



RESEARCH ARTICLE

CONTRIBUTION OF TEACHER ATTITUDE TO MANAGEMENT OF STUDENT SAFETY IN EMERGENCY INCIDENTS IN PUBLIC SECONDARY SCHOOLS IN KENYA: A CASE STUDY OF KISUMU COUNTY

<sup>1</sup>Berther Kute, <sup>2,\*</sup>Enose M.W. Simatwa and <sup>3</sup>Florence Y. Odera

<sup>1</sup>Department of Educational Management and Foundations, Rongo University, Kenya

<sup>2</sup>Department of Education Policy and Management, Tom Mboya University College, Kenya, (A Constituent College of Maseno University)

<sup>3</sup>Department of Curriculum Instruction and Media, Rongo University, Kenya

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ABