with one objective in mind; that is to successfully manage the said catastrophe. Through this process the individuals in a collective action work for better ways of not only to manage the disaster after occurrence but also best preventive measures. The current study also focused on how social interactions were being employed by various educational stakeholders in order to prepare and manage disasters within public secondary schools.

Social interactions on their part in relations to disaster management can be found in resource management which includes funding and provision of skilled human resource among others. Successful management of available resources can therefore aid school managers in managing

disasters as the theory suggests. This has therefore been the main guide to the adoption of the theory in this study.

3.0 RESEARCH METHODOLOGY

The study was mixed methodology using Concurrent Triangulation Design. The process of gathering quantitative data was through questionnaires while qualitative data was collected through interviews. Concurrent triangulation research design was employed to establish the influence of the resources allocated to schools for managing disaster risks in Nairobi public secondary schools. It is a one-phase design used for gathering diverse but corresponding quantitative and qualitative statistics on one theme at the same time-frame and with equal weight (Morse, 1991). The design enabled the researcher converge diverse techniques of data collection and further aided in the unswervingly likening and comparing quantitative arithmetic results with qualitative outcomes or authenticating or amplifying quantifiable results with qualitative data (Creswell, 2003). The population comprised 282 individuals and sample size of 167 respondents determined according to Krejcie and Morgan sampling table. Data was collected through questionnaires and observation checklists for principals, HODs, BOM and interview guides for sub QASOs. Tools were pre-tested among 10% of the target sample, not part of part of the actual study. Pearson Product Moment Correlation was used to establish instrument consistency and a correlation coefficient of 0.75 was considered acceptable. Expert judgment by supervisors and peer reviewers was used to test the instruments for validity. Instrument dependability was established by employing overlapping procedures including telephone and face to face interviews during field work. Concurrent triangulation was employed for data credibility. Instrument reliability was calculated using Cronbach's Alpha. Quantifiable statistics was descriptively analyzed and results shown in figures and tables. Significance of confidence at 95% level was tested using inferential statistics. Qualitative data was analysed thematically and results presented in tables. Conclusions are anticipated to benefit School managers, Teachers' Service commission, Parents, Principals, Ministry of Education and Nairobi City. All ethical issues pertaining to research were observed.

4.0 RESEARCH FINDINGS

4.1 Questionnaire Return Rate

Questionnaires were issued to 167 school managers who were drawn from public secondary schools in Nairobi City who comprised school principals, BOM chairpersons and the HODs Boarding/Deans of studies. However, 160 questionnaires were returned after data collection as shown in Table 1.

Table 1: Questionnaire Response Rate

Sample size		Participants		Non participants		Response rate	
Frequency	%	Frequency	%	Frequency	%	Frequency	%
167	100	160	95.8	7	4.2	160	95.8

Source, Field Data, (2018)

As in Table 1, the total response rate was 160 participants (95.8%) which recorded approximately 95.8%. This could be judged as excellent rate for the analysis of collected data hence data was generalized to all public secondary schools in Nairobi county Kenya.

4.2 Extent of Availability of DRM Resources in Schools

Percentages and frequencies were used to report the extent of availability of resources in Nairobi County public secondary schools as shown in Tables 2.

Table 2: Extent of Availability of DRM Resources in Schools

	Extremely Available		Available		Not Available at all	
	f	%	f	%	f	%
Security personnel	62	38.8	92	57.5	6	3.8
Adequate space in classes	33	20.6	108	67.5	19	11.9
Safe classrooms and dormitories	61	38.1	8	5.0	91	56.9
Fire extinguishers	17	10.6	67	41.9	76	47.5
Teaching and learning resources on DRM	9	5.6	66	41.2	85	53.1
Evacuation centers	23	14.4	81	50.6	56	35.0
DRM funding	0	0.0	7	4.4	153	95.6
Fire assembly ground	50	31.2	95	59.4	15	9.4
Health unit	0	0.0	16	10.0	144	90.0
CCTV cameras	0	0.0	26	16.2	134	83.7
Averages	25	15.9	57	35.4	78	48.7

Source, Field Data, (2018)

The findings on the extent of availability of resources for management of disaster risks in Nairobi schools revealed that (57.5%) had security personnel while 38.8% of school managers mentioned that security personnel were extremely available, a large number, 67.5%, observed that there was adequate space in classes, 56.9% mentioned that safe classrooms and dormitories were not available at all, 47.5% of schools did not have any fire extinguisher.

