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RESEARCH ARTICLE

CONTRIBUTION OF TEACHER PRACTICES IN THE PROVISION OF STUDENT SAFETY IN EMERGENCY INCIDENTS IN PUBLIC SECONDARY SCHOOLS IN KENYA: A CASE STUDY OF KISUMU COUNTY

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ABSTRACT

Parents expect a safe learning environment for their children while in teachers' custody, yet threats to student safety are increasing globally, and Kenya is no exception. In Kisumu County, incidents from floods, criminal activity, community conflicts, fires and strikes continue to be recorded in schools. Due to legal responsibility and their position as first responders in school emergency, teachers have a crucial role in ensuring student safety, yet little had been done to explore teacher preparedness. The objective of this study was to determine contribution of teacher practices in the provision of student safety in emergency incidents in public secondary schools in Kisumu County. The study established that teacher practices moderately contributed to student safety with overall mean rating of 2.96. The findings of this study are important to educational administrators, policy makers and planners in understanding how teacher practices contributes to management of students safety in emergency incidents in public secondary schools in Kisumu County and the way forward.

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INTRODUCTION

An emergency incident refers to an unplanned event that can cause death or significant injuries to people or that can destroy property and cause physical or environmental damage, and often starts with the onset of the disaster or hazard (Jimerson, Brock, & Fletcher, 2005). The aim of emergency preparedness for response is to maintain life, improve health and support morale of affected population by evacuation, relocation, isolation and expansion (Nova Scotia Education Department, 2008). Emergency response activities involve, search-and-rescue efforts to find those who may be trapped; distribution and provision of basic commodities such as water to affected populations; provision of temporary power and shelters; and control of fires and spills or leaks of hazardous materials (National Research Council, 2007). While emergency response begins when a disaster strikes, it could overlap with the preceding preparedness phase where disaster onset is slow. This may include proactive steps such as warning and evacuation. Generally emergency response has been defined as lasting for 72 hours, but this is not definite, it could stretch for a longer period of time.

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Planning and preparedness, especially with effective leadership for an emergency are the most significant components of dealing with disasters (McBryde, Pennington & Montgomery, 2013; Najafi, Ardalan, Akbarisari, Noorbala & Jabbari, 2015). The concept of emergency preparedness is described as the capacity of individuals and organizations prepared and ready to respond efficiently to emergencies (National Center for Education Statistics, 2009). With the rising challenges of safety, the government of Kenya noted the importance of developing a policy to address safety of students while in school. Republic of Kenya (2008) reiterates; "In recognition of the critical importance of school safety, in the provision of quality education, the Government, through the Ministry of Education, is committed to institutionalising and mainstreaming school safety. However, it is critical to appreciate that school safety is not provided by fences and walls but by the community as a whole. p. 5. Therefore, Government in collaboration with Church World Service developed Safety Standards Manual. The manual outlines action areas for schools to ensure safety as concern for disaster response preparedness gets into sharper focus in within the school environment. Some of the areas identified by the manual as natural disaster hence needing emergency response are; floods, landslides, thunderstorms and lightning,

earthquake, strong winds, fire, and chemical emissions/ severe pollution. It further takes note that the community should use administrative structure and authority to resolve school-community conflicts because if a poor relationship with community, then the school safety is also at risk because possibility of criminal activity. However, immediate safety of learners rests with teachers to create a safe environment in school (Republic of Kenya, 2013). Therefore the guidelines underscore two specific areas with regard to Disaster Risk Response, including; empower members of the school community to handle disasters and thus minimize risks, and provide first line emergency services to learners and staff who become victims of injury or are taken ill. This means that effective implementation of such policies and guidelines, depend on the degree of preparedness of the school and its staff (Mburu, 2012; Migiuro, 2012; Ng'ang'a, 2013). Other study findings, for example; Mangoa (2012) and Shibusse, Omuterema and China, (2014), confirm that while some schools are yet to implement the Safety Standards Manual at all, a number of schools have made some progress to implement the policy despite various challenges.

Globally, preparedness for emergency in schools is a greater concern now than ever before. In the past, schools were considered safe places however, recent experiences all over the world indicate that this is not always true (National Center for Disaster Preparedness, 2018). The emergence and increase of natural disasters, in-school violence, acts of terrorism, and the threat of pandemic flu show the need for schools to be prepared to respond for all-hazard crisis incidents (Council on School Health, 2008). Natural disasters and emergencies can occur at any time, and when they happen at school, everyone should be prepared to handle them safely and effectively, to regularize the learning and teaching environment. Khorram-Manesh, Yttermyr, Sörensson and Carlström (2017) note that crises and disasters cannot be avoided, but their consequences can be mitigated by planning, exercises and preparedness. Although major events affect whole society, their impact on vulnerable groups is more evident. Children and youth belong to this category and need to be considered for special planning and education. Like in most parts of the world, Kenya experiences of natural and human hazards have increased in number, frequency and complexity including; fires, terrorism, poisoning, pollution, collapsed buildings, road accidents, diseases, floods, droughts, landslides mudslides, lightning/thunderstorms, wild fires, and strong winds (UNISDR, 2008; Wachira & Smith, 2013). The result is more deaths of people and animals, loss of livelihoods, destruction of infrastructure among other effects resulting in losses of varying magnitude. All these incidents have an impact on schools make learning inaccessible for learners and teachers, schools are closed as infrastructure is destroyed, families are displaced and disease outbreaks emerge, and schools are also used as shelter for displaced families (Wachira & Smith, 2013). While schools with the high capacity to respond to disaster re-emerge faster, those that are not prepared, with low response capacity, sink deeper into impoverishment (Kamunde, 2010; Okuom, Simatwa, Olet, & Wichenje, 2012), hence the need for teachers' preparedness for efficient and timely emergency response. Each year, schools all over the world suffer from disasters, ranging from small to large damaging disasters that affect children's safety and health. Mersal and Aly (2016) recognize that teachers play significant roles in child protection, because as Mutugi and

Maingi (2011) notes, disasters have devastating results, and when it strikes, bring huge losses of human life and property. Therefore, teachers' preparedness is very important for effective school disaster response. *Zenere (2007)* notes that they should have adequate competency, and positive mindset to be able to handle or participate in emergency situations as well as expected (Rolfness & Idsoe, 2011; Seyle, Widyatmoko, & Silver, 2011). National Center for Disaster Preparedness at Columbia University further notes that preparedness is not only about stockpiles of water and batteries and survival, but it is about what people know, what they think, what they believe and who they trust, hence need for holistic improvement of peoples' capacity to respond in emergencies. United Nations International Children's Education Fund (2009) stresses the need for training by noting that countries should commit to teacher training and curriculum development to support large scale teaching of disaster risk reduction. Such training approaches include: Pre-service formal teacher training through institutes, training colleges and face-to-face lectures and activities. During in-service courses: where teachers are taught for a short period of time or on weekends, after school or in vacation time; and process repeated for a series of workshops or face-to-face training. As indicated by Khorram-Manesh (2017) and World Development Report (2014), crises and disasters are major events affect whole society, their impact on vulnerable groups, such as children and youth is more evident. There is a need for new educational initiative in the field of emergency and disaster management for children and youth. Such education aims to increase emergency preparedness in schools, enhance individual skills, increase the understanding about the involved authorities' actions and responsibilities, provide support and opportunities for teachers and young people to take responsibility in emergency situations, increase the opportunities for the recruitment to these professionals, increase equality and reduce exclusion in some areas and increase understanding of the psychological effects of an event and the need for follow-up.

Research Objective: The research objective was to determine the contribution of teacher practices in the provision of student safety in emergency incidents in public secondary schools in Kisumu County. Synthesis of literature on the contribution of teachers practices in the provision of student safety in emergency incidents in schools: In an emergency, there are key practices that are important that need to be learnt and executed. Some of these aspects include; planning, training and drills, resource allocation and evaluation (Yan, Da Jun & Jun-feng, 2013).

Planning and safety in emergency incidents: Planning in safety preparedness covers various aspects. For example, evacuation planning includes the estimation of the evacuation time, propagation time of the disaster, the potential risk, and location of the safety zone and the reorganization of the traffic routes from the disaster zone to the safety zone (Khadka, 2015). Evacuation planning depends on the disaster source (flood, explosion, hurricane, land slide etc.), the disaster zone (building, city, region or vehicle), distribution (age, gender, disability) and behavior of evacuees, safety zone and emergency facilities. The time evacuation completes is called the evacuation time. Sharifian, Ghomian, Khodadadizadeh and Jahangiri (2017) sought to assess the health system's informative documents on disaster management used by the

decision-makers through qualitative research. Valid checklists and data extraction forms were used for data collection, and analysis done through the process of Content Analysis. The most mentioned strategies were related to disaster preparedness organizational structure, resource planning mobilization, and strategies on evaluation, vulnerability assessment, and disaster response mechanisms. According to the findings of that study, strategic planning was key. They concluded that more attention should be paid to disaster strategic planning in terms of mission and vision of the organizations in disaster preparedness, helping the organizations prepare and respond better in disaster. Their study focused on organizational preparedness, however the present study focused on individual preparedness among teachers. Mudavanhu (2014) carried out a study which focused on analyzing school children's specific vulnerabilities to flood disasters that need to be taken into account in policy development. Basically, the study was addressing floods as hazard. Using both qualitative and quantitative data, he provided an overview of flood disasters and their potential effects on children's access to quality education in Zimbabwe. Other than indicating the loss caused by floods in his findings like; loss of learning hours, loss of qualified personnel, outbreak of waterborne diseases, high absenteeism and low syllabus coverage leading to children's poor academic performance, his findings further supports the essence of planning and adaptation of preparedness strategies to ensure that the risks specific to school children are addressed. Other than floods, the study did not cover other hazards that hinder children's safety and how teachers are prepared to mitigate their impacts.

On the other hand, Adenakan *et al.* (2016) carried out a descriptive, cross-sectional study whose aim was to assess the knowledge, attitude, and practices of emergency personnel at two tertiary hospitals in Lagos with regard to emergency management and preparedness. Regarding knowledge; they discovered that less than half of the participants had good knowledge of emergency preparedness and planning. However, on practice, only 35.1% of the respondents knew that emergency drills were done in their respective hospitals. They concluded that there was an overall deficiency in the respondents' knowledge of emergency preparedness. Their attitude was good and acceptable, but their practices in terms of the frequency of emergency drills and the frequency of regularly updating the emergency plans were grossly inadequate. This study finding showed that little effort was put on development and updating of plans among teachers. This is one of the areas that were identified as a gap in this study for further investigation.

Training and drills and safety in emergency incidents:

When tasks are assigned to staff with relevant skills and level of competence there is improved performance, hence the relevance of skills training is key to provision of safety. Regular fire and emergency drills for students and staff are vital to ensure that lifesaving skills are practiced and mastered (Cowan, Vaillancourt, Rossen & Elliot, 2013). In a survey study in USA, and using self-administered questionnaires among school administrators, Cowan *et al.* (2013) found that important safety preparedness within departments can be implemented in schools to promote safety as they reduce response time in the event of an emergency. This is because training and drills improve competence and mastery of skills that are required for survival during an emergency.

Similarly, Skryabina, Reedy, Amlôt, Jaye, and Riley (2017) reviewed and summarized published evidence on the effectiveness and benefits of exercises to prepare health emergency professionals for responding to emergencies and disasters. A literature search strategy was designed to identify the relevant publications from four major medical databases, where findings from 86 studies were identified, and a descriptive summary and a thematic analysis done. While that study was focusing on health workers, its findings showed that emergency preparedness exercises were found to be effective (post exercise) at improving participants' knowledge of emergency activities, policies and procedures and improving overall competence and confidence. Other immediate individual benefits included improved perceptions of preparedness and improved understanding of individual roles and roles of partners. In terms of planning, the most commonly reported post-exercise organizational benefits were: identifying gaps or limitations in plans, protocols or procedures and providing opportunities to share lessons. This work underscores the critical role in identifying how specific areas of planning in emergency preparedness is important in preparedness in emergency. Similarly, a study by Cole and Zhuang (2011) on decisions in disaster recovery operations also showed that a successful response and recovery is dependent on knowledgeable, properly trained and located personnel. Their knowledge on effective communication between response elements is a crucial component in a stable operation. Cole and Zhuang pointed out that locally trained personnel are instrumental in a successful recovery effort. Their findings show that successful recovery is because the local responders are more familiar with the geography of the area and location of equipment, than external partners. The findings of Merchant, Leigh and Lurie (2010) also confirmed that training programs for emergency responders are critical in preparing them in terms of knowledge and skills required during an emergency response. They note that it is easier for trained responders to quickly identify and allocate appropriate resources in the overall response effort, than those without such training. Results from the study, which they carried out among health care professionals suggests that training enhances greater effectiveness of emergency response efforts, because the knowledge of responders is improved. According to a study by Yan, Da Jun, and Jun-feng (2013), in many parts of China, there is a widespread lack of the knowledge and skills required for emergency preparedness and self-rescue. The study was done in four counties in Sichuan province which were selected for the baseline survey by means of a multistage random sampling method. The findings show that targeted health education and intervention activities, and by popularizing the knowledge and skills in health emergencies, the abilities of citizens to respond to public health emergencies and protect themselves yielded very promising results such as; reduce damage to property, and eliminate unnecessary panic. The study concluded that; after the intervention in Sichuan province, the knowledge and skills of the public to respond to public health emergencies were significantly improved. Secondly that health education interventions should be developed in accordance with geographical features, the educational level of the population, age characteristics, and other factors. Rao and Shenoy (2014) carried out a study to evaluate the level at which the schools and the teachers of Mangalore city were ready to respond to medical and dental emergencies in children. Their findings of the study showed that teachers as well as schools were not prepared to deal with health emergencies arising during school hours.

A self-administered questionnaire was administered to teachers and heads of the schools. They concluded that it was very necessary for the schools to provide education and training to teachers in order to equip them with knowledge to identify and manage emergencies in school. The training also needs to be reinforced at regular intervals. Like was done in the present study, self-administered questionnaires were used to collect data from teachers and principals. The areas considered in the study by Rao *et al.* were also included in the present study, however they touched on two areas of emergency only, that is; medical and dental. The present study covered a greater scope of emergency such as community conflicts and floods that were not considered by Rao *et al.* (2014). Furthermore the locale of the study was in India, while the present one was done in Kisumu County in Kenya.

On his part, Brown (2008) examined teachers' perceptions of their abilities to effectively respond to crises on their school campuses, with a focus on training on procedures. Participants responded to items about the consistency of practice drills, established emergency procedures and plans, and confidence in their administrators' ability to capably lead in a crisis. Examination of the data showed that teachers report they practice drills in average frequency, with the exception of fire drills which were reported to be practiced in higher frequencies. Teachers did not believe that they were well trained to handle a crisis situation, and could not effectively offer safety at their schools. Further examination of the data confirmed that teachers had more confidence in their principal's ability to respond to a crisis than in their own abilities, teachers didn't have a strong perception of their principal's ability. This indicated that more steps needed to be taken to establish safety plans and consistently practice procedures for all types of crises to enhance teachers' confidence in their ability to respond during a crisis. Given the gap of time in the study, it was of the interest of the present study to establish if similar findings could be unearthed after some passage of time.

According to Raj, Sekar and Kasi (2015), teachers who were provided with training on psychosocial disaster preparedness had better knowledge than those who were not. Their study was aimed at developing psychosocial disaster preparedness among school children by imparting training on psychosocial preparedness to them through trained teachers. Quasi-experimental design was adopted for the study. They concluded that higher the psychosocial disaster preparedness knowledge among teachers, led to better knowledge among children. The study by Raj *et al.* (2015), noted that there was a positive relationship between psychological preparedness of teachers and children in emergency. While the quasi-experimental design adopted in the study varies from the current one, its findings suggest that preparedness knowledge among teachers was influential in preparing children to respond in emergencies, which was a key area of interest in the current study. Lee (2008) examined teachers' perceptions of their abilities to effectively respond to crises on their school campuses. Participants responded to items about the consistency of practice drills, established emergency procedures and plans, and confidence in their administrators' ability to capably lead in a crisis. Examination of the data showed that teachers report they practice drills in average frequency, with the exception of fire drills which were reported to be practiced in higher frequencies. In all, teachers did not believe they were well trained to handle a crisis situation, and

could not effectively offer safety at their schools. This indicated that more steps needed to be taken to establish, and be familiar with safety plans and consistently practice procedures for all types of crises to enhance teachers' confidence in their ability to respond during a crisis. Furthermore, a study by Brudney and Gazley (2009) also revealed that involving volunteer organizations in routine processes of planning and training can help enhance knowledge on overall emergency preparedness for better outcomes. They recognized that a successful response and recovery was dependent on properly trained and located personnel, with adequate knowledge. They reiterated that in such circumstances, effective risk communication between response elements was a crucial component in a stable operation. Kalanlar's (2017) purpose of research was to determine the effects of disaster nursing education on nursing students' knowledge and preparedness for disasters which was conducted within the undergraduate programme of study of a nursing faculty. In this research, "quasi-experimental design pretest-posttest with control group" methods were used, and the study population was final year undergraduate nursing students. Data analysis showed that there was significant increase in the knowledge and preparedness of the treatment group students for disasters, disaster nursing and management, which was relatively higher than those of control group students. It has shown that training can be beneficial in equipping undergraduate students to be effective in the processes of disaster preparedness, response, recovery. The study by Kalanlar (2017) was an evaluative quasi-experimental design, which was a departure from the present study.

Alim, Kawabata and Nakazawa (2015) sought to evaluate of disaster preparedness training and disaster drill for nursing students. Preparedness and preventive measures are needed to reduce the impact of disasters colleges located in Indonesia. The study used pre-test and post-test evaluation of knowledge, observation of skills during disaster drill, and a structured one-to-one interview of participants' responses to the training and drill process. Evaluation scores showed significant improvement on the disaster drill were above 4.0 (on 5-point Likert scale). Interview results showed that most participants responded more positively when they had training and drills, confirming that both activities; training and drill improved the knowledge and ability to provide safety in disaster. Results from the studies reviewed suggest that training and drills are closely linked with greater effectiveness of emergency response efforts and that training of health personnel is positively associated with willingness to volunteer and deploy in the event of a disaster (Devnani, 2012). This is because training facilitates passing of information that increases awareness. Bin Shalhoub, Khan and Alaska (2017) carried out a study to identify and describe the Hospital Disaster Preparedness in major private hospitals in Riyadh, Saudi Arabia. This was carried out through observational cross-sectional survey study performed in Riyadh city, Saudi where 13 major private hospitals in Riyadh with more than 110 beds capacity were included in this investigation. Data was collected through a questionnaire with both open ended and closed questions through an interview with key informants in the hospital such as the hospital administrators, emergency managers and/or a member of the hospital emergency preparedness and response committee. Data were recorded via taking notes during interviews and collected through semi-structured interviews. The study concluded that most of the weaknesses that hampered response were particularly in the

education, training and monitoring of the hospital staff to the preparedness for disaster emergency occasion. Few hospitals had conducted an exercise with casualties, few had drilled evacuation of staff and patients in the 12 months preceding the study, and none had any unannounced exercise in the previous year, thus contributed the weaknesses recorded in the study. In the present study, the focus will be in school, unlike in a hospital set-up. Apart from that, interviews were not used in data collection, and quantitative analysis was not done to make conclusions.

According to a study done by Nthenya (2011), drill programs are relevant to ensure safety of students while in custody of teachers. She carried out a cross-sectional study on situational analysis of school safety and school administration in public secondary schools in Kenya. The aim of the study was to assess the capacity of school and school administrators with regard to safety policy implementation. The study concluded that provision of evacuation maps, marking and drills of reporting of assembly points, and training of the school head teacher and deputy head teacher should be accomplished if safety of students are to be accomplished. The focus of was on the practices in the implementation process, and was targeted at school administrators rather than teachers, and how such practices helped teachers to prepared to respond in emergencies.

Resource allocation and safety in emergency incidents:

Sinclair (2012) posits that a leader's creative decision making is necessary when there is no protocol for making decisions, such as unpredictable incidents. These are usually decisions that are made on the spur of the moment. Sinclair (2012) affirms that poor decision-making by leaders, hence poor emergency management and insufficient calculation for resource allocation. This could result into a failed emergency response effort due to inadequate resource allocation. Furthermore, organizational training programs for emergency responders are critical to quickly assist them improve their knowledge to identify and deploy appropriate resources in the overall response effort for better outcomes (Merchant, 2010).

Review of literature also shows that availability and effectiveness of facilities and equipment are in key in emergency response preparedness in an organization. A study Morris *et al.* (2016), found that pace of response is then driven by a capacity to identify threats, and sending of necessary and relevant equipment to the scene of emergency. They also noted that even when equipment is available, the responders have significant challenges because of the unfamiliarity of such equipment, or even their level of comfort, in the case of personal protective gear. They recognize that routine activities such as communicating, pushing buttons, and observing surroundings cannot be easily accomplished in protective gear. Finally, they reported that risk communication is important in any emergency. They indicated that it is often extremely difficult to extend the situational awareness in the emergency response system to the frontline responders. For example, Morris *et al.* noted that responders needed to have certain critical information mostly stored in locations or formats prevent that are not readily available during emergency response. These include items like evacuation maps and standpipes for water, in the event of fire incidents. They also noted that, there is also the situation where the facilities and equipment are inadequate or missing altogether. They concluded that all these circumstances of mismatch of

resources and information compromises the preparation of responders in an emergency.

In a study by Amri, Bird, Ronan, Haynes and Towers (2016) on Disaster Risk Reduction education in Indonesia, they focused on challenges, and how Disaster Risk Reduction education could be scaled up. Among other findings, they reported that lack of training, lack of knowledge in developing curriculum for disaster education, unclear policies for school to deliver disaster risk reduction education, inadequate personal interest and inadequate budget were some of the challenges in disaster preparedness in schools. While recognizing the importance of resource allocation, the present study further sought to quantify how budgetary allocation contributes to the preparation of teachers in emergency response to provide safety.