Another 53.1% lacked teaching and learning resources on DRM. Majority of school managers, 153 (95.6%) indicated that they did not have any funding for managing disaster risks. Fire assemblies were available in 59.4% but 90% of schools did not have health care units, while 83.7% did not have Closed-circuit television (CCTV) cameras (table 2).

Furthermore, 76 (47.5%) did not have a single fire extinguisher, 6 (3.7%), did not have any security personnel, among other essential resources for managing disaster risks. This means that schools in Nairobi do not have all the requisite resources including funding for managing disaster risks; despite them being government sponsored. These findings imply that there is no coordinated allocation of resources for managing disaster risks in Nairobi public secondary schools; the destructive weight of disasters notwithstanding. Each school manager is left to source for resources on their own; which a very dangerous trend is.

According to Lombard and Kole (2009), a school should put in place most of the following resources for management of disaster risks: electronic equipment, (X-ray machines, alarm and CCTV camera systems, Card reader systems, and metal detectors), communication systems, intercom systems (telephone, and radio systems) fences, burglar-proof settings, lock *and* keys, strong rooms and safes, Sufficient funding and adequate lighting.

4.3 Aspects of disaster risk management practices most influenced by resource allocation on DRM

Information about the aspects of disaster risk management most influenced by resource allocation on DRM in public secondary schools was collected using a five point Likert scale and results presented in Figure 1.

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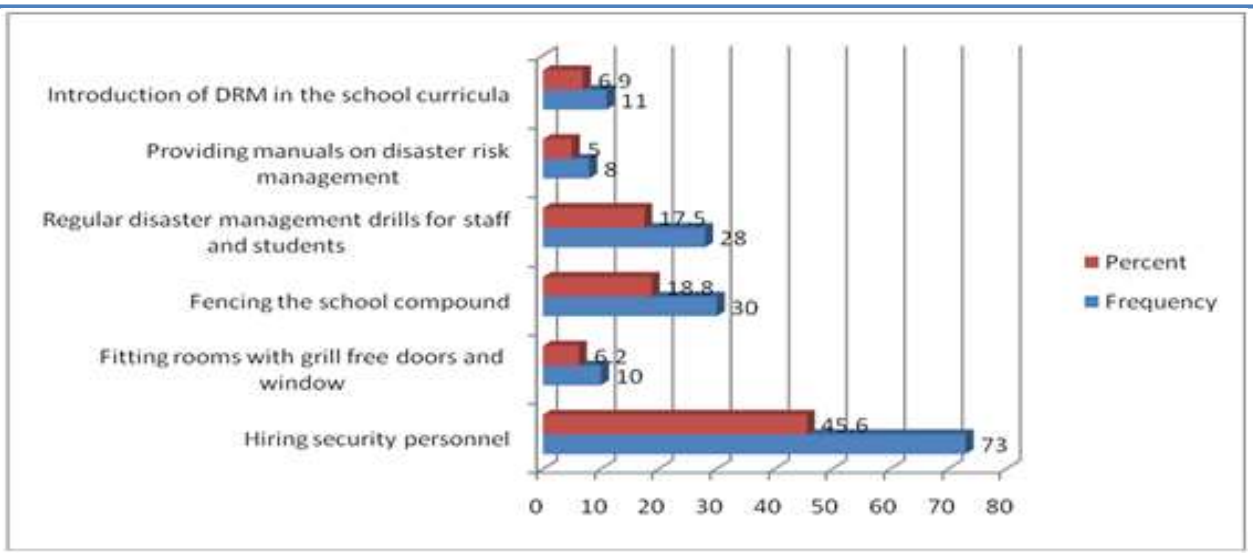

Figure 1: Disaster Risk Management Practices most influenced by School Resource Allocation

In public secondary schools of Nairobi City, the study found that hiring of security personnel was the aspect of disaster risk management most influenced by school resources allocation as mentioned by 45.6% of the school managers, followed by fencing of school compounds (18.8%), regular disaster management drills for staff and students (17.5%), introduction of DRM in the school curricula (6.9%), fitting rooms with grill free doors and windows (6.2%), as well as provision of manuals on DRM (5.0%). This means that school managers gave priority to the hiring of security personnel for guarding schools. The findings also denote that there was no organized allocation of security staff to schools by either the National Government or City government of Nairobi. This implies that school managers hire security personnel according to each school's ability and plan.