Sakurai, Bisri, Oda, Oktari and Murayama (2017) carried out a study whose purpose was to assess the depth of school disaster preparedness and to examine ways for a sustainable approach at public elementary schools in Banda Aceh City, Indonesia. In the 3 step survey, the authors did mapping, conducted interviews and focus groups with school headmasters and teachers. They also collected data from students from four schools. Externally-driven disaster risk reduction activities been massively been implemented to enhance the school disaster safety in the Banda Aceh City, including reconstruction of concrete school buildings, making evacuation route maps and signs, conducting evacuation drills, preparing for teaching and developing learning materials. The findings of the study confirmed that resource allocation, training and drills improve preparedness during disasters. However, he noted that after the external supports ended, there was no continuation by local education agencies and schools. Evacuation information and disaster education curricula and plans had also not been updated, thereby reversing the gains that had been earlier achieved in disaster preparedness. The study thus concluded that resource allocation plays a key role in disaster preparedness. Other than qualitative methods used in the study done by Sakurai *et al.* (2017), the present study also involved the use of questionnaires, hence broadening the sources of data.

Furthermore, findings from a study by Cole and Zhuang (2011) showed that priority of resources should be assigned according to the threat, and suggested that locally trained personnel were instrumental in a successful recovery effort because the local responders were more familiar with the geography of the area than external partners. Similar findings were reported by (Mabasa, 2014). He carried out an evaluative study in Limpopo, in South Africa. The objective of his study was to assess implementation of Safe Schools Programme of the Limpopo Province of South Africa. The findings indicated that poor or inadequate resource and finance allocation is a barrier to implementation of the school safety programmes in Limpopo. Leandri (2011) also recorded findings similar to those of Mabasa (2014). He carried out a study on investigation of safety and security measures at secondary schools in Tswane, South Africa. He found out that funds are needed to install safety gadgets in schools, put security plan policies and procedures and follow on their adherence. Findings by Cole and Zhuang (2011), Leandri (2011) and Mabasa (2014), all confirm the important contribution of resource allocation in providing safety, however the studies were done outside Kenya where prevailing circumstances vary

from the present study. Equally, only descriptive analysis of data was done in those studies, while the present study went ahead to employ quantitative analysis of data. A study by Ndetu and Kaluyu (2016) sought to establish the factors influencing fire disaster preparedness in primary schools in Makueni County in Kenya. Using multiple regression analysis, the findings showed that fire safety policy knowledge, fire safety guidelines implementation practices and fire safety resources provision. This infers that fire safety support resources allocation and provision affects fire disaster management preparedness in primary schools to a great extent followed by safety policy knowledge, while fire safety guidelines implementation had the least effect. Analysis of Variance indicated a significance level of .009 in the study, which is less than .05 showed that the model was significant in predicting how policy knowledge, guidelines implementation practices and support resources provision influence fire disaster management preparedness in primary schools. Therefore, the study recommended that more emphasis should be put on training of school stakeholders on fire disaster preparedness and allocation of fire safety support resources for combating fire disasters in primary schools. Like was done in the present study, Ndetu and Kaluyu used multiple regression to examine the variables in their study; but its focus was only implementation of policy with regard to fire safety, while the present study had a wider scope focusing on teacher preparedness.

A study by Otieno and Ofulla (2009) also revealed that due to inadequate resource allocation and under-financing, most schools in Kenya had little capacity to handle emergencies like fire, similarly, the findings of a study of selected boarding secondary schools in Kenya, carried out by Maritim, Mwangeli and Barmao (2015) also reported similar findings. They note that the implications of budgetary constraints for safety preparedness, especially in resource allocation is dire. They indicate that not a single school could afford to buy fire extinguishers to be put in all required places. It is notable that the element of funding of safety initiatives is a challenge to schools, yet these facilities that are not in adequate supply in schools are important, especially during medical and fire emergencies. This in turn has an impact on the poor contribution in emergency response because of inadequate resource allocation. The study population was selected boarding secondary schools, which were not identified as public, private or both private and public. The present study identified a gap in this study because the scope considered by Maritim, *et al.* was narrower, looking at selected, and boarding schools only. The present study was thus broader, giving more data on both day and boarding secondary schools, and looked at teacher preparedness rather than implementation of safety policy. Onderi and Makori (2013), in a survey study of schools in Nyamira County, Kenya, confirm that conflicting expectations affects budgetary allocation for school activities. This finding is further reiterated by Kirui, Mbugua and Sang (2011), who carried out a cross sectional survey study on challenges facing Head-teachers in security management in public secondary schools in Kisii County. They report that the budgetary allocation by the Board of Governors, now known as Board of Management on safety and security issues was below 10% of the total school budget. Both studies confirmed that adequate budgetary allocation is important, for effective school functions; Kirui *et al.* (2011) further reiterated the role of a budget in safety provision, however, both studies did not examine how such inadequate budgets contribute to teacher

preparedness in the provision of safety, which was addressed in the present study. These findings are also supported by a study done by Kukali (2013), who sought to establish challenges faced in the implementation of safety policy in girl's boarding secondary schools in Bungoma East District, Kenya. The study employed a survey design. Some of the findings of the study indicated that financial constraints, poor leadership and inadequate community support were major challenges faced in the implementation process. The study concluded that poor allocation and deployment of both financial resources could hamper safety as the required facilities and skills were scanty.

Similarly, Nyakundi, Ngwacho, Monga're, Onguti and Mikuro (2014) did a study whose purpose was to establish why school management was not fully implementing Ministry of Education Safety Standards and Guidelines in Public Secondary schools in Marani District, Kenya. The Government policies, administrative factors, disaster management and emergency facilities exemplify the independent variables while school safety exemplify the dependent variable. The objectives of the study were to: establish the safety situation, outline the main causes of disasters, examine the constraints in the implementation of safety measures and explore major strategies put in place to prevent occurrence of disasters in public secondary schools in Marani District, Kenya. While adopting a descriptive survey design and data was collected using one questionnaire targeted teachers in 28 public secondary schools, stratified, purposive and simple random sampling was used to select the required sample of the study of 49 teachers. Data was quantified using descriptive statistics, while thematic analysis was used to analyze qualitative data. The major findings of the study were the Ministry of Education safety standards and guidelines had not been fully implemented majorly due to inadequate funds and inadequate supervision. The major recommendations therefore were policy makers to follow up, monitor and evaluate safety situation in all educational institutions and provide funds to all schools to enhance disaster preparedness. The study highlighted the importance of adequate financial allocation for school safety. Significantly, the findings by Nyakundi *et al.* underscored the importance of adhering to safety standards and guidelines in schools thus education policy makers and other stakeholders' must come up with plans and guidelines to ensure school safety by preventing losses caused by disasters in schools. The study did not, however, employ the use quantitative methods to interrogate the extent of this contribution, and it also did not focus on the teacher as a responder in the implementation process of safety but rather on the school as a unitary organizational unit.

Contribution of Evaluation and safety in emergency incidents: In an attempt to identify strengths and weaknesses of a particular response and enable practical lessons to be learned and applied, Pfefferbaum, Pfefferbaum and Van Horn, (2018) carried out a study to provide a theoretical foundation for children's involvement in disaster risk reduction activities. The method of their study involved paper reviews and analyses the literature on children's participation, on their developmental capacity to participate, and on disaster risk reduction activities involving children. The results of the study showed that evaluation of such activities yields numerous potential benefits for children, including enhanced personal development and skills, self-efficacy, and interpersonal relationships, and for communities through improved social

connections and networks and disaster preparedness. While this study sought to highlight various areas of benefit of evaluation among teachers, the findings of Pfefferbaum *et al.* like the present study showed the important role of evaluation in preparedness in terms of safety outcomes. With an aim of investigating how training or exercises were assessed in local government emergency management organizations, Sinclair (2012) carried out an investigative review of the resources available to emergency managers across North America and within New Zealand, for the evaluation and monitoring of emergency management training and exercises. The results of the study were compared to those from a questionnaire based survey of 48 similar local government organizations in Canada, USA, and New Zealand, where closed and open ended questions were used, enabling qualitative and quantitative analysis. Other than uniqueness of each organization's training program, and their assessment, they noted that monitoring and evaluation aspect of training has been overlooked in some organizations leading poor preparedness. The study concluded that effectiveness of the training efforts of local government organizations are largely unknown. These results highlight that organizations need to move away from an ad hoc approach to training design and evaluation, towards a more sophisticated and evidence-based approach to training needs analysis, design, and evaluation if they are to maximize the benefits of this training. This study is a clear demonstration of how evaluation as a practice can be used to improve quality of disaster training programme, which can contribute to better outcomes in safety emergencies.