A study of Pakistan indicated that, the government has seen the need to increase funding to learning institutions to cater for security needs due to the frequent terror attacks in schools. This was especially after the Peshawar school attack which left 130 pupils and teachers dead and scores injured in December 2014. Financial allocations earlier intended for repairs and maintenance, procuring furniture items, learning resources, meeting the current expenses have been redirected to structural refurbishment and safety measures in schools. Finances amounting to about $ 15 million dollars initially intended for provision of water and sanitation facilities in the Khyber Pakhtunkhwah region, later on got channeled to assisting in the implementation of safety concerns in the institutions of learning (DFID, 2015).

4.4 Influence of School Resource Allocation on Disaster Risk Management

Information was collected from school managers on the influence of resource allocation on DRM in schools and findings presented in Figure 2.

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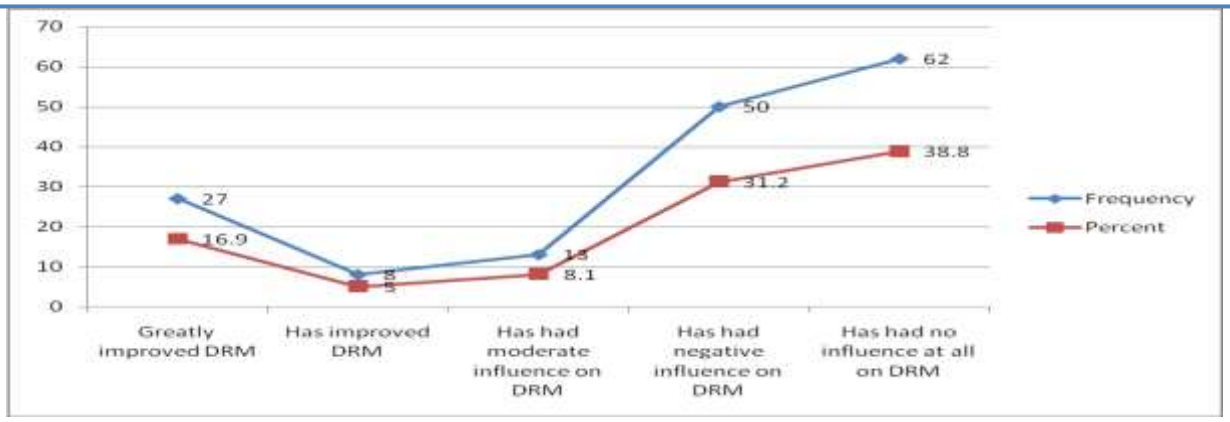

Figure 2: Influence of Resource Allocation on DRM in Schools

Source, Field Data, (2018)

The study results presented in Figure 2 indicate that 38.8% of school managers felt that resources allocation on DRM had no influence at all, in 31.2%, resources allocation had negative influence. Another 8.1% indicated that resource allocation moderately improved DRM. A paltry 5%, felt that resource allocation had improved management, but 16.9% others stated that the allocation had greatly improved DRM.

The findings indicated that according to 110 (70%) of the respondents, allocation of resources had negative or no influence on management of disaster risks. This probably could be explained by the fact that they had no allocation at all. Only a mere 30% indicated that there was some influence. This group had earlier on indicated that they did not have adequate resources for management of disaster risk. On her part, Wangui (2015), established that MOEST funds moderately enabled the schools to fund preparedness in disaster management. The study also revealed that funding for managing disasters generally had influenced disaster management.

4.5 Inferential Statistics on how School Resources Allocation Influences Management of Disaster Risk

The correlation amid the variables both dependent and independent was examined through multiple regression analysis. A comparison was carried out between the independent variables of school resource allocation and the dependent variable of disaster risk management in public secondary schools. The test was carried out at 95% confidence level. Responses were captured in a five-point Likert scale of disagree, strongly disagree, neutral, agree and strongly agree and the test results presented in Table 3.

4.5.1 Regression Coefficients on School Resources Allocation and Disaster Risks Management

In Table 3, the researcher presents linear regression results on school resources allocation and disaster risk management in Nairobi City Kenya.

Table 3: Regression Coefficients on School Resources Allocation and Disaster Risks Management

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.997	.066		15.217	.000
	DRM resources	.478	.021	.874	22.559	.000

a. Dependent Variable: Disaster risk management

Source, Field Data, (2018)

The coefficient of DRM resources is X_2 (0. 478) with a T-statistic of 22.559 and P-value of 0.000. This P-value was lower than 0.05 which implied that the coefficient of school resources allocation was significantly related to disaster risk management at 95% level of significance. The findings also revealed that within public secondary schools, by increasing resource allocation, DRM would improve by 0.478 units. This was in agreement with Leandri (2011), who found out that there was a significant relationship between resource allocation and disaster management in schools in Tswana, through a study on safety and security measures in secondary schools in South Africa.