Gossip *et al.* (2017) carried out a study to find out why local health departments often conducted Monitoring and Evaluation work post-disaster, yet many of those efforts failed to improve response procedures. They wanted to explain why Monitoring and Evaluation efforts made by local health departments did not always lead to improved disaster response efforts. The study findings showed that monitoring and evaluation is important in disaster response to support the accurate documentation and assessment of a disaster response. They concluded that enhancement and widespread dissemination of lessons learned and facilitate inter-agency learning, could lead to increase commitment to improvement processes in emergency response. Supporting such findings, Xaba (2014), reports that one of the most ignored administration aspects of school safety is documentation and evaluation, yet they are crucial to planning and safety response. Xaba (2014), carried out a study with an aim of examining effectiveness of safety measures at public schools in South Africa. The study interrogated various issues like; whether there were incident registers where all disruptions and safety violations were recorded, evaluated and finally shared with relevant segment of school community. The study indicated that the incident register was important because it helped the school administration to monitor safety threatening trends and know when and where to focus on before such incidents occur; and also to evaluate practice gaps in safety response that need to be addressed. Like the present study, the former study notes the importance of monitoring and evaluation for safety in schools. However, the study sample considered in the study was small, and the focus of the study was also on effectiveness of safety measures, rather than preparedness the teacher in provision of safety. Notable departure of present study from the ones reviewed on aspects of preparedness, namely knowledge, attitude and practices, is that it had three different categories of respondents other than teachers only.

Furthermore, unlike the studies done previously, Sub County Quality and Assurance Standards Officers were not included in any of those studies. While some of the studies were carried out in schools, most of the respondents in study population did not consist of teachers in a secondary school set up, as was done in this study. Additionally, only questionnaires were used, while in the present study, in-depth interviews were used to get a deeper understanding on emergency response preparedness. Finally, some studies were done in settings outside the school, hence the need to carry out this study.

Conceptual framework

This study was guided by conceptual framework (Figure 1) which helps to give a clearer understanding of relationships of the variables indicated. Leeds and Ormrod (2005) note that in the absence of a theory that can precisely explain the basis of a given study, then available literature can be used to formulate a conceptual framework. This presupposition is based on Grounded Theory developed in the early 1960s by Barney Glaser and Anselm Strauss, whose aim is to understand reality from the conception or meaning people hold about a certain context or object, so as to generate knowledge, improve understanding and provide a meaningful guide for action (Creswell, 2014). It allows investigation extraction meaningful aspects from social actors' experiences, which permits researchers to link theoretical constructs and intensify the expansion of knowledge. Grounded Theory helps in the development of a conceptual model that explains the phenomenon under study and which will enable the researcher to develop and relate concepts with one another (Dantas, Leite, Lima & Stipp, 2009). This approach was considered relevant to the study because it allows a researcher to develop concepts about the world of peoples' lives by it permitting one to reach a conclusion that can be generalized. Furthermore, allows a researcher to construct theoretical concept based on collected data on a given reality, and employs a sampling technique, which allows the researcher to search for data in places or through the testimony of people who have knowledge about the object of study.

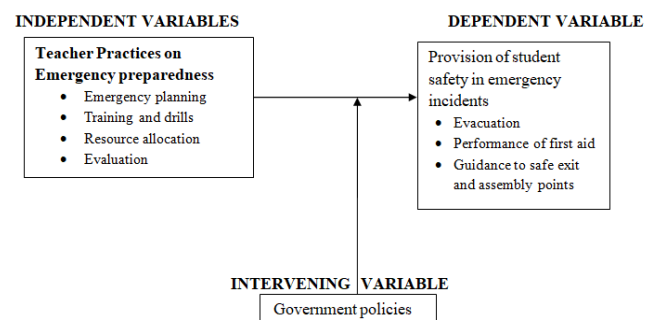


Figure 1. Conceptual Framework showing Contribution of Teacher Practices in the provision of Student Safety in Emergency Incidents in schools

Two types of variables were used in the conceptual framework; independent variables and dependent variable. Studies by Devi and Sharma (2015), Alharbi *et al.* (2016), and Menon, Pathrose and Priya (2016), showed that unless a responder had the requisite and relevant knowledge, correct attitude, and experience of certain safety practices, to be able to provide safety during an emergency. In demographic factors aspects such as age, sex and family status, level of income, previous exposure, years of job experience, race, level of

education or educational attainment were important as background factors in emergency preparedness and response (Ganpatrao, 2014; Reese *et al.*, 2012; Negradas-Varona, Man, Bolla, Bolinget & Illab, 2017). The studies showed that the demographic factors will influence the extent to which one can comprehend, appreciate, internalize information and skills related to; and react in a situation where there is a threat to safety. On the basis of relevance to this study; age, sex, level of education, years of experience and marital status will be interrogated to understand how they relate to preparedness in provision of safety. The independent variable is emergency response to student safety as indicated in Figure 1. It is influenced by level of teachers' preparedness. In a case where teachers are not well prepared, then students' safety is at risk. Aspects of emergency practices considered include; Emergency planning, training and drills, resource allocation and evaluation. Intervening variable is government intervention. In this study, the school safety management is the key government policy document because it spells out guidelines in disaster response preparedness. It identifies the areas of concern in preparedness, the expected levels of competency and skills preparation, as well as planning and evaluation in order to attain student safety. While the government is responsible giving guidance, challenges arise especially because allocation and late remittance funds which compromises timely training of teachers, exercises and drills, as well as acquisition of safety equipment. It is against the background of school safety manual that the contribution of attitude is interrogated in the study.

RESEARCH METHODOLOGY

The study adopted descriptive research design. The study population was 42 principals, 324 teachers, and 6 Sub County Quality Assurance and Standards Officers. Purposive sampling was used to select principals while teachers and were selected by saturated sampling from the respective schools of selected principals, and in the county under study. Study sample was 37 principals, 299 teachers and 4 Sub County Quality Assurance and Standards Officers. Questionnaire and interview schedule for Sub County Quality Assurance and Standards Officers, were used to collect data. Piloting was used to establish reliability of instruments; 5 principals, 25 teachers and 2 Sub County Quality Assurance and Standards Officers were included in piloting. Test-retest was used to determine reliability of the questionnaires, and Pearson's *r* was used at *p*-value of 0.05. Reliability co-efficient of 0.86 and 0.81 were attained for teachers' and principals' questionnaires, respectively. Validity was determined by experts in Educational Administration and Policy studies. Quantitative data was analyzed using mean, *t*-test, correlation and regression while qualitative data was coded, transcribed and organized thematically.

RESULTS

Return Rate: The return rate of the principals' questionnaire was 32 (86.5%) and teachers questionnaire was 270(90.3%). According to Mugenda and Mugenda (2003) the questionnaire return rate of 70% and above is good for analysis of the findings of the student and therefore in this case since the return rate were above 70%, analysis of data proceeded.

Demographic Characteristics of Respondents: The demographic characteristics of the respondents described in

this study were: sex, age, highest academic qualification, teaching experience, and teaching experience in current school. The descriptions are presented in Tables 2-5. Equally, Table 3 indicates that the sampled teachers distributed amongst all the age groups of respondents considered in the study. The highest representation of 114(42.2%) is in the age bracket of 21-30 years. However, the principals only spread within the age brackets 41-50 and 51-60 with the majority representation at 19 (59.4%) compared to 13(40.6%) respectively. Similarly, Table 4 showed that majority of teachers 221(81.9%) and principals 20(62.5%) who participated in the study had Bachelor of Education degree qualification. Table 5 shows that the most teachers 123(45.6%) were having 1-5 years of experience in teaching while a majority of principals 18(56%) were in the age bracket 21-30.

Research Question: The research question responded to was: What is the contribution of teacher practices in the provision of student safety in emergency incidents in public secondary schools in Kisumu County Kenya? Teacher practices were presented in four sub-themes namely; Development and updating of plans, training and drills, resource allocation and evaluation. The response to this research question by teachers in public secondary schools was presented in Tables 6 to 9 which gave the mean ratings and *t*-test results. Table 6 shows that the mean ratings of teachers (2.87) and principals (2.84) on periodic testing, review and updating of emergency plans, and with an overall mean rating of 2.87 was not significantly different ($t(300) = 0.157, p > .05$). Similarly, Table 6 indicates that the mean ratings of 3.07 and 3.09 for teachers and principals respectively on communicating response plans to the stakeholders, and with an overall mean rating of 3.07 had no significant difference ($t(300) = -0.140, p > .05$) between.

Equally, Table 6 indicates that the teachers' and principals' mean ratings of 2.97 and 2.81 respectively on regular collaboration and consultation with external response teams or emergency service providers, and with an overall mean rating of 2.95 had no statistically significant difference ($t(300) = 0.781, p > .05$). Thus, teacher practice on regular collaboration and consultation with external response teams or emergency service providers moderately contributed in the provision of student safety in emergency incidents. In overall, the mean ratings for teacher practice on developing and updating plans were; 2.97 and 2.92 for teachers and principals respectively, with an overall mean rating of 2.96. There was no significant difference ($t(300) = 0.474, p > .05$) between the mean ratings of teachers and principals. Table 7 indicates that the mean ratings for teachers (3.04) and (2.75) for principals on incorporating lessons learnt from emergency response drills and exercises, and an overall mean rating of 2.91 was not statistically significant difference ($t(300) = 1.418, p > .05$). Similarly, Table 7 shows that mean ratings for teachers and principals at 2.84 and 2.88 on training emergency responders had an overall mean rating of 2.85. The mean rating between teachers and principals was not significantly different ($t(300) = -0.147, p > .05$). This implied teacher practice on training emergency responders moderately contributed in the provision of student safety in emergency incidents. Table 7 also shows that the teachers' mean rating was 2.89, principals' mean rating 3.06 and the overall mean rating was 3.01. The mean ratings between the teachers and principals showed no statistically significant difference ($t(300) = -0.845, p > .05$). This implied that teacher practices on incorporating lessons learnt from previous emergency incidents moderately contributed in the provision of student safety in emergency incidents.

On emergency trainings and drills, Table 7 indicates the mean ratings for teachers (2.92), principals (2.90), and an overall mean rating at 2.92. These findings showed no significant difference ($t(300) = 0.263, p > .05$) between teachers and principals mean ratings. Therefore, teacher practice on trainings and drills moderately contributed in the provision of student safety in emergency. Table 8 shows the teachers' mean rating of 3.06 and 2.69 for principals' on allocation of resources in an emergency incident and an overall mean rating of 3.02. These mean ratings showed no statistical significant difference ($t(300) = 1.841, p > .05$). This meant that the teacher practices of allocation of resources moderately contributed in the provision of student safety in emergency incidents. Similarly, Table 8 indicates that the mean ratings for teachers (2.85) and (2.72) for principals on backup staff available during crisis, and with an overall mean rate of 2.84, was not significantly different ($t(300) = 0.648, p > .05$). Therefore, teacher practice on backup staff available during crisis moderately contributed in the provision of student safety in emergency incidents. However from the overall rating, contribution of back up staff has a lower moderate rating to all other safety activities. There is a possibility that most teachers were involved in providing safety all at once, and that back up element has less attention during an emergency. Furthermore, Table 8 shows the mean rating of teachers at 2.95, principals' mean rating at 2.84 and overall mean rating at 3.02, on identification of tasks in crisis. The test analysis indicated no statistical significant difference ($t(300) = 0.433, p > .05$) between teachers and principals mean rating. This implied that teacher practice on identification of tasks in crisis moderately contributed in the provision of student safety in emergency incidents. Table 8 also shows that the mean ratings for teachers and principals at 2.88 and 3.00 respectively, on matching tasks to resources available from the identified participants had an overall mean rating of 2.87. There was no significant difference ($t(300) = -0.991, p > .05$) between the teachers' and principals' mean ratings. This implied teacher practice on matching tasks to resources available from the identified participants moderately contributed in the provision of student safety in emergency incidents. In general, Table 3 shows that the mean ratings of teachers 2.95 and 2.84 for principals on emergency resource allocation, with an overall mean rating of 2.94 had no significant difference ($t(300) = 1.109, p > .05$) between the mean ratings. This meant the teacher practice on resource allocation moderately contributed in the provision of student safety in emergency incidents.

Table 9 shows that the mean ratings of 3.05 and 3.13 for teachers and principals respectively on evaluation of incidents, and with an overall mean rating of 3.06 had no significant difference ($t(300) = -0.366, p > .05$) between them and hence meant that teacher practice on evaluation of incidents moderately contributed in the provision of student safety in emergency incidents. Table 9 also indicates that the mean ratings of teachers at 2.89 and principals at 2.81, and with an overall mean rating of 2.88 on evaluation of options for hazards management implied no significant difference ($t(300) = 0.379, p > .05$). Hence, teacher practice on evaluation of options for hazards management moderately contributed in the provision of students' safety in emergency incidents. In addition, Table 9 shows that the mean ratings of 3.13 and 2.91 for teachers and principals respectively, and with an overall mean rating of 3.10 on evaluation of hazards that may result in emergency situation was not significantly different ($t(300) = 1.120, p > .05$). This meant teacher practices on evaluation of

hazards that may result in emergency situation moderately contributed in the provision of student safety in emergency incidents. Finally, teacher practice on evaluation had the teachers' and principals' mean ratings of 3.02 and 2.95 respectively, with an overall mean rating of 3.01 indicating there was no significant difference ($t(300) = 0.624, p > .05$) between the mean ratings of teachers and principals. This signified that teacher practices on evaluation moderately contributed in the provision of student safety in emergency incidents.

DISCUSSION

The study had both gender represented and would also help in understanding teacher preparedness since gender defines roles, behaviors, activities and attributes that a society considers appropriate in an emergency situation. In other comparisons have shown that there are statistically significant only for the associations between gender and the score for response practices (Mahdaviazad, & Abdolahifar, 2014) making gender representation a vital one in this study. Age was considered because it relates to how people respond to risk-related messages, and as a result determines responsiveness and emotional resilience. For instance, older people are considered more emotionally resilient than the younger people, due to their experience and understanding. On the other hand, younger people are more agile, more physically advantaged to respond faster in an emergency. Strang (2014) confirmed that age contributes to safety in emergency because it influenced decision making on response, and evacuation initiation time. It was thought that educational level could promote preparedness because education enhances individual cognitive skills, psychomotor and access to information. This is especially so when understanding of such competencies are required such as emergency training, development and updating of emergency plans, and evaluation to improve response. Studies have shown that there is a possible correlation between educational attainment and disaster response and preparedness (Negradas-Varona *et al.*, 2017). Years of experience imply risk perception and challenges that may have been encountered during the period of service. It may also influence teacher to get more information and knowledge about emergency incidents and as a result; improve on weak areas and implement lessons learnt for better preparedness in the provision of student safety (Taghizadeh *et al.*, 2012).