4.6 Thematic Analysis on Influence of School Resources Allocation for Management of Disaster Risk.

On availability of DRM resources in schools, interview participants generally felt that some resources were available. For instance, they noted that security personnel were available in all schools.

"In all public secondary schools of Nairobi County, security personnel are available and adequate as all schools have day and night watchmen" (Sub-County QASOs, 1 and 2)

"Security personnel are inadequate as the ratio of security personnel to students is too high making it impossible for the security personnel to effectively perform their duties" (Sub-County QASO 3)

The participants also generally held that while some class rooms were congested and needed reduction of the number of learners; in most schools the available classes had adequate space. In most schools, class rooms met the set standards of space for learning and teaching.

"Class rooms in public secondary schools in the County are too congested as most have over 60 students instead of the recommended number of 45 and therefore there is no adequate space in most classes for the number of learners" (Sub-County QASO 1)

"Most schools have adequate space in classes; a majority of the schools 90% do not have overcrowded classrooms" (Sub-County QASO 2)

"Some public secondary schools have met the standards of adequate space in classrooms but over enrolment may cause a problem" (Sub-County QASO 3 & 4)

On availability of safe classrooms and dormitories, the interviewees were of the view that some schools lacked safe classes and dormitories while others were of the view that these facilities are safe. However, the general view of the participants was that schools in the area under the study lacked innocuous dorms and schoolrooms.

"In some schools, classrooms and dormitories in public secondary schools are safe since grills have been removed from windows of classes and dormitories" (Sub-County QASO, 1)

"Very few public secondary schools in Nairobi County have safe classrooms and dormitories for learners as majority lack safe classrooms and dormitories" (Sub-County QASOs, 2, and 3)

The interview participants were of the general opinion that public secondary schools in Nairobi moderately had fire extinguishers; however, the fire extinguishers were not adequate to enable effective management of fire outbreaks in schools. The participants further noted that school managers had no knowledge on the operation of fire extinguishers indicating that in the event of a fire outbreak, the resource would most likely not be effectively used.

"Fire extinguishers are moderately available in most secondary schools but majority do not have adequate numbers" (Sub-County QASO, 1 and 2)

"In Nairobi County public secondary schools, fire extinguishers are available, but some school managers' have no knowledge of how to use them" (Sub-County, QASO 3)

Participants in the interviews were of the general view that all public secondary schools in Nairobi County had no teaching and learning resources on disaster risk management. These materials may include but not limited to danger signs, pamphlets and text books on disaster risk management.

"In most public secondary schools of Nairobi County, there are no DRM teaching and learning resources but a few schools may have some" (Sub-County QASOs, 1 and 2)

"There are no teaching and learning resources for disaster risk management in any public secondary schools in Nairobi County" (Sub-County QASO, 3)

On availability of evacuation centers, the interview participants noted that few schools had specific evacuation centers which included fire assembly points, even though; most schools utilized the assembly ground as evacuation centers during emergencies. Nonetheless, some interviewees felt that evacuation centers were available in all schools and these included the general assembly and the play grounds.

"Some schools have fire assembly grounds but majority use play grounds and assembly grounds for emergency situations; hence lack of adequate evacuation centers in public secondary schools" (Sub-County QASO, 1)

"All public secondary schools in Nairobi County have fire assembly points. These normally include the assembly grounds and playing fields" (Sub-County QASO, 2)

"There are no evacuation centers in all public secondary schools of Nairobi County" (Sub-County QASO, 3)

On the availability of disaster risk management funding in Nairobi City schools, all participants indicated that there was no funding set aside for managing disaster risks. The interviewees further noted that school managers are forced to source for funds for managing disaster risks on their own as the government does not provide any such funding.

"Despite the importance of disaster risk management in schools as various disasters have been occurring, no funding is allocated for DRM so schools have to source for the funds individually" (Sub-County QASOs, 1, 2 and 3)

The study participants also observed that disaster risk management resource availability influenced DRM in public secondary schools of Nairobi County. The participants observed that lack of some resources led to poor management of disaster risks.