Teacher practice on periodic testing, review and updating of emergency plans moderately contributed in the provision of students' safety in emergency incidents. Teacher practice on communicating response plans to the stakeholders moderately contributed in the provision of student safety in emergency incidents. Stakeholders such as parents, Board of Management, teachers, security officers, local administration, play a pivotal role in the planning of school activities by various means, for instance; financing, participation, training among others, hence involving them in planning by sharing information with them can help teachers to improve their level preparedness, hence better safety of learners. Sub County Quality and Assurance Standards Officers noted that the plans in emergency and safety preparedness were of utmost importance to secure safety of learners in emergency. They recognized that while preparedness in planning has not involved all teachers fully, most schools identified teacher representatives to participate in planning for safety through the formation of safety committees within their schools.

Table 2. Distribution of Respondents based on Gender

Respondent	Male		Female		Total
	F	%	F	%	
Teachers	188	69.6	82	30.4	270
Principals	21	65.6	11	34.4	32
Total	209	69.2	93	30.8	302

Table 3. Frequency distribution based on the Age group of Respondents

Age	Teachers		Principals		Total
	F	%	F	%	
21-30	114	42.2	0	0	114
31-40	92	34.1	0	0	92
41-50	47	17.4	19	59.4	66
51-60	17	6.3	13	40.6	30
Total	270	100	32	100	302

Table 4. Teachers and Principals Academic Qualification Distribution

Highest academic Qualification	Teachers			Principals		Total
	F	F	%	F	%	
Diploma	22	8.1	2	6.3	24	
Bachelors	221	81.9	20	62.5	241	
Masters	26	9.6	10	31.2	36	
PhD	1	0.4	0	0	1	
Total	270	100	32	100	302	

Table 5. Teachers and Principals Years of Experience in Teaching

Years of Experience	Teachers		Principals		Total
	F	%	F	%	
1-5	123	45.6	0	0	123
6-10	60	22.2	0	0	60
11-20	57	21.1	12	38	69
21-30	22	8.1	18	56	40
31-40	8	3.0	2	6	10
Total	270	100	32	100	302

Table 6. Contribution of Teacher practices on developing and updating of plans in the provision of student safety in emergency incidents (Teachers, n=270 and Principals, n=32)

Aspects of teacher practice on developing and updating of plans	Respondent	Mean Rating	Overall Mean Rating	t- test
Periodic testing, review and updating of emergency plans	Teachers	2.87	2.87	t(300)=0.157, p=.875
	Principals	2.84		
Communicating response plans to the stakeholders	Teachers	3.07	3.07	t(300)=-0.140, p=.888
	Principals	3.09		
Regular collaboration and consultation with external response teams or emergency service providers	Teachers	2.97	2.95	t(300)=0.781, p=.435
	Principals	2.81		
Teacher practice on developing and updating of plans	Teachers	2.97	2.96	t(300)=0.474, p=.636
	Principals	2.92		

Interpretation of Mean Rating:

1.00-1.44=Very Low

1.45-2.44= Low

2.45-3.44=Moderate

3.45-4.44=High

4.45-5.00=Very High

This action shows schools recognize that involvement of teachers in planning is one way of improving safety provision in schools. This study finding agree with the findings of Sharifian *et al.* (2017), who sought to assess the health system's information on disaster management used by the decision-makers despite the fact that their study was done in a different setting, Their findings mentioned strategies which played a vital role to disaster preparedness in an organizational structure, resource planning mobilization, and strategies on evaluation, vulnerability assessment, and disaster response mechanisms.

According to the findings of that study, strategic planning was key to disaster preparedness. They concluded that more attention should be paid to disaster strategic planning in disaster preparedness, helping the organizations prepare and respond better in disaster. Furthermore, Mudavanhu (2014) whose study focused on school children's specific vulnerabilities addressed floods as hazard in Zimbabwe. Other than indicating the loss caused by floods in his findings like; loss of learning hours, loss of qualified personnel, outbreak of waterborne diseases, high absenteeism and low syllabus coverage leading to children's poor academic performance, his

Table 7. Contribution of Teacher Practice on trainings and drills in the provision of Student Safety in emergency incidents (Teachers n=270 and Principals n=32)

Aspects of Teacher Practice on training and drills	Respondent	Mean Rating	Overall Mean Rating	t- test
Incorporating lessons learnt from emergency response drills and exercises	Teachers	3.04	2.91	t(300)=1.418, p=.157
	Principals	2.75		
Training emergency responders	Teachers	2.84	2.85	t (300)=-0.147, p=.884
	Principals	2.88		
Incorporating lessons learnt from previous emergency incidents	Teachers	2.89	3.01	t (300)=-0.845, p=.399
	Principals	3.06		
Teacher practice on trainings and drills	Teachers	2.92	2.92	t (300)=0.263, p=.793
	Principals	2.90		

Interpretation of Mean Rating:

- 1.00-1.44=Very Low
- 1.45-2.44= Low
- 2.45-3.44=Moderate
- 3.45-4.44=High
- 4.45-5.00=Very High

Table 8. Contribution of Teacher Practices on Resource Allocation in the Provision of Student Safety in Emergency Incidents (Teachers, n=270 and Principals, n=32)

Aspects of Teacher Practice on resource allocation	Respondent	Mean Rating	Overall Mean Rating	t- test
Allocation of resources	Teachers	3.06	3.02	t(300)=1.841, p=.067
	Principals	2.69		
Backup staff available during crisis	Teachers	2.85	2.84	t(300)=0.648, p=.518
	Principals	2.72		
Identification of tasks in crisis	Teachers	2.95	3.02	t(300)=0.433, p=.666
	Principals	2.84		
Matching tasks to resources available from the identified participants	Teachers	2.88	2.87	t(300)=-0.991, p=.327
	Principals	3.00		
Teacher practice on resource allocation	Teachers	2.95	2.94	t(300)=1.109, p=.268
	Principals	2.84		

Interpretation of Mean Rating:

- 1.00-1.44=Very Low
- 1.45-2.44= Low
- 2.45-3.44=Moderate
- 3.45-4.44=High
- 4.45-5.00=Very High

Table 9. Contribution of Teacher Practices on Evaluation in the Provision of Student Safety In Emergency Incidents (Teachers, n=270 and Principals, n=32)

Aspects of Teacher Practice on emergency incident evaluation	Respondent	Mean Rating	Overall Mean Rating	t- test
Assessment of drills and trainings	Teachers	3.05	3.06	t((300) =-0.366, p=.714
	Principals	3.13		
Evaluation of options for hazards management	Teachers	2.89	2.88	t((300) =0.379, p=.705
	Principals	2.81		
Evaluation of hazards that may result in emergency situation	Teachers	3.13	3.10	t((300) =1.120, p=.264
	Principals	2.91		
Evaluation	Teachers	3.02	3.01	t((300) =0.624, p=.533
	Principals	2.95		

Interpretation of Mean Rating:

- 1.00-1.44=Very Low
- 1.45-2.44= Low
- 2.45-3.44=Moderate
- 3.45-4.44=High
- 4.45-5.00=Very High

findings further supports the essence of planning and adaptation of preparedness strategies to ensure that the risks specific to school children are addressed. Similarly, Adenakan, Balogun and Inem (2016) carried out a descriptive, cross-sectional study whose aim was to assess the knowledge, attitude, and practices of emergency personnel at two tertiary hospitals in Lagos with regard to emergency management and preparedness agrees with the findings of the present study. It showed that involvement in emergency planning is important to prepare for emergency.