"Lack of some of the needed resources in most public secondary schools in Nairobi County has led to poor management of disaster risk whenever they occur" (Sub-County QASO, 1)

"There are no resources allocated to disaster risk management from ministry of education, county government or public secondary schools themselves in Nairobi County; leading to poor disaster risk management" (Sub-County QASO, 2)

"Resource allocation is not given priority by the ministry of education, the county government or even the public secondary schools and this negatively influences schools capacity to manage a disaster" (Sub-County QASO, 3)

On the aspect of disaster risk management greatly influenced by the school managers' resource allocation in Nairobi County, the study participants had the following to say,

"School managers' resource allocation in public secondary schools of Nairobi County has greatly influenced the building perimeter walls in some schools or fencing of school compounds in most schools. Some schools have several "panya" routes through which one can enter or leave without being noticed" (Sub-County QASO, 1)

"A lot of school resource allocation has influenced fire outbreaks as well as safety and standards of learners within public secondary schools" (Sub-County QASO, 2)

"In schools that have been riddled with disasters such as fire outbreaks and student unrests, lack of resource allocation has greatly resulted in the destruction of school facilities such as window panes and furniture as well as burning of libraries, class rooms and dormitories" (Sub-County QASO, 3)

The interview results indicate that although there were some resources allocated for disaster risk management in schools, some of these resources were not adequate. Further, teaching and learning resources which are essential for disaster risk management in schools for teachers and learners were basically nonexistent, which implied that most learners and teachers lacked knowledge on DRM management.

Lastly, evacuation centers were lacking in most schools and almost all schools lacked funding for disaster risk management. This makes public secondary schools in Nairobi County ill equipped to prevent, recover from or mitigate disasters that often bedevil public schools in the County. An investigation by Wangui (2014) indicated that M.O.E funds moderately enabled the schools to fund recovery in disaster risk management and that school fundraisings had influenced disaster risk management in schools.

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Extent of availability of DRM resources in schools

Results on the extent of availability of resources on disaster risk management, established that most schools had security personnel, adequate space in classes, fire assemblies; however, most schools lacked safe classrooms, dormitories or fire extinguishers, lacked teaching and learning resources on DRM, funding for managing disaster risks, health care units and CCTV cameras. These findings implied that there was no coordination in allocation of resources for managing disaster risks in Nairobi public secondary schools.

Aspects of disaster risk management practices most influenced by resource allocation on DRM

Based on information gathered on the aspects of disaster risk management most influenced by resource allocation on DRM in public secondary schools, hiring of security personnel was found to be the aspect of DRM most influenced by schools resource allocation while others included fencing of school compounds, regular disaster management drills for staff and students, introduction of DRM in the school curricula, fitting rooms with grill free door and windows, as well as provision of manuals on DRM. This meant that school managers gave priority to the hiring of security personnel for guarding schools than other necessary DRM resources within public secondary schools.

Influence of School Resource Allocation on DRM

Lastly, with respect to the influence of resources allocation on DRM in schools, study findings showed that resource allocation generally had no effect at all on DRM within public secondary schools in Nairobi City. This was explained by the fact that none of the schools in the study area generally had adequate resources needed for DRM. Inferential statistics however, showed that there was a statistically significant relationship between resource allocation and DRM in public secondary schools in Nairobi city Kenya.

5.2 Conclusions

With respect to the first study objective, the study concluded that public secondary schools in Nairobi city have adequate security personnel, space in classes and fire assemblies, but, they lack safe classrooms, dormitories, fire extinguishers, teaching and learning resources on DRM, funding for managing disaster risks, health care units and CCTV cameras. While addressing the second study objective, it was concluded that hiring of security personnel is the main aspect of DRM practice mostly influenced by resource allocation while the least affected aspects were fencing school compounds as well as regular DRM drills for learners and school employees. On the last objective, the study concludes that resource allocation generally had no influence on DRM in public secondary schools with the most notable influence being negative.

5.3 Recommendations

Unique Contributions on Practice

The Government of Kenya and other education stakeholders must allocate the requisite resources including adequate funding to schools in preparation for management of disaster risk. Beef up security in schools to be on high alert since disaster has become common in the country. Government of Kenya should provide well trained Security personnel to man security in schools throughout the republic

Unique Contributions on Policy

Teachers Service Commission of Kenya should also revise the policy on appointment of school managers' to focus more on merit. Many schools are in deplorable conditions; an indication that the managers in charge lack knowledge on what a clean school environment means with regard to disaster risk management.

Unique Contributions on Theory

The findings therefore implied that there was a significant relationship between resource allocation and DRM in schools. This validates the Risk management theory adopted by the study which holds that management actions are necessitated by circumstances, therefore, the low resource allocations for DRM by school managers may be due to the fact that disasters are not a common phenomenon in their schools, hence, managers do not see the need to allocate more resources on it.

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