They also noted that frequency of regularly updating the emergency plans were grossly inadequate. They concluded that there was an overall deficiency in the respondents' emergency preparedness and lack of planning led to poor response in emergency, agreeing with the findings of the present study that development of plans is essential in emergency response. Teacher practice on incorporating lessons learnt from emergency response drills and exercises moderately contributed in the provision of student safety in emergency incidents. Drills are used to simulate situations in real life, so that people learn to respond in the event of the actual incident

occurring, on the other hand, practices involve sharpening skills that are required in response to any incident. The findings from the study show that in the present study they contributed only moderately. The possible gap between what is expected in terms of drills and skills in this study could be a pointer to the possibility that teachers do not have sufficient skills, and that the drills are not done as required. Therefore when an incident occurred, they were only able to moderately contribute because of the deficiencies in the two areas of practice. This is confirmed by the study findings on training of emergency responders which indicated that training of emergency responders moderately contributed to safety. It is through training that skills are imparted for drills to be useful in enhancing provision of safety. Sub County Quality and Assurance and Standards Officer confirmed; "Frequent and school-wide emergency response drills and exercises are very important but a challenge to schools because they have to pay the service providers like St. John's Ambulance for in-house training, but schools try to do whatever they can. What is encouraging is that schools that have had drills and exercises manage safety issues extremely well, not just to ensure safety of students but also to ensure safety of the whole school community. It is my hope that schools make effort to train and drill the school community for better preparedness gains as exemplified in the schools that have had the sessions." According to Sub County Quality and Assurance and Standards Officers, it emerged that debriefing about child friendly schools, issues and reports on safety practices are shared in for a where different institutions and schools and their management are represented.

They affirmed that such meetings have been helpful to schools by improving their plans and strategies and aligning best practices and lessons on safety for future use. They also noted that information shared in such meetings help principals to incorporate teachers in adopting best practices in emergency response. Skryabina *et al.* (2017) reviewed and summarized published evidence from 86 studies on the effectiveness and benefits of exercises to prepare health emergency professionals for responding to emergencies and disasters. Its findings showed that emergency preparedness exercises were found to be effective at improving participants' knowledge of emergency activities, policies and procedures and improving overall competence and confidence. Other immediate individual benefits included improved perceptions of preparedness and improved understanding of individual roles and roles of partners. One of the Sub County Quality and Assurance and Standards Officer said; "from what I have seen in several school budgetary plans, and what we see on the ground, because we have the benefit of looking at the school budget, therefore looking at what they have on their vote-heads, the level of budget allocation on fire is small. Looking at our reports, we have constantly identified it as an area of gap for further improvement for most schools. I would rate it at 4 on a scale of 1-10, slightly below moderate." Like for any school activity which involves processes and equipment, financial and human resources are necessary to enhance safety preparedness. While money is required to purchase, and maintain equipment, as well as to train staff, who are required for actual response during an emergency. The moderate contribution of allocation to provision of safety could be because of inadequate allocation, hence teachers are not fully equipped to provide safety. The slight variation in the ratings of Sub County Quality and Assurance and Standards Officer and teachers could come because the teachers do not have the

exact details on the actual school budgets to be able to rate it with accuracy, however it is possible that from their experience, whatever allocation they have had, has served them fairly well. According to Sinclair (2012) affirms that poor decision-making by leaders, hence poor emergency management and insufficient calculation for resource allocation. This could result into a failed emergency response effort due to inadequate resource allocation. Furthermore, Merchant (2010) also indicated that organizational training programs for emergency responders are critical to quickly assist them improve their knowledge to identify and deploy appropriate resources in the overall response effort for better outcomes. Other studies agree with the findings of the present study that funds contribute immensely in safety in schools. In their studies; Sakurai *et al.* (2017), Morris *et al.* (2016) and Amri *et al.* (2016), found out that budgetary allocation is crucial for in preparing for safety provision, especially; to improve on training, install safety gadgets in schools, put security plan policies and procedures, and follow on their adherence.

Sub County Quality and Assurance and Standards Officer said; "I wish to categorically state that both human and financial resources allocated for provision of safety by some schools is quite dismal, sometimes even totally lacking in their financial allocation. On a scale of 1 to 10, I would rate it at 3. This implies that the process of developing a pool of teachers for emergency back-up is poor. Therefore the contribution of teachers who are on standby for response cannot yield much in cases of an emergency." The idea expressed by the Sub County Quality and Assurance and Standards Officer agrees with those of Sinclair (2012) which affirms that poor decision-making by leaders often means poor emergency management and insufficient calculation of funds for emergency. This could result into a failed emergency response effort due to inadequate resource allocation. Similar findings were recorded by Mabasa (2014), who carried out an evaluative study to assess implementation of Safe Schools Programme of the Limpopo Province of South Africa. The findings indicated that poor or inadequate resource and finance allocation is a barrier to implementation of the school safety programmes in Limpopo. Leandri (2011) also recorded findings similar to those of Mabasa (2014). He carried out a study on investigation of safety and security measures at secondary schools in Tswane, South Africa. He found out that funds are needed to install safety gadgets in schools, put security plan policies and procedures and follow on their adherence. This a slight departure from the findings of present study which showed that resource allocation moderately contributed to provision of students' safety in emergency incidents. The difference in mean rating on contribution of allocation and support back up may be due to differences in schools within specific area where the study was carried out. As earlier indicated by response of two Sub County Quality and Assurance and Standards Officers, some schools have fully involved their school community in safety preparedness programmes, therefore their extremely high ratings could have countered the lower ratings in the fewer schools to give a moderate contribution. This finding agrees with that of a study carried out by Ndetu and Kaluyu (2016). They sought to establish the factors influencing fire disaster preparedness in primary schools in Makeni County in Kenya. Their findings assert that resource allocation preparedness is fair and needs to be boosted by policy implementation in schools. Similarly, a study by Onderi and Makori (2013), asserts that there are

several competing activities that are given priority in the process of school budgeting, and this could hamper financial allocation to safety related activities leading to poor preparation teachers, hence poor response to emergency to safeguard well-being of students. According to Sub County Quality and Assurance and Standards Officer, post-event evaluation has been frequently done by the schools in the aftermath of the emergency incidents. He noted that stakeholders were keen to assess how their response worked and where it failed. However, he noted that the implementation of the lessons learnt was still a challenge due to poor financial allocation to such activities. He thus noted that the theoretical approach to evaluation without implementation does not yield much when it comes to response during emergency incidents. While there seems to be a little deviation from the findings in terms of extent of contribution of evaluation, the Sub County Quality and Assurance and Standards Officer recognizes that evaluation can contribute to safety if the lessons are put to practice. Teacher practices on emergency preparedness moderately contributed in the provision of student safety in emergency incidents. Finally, the Sub County Quality and Assurance and Standards Officers noted that schools do not have sufficient funds to enable them to buy or maintain First Aid equipment, and that the more government allocation should help them to enhance this.

Conclusion

On the contribution of teacher safety practices including planning, training and drills, resource allocation and evaluation contributed moderately in the provision of student safety in emergency incidents. In overall, the findings of the study showed that trainings and drills and resource allocation contributed the least of all practices, followed by poor planning, and collaboration and consultation with external response providers.

Recommendations

With regard to training and drills, this should be carried out more frequently to improve teachers' competence in the provision of student safety in emergency incidents in schools. On resource allocation, the school management should plan for and allocate more resources to improve teacher preparedness in providing student safety in emergency incidents in schools. School management should work towards improving relationship with service providers so as to work as a team with their teachers to improve their preparedness to provide student safety in emergency incidents in schools.

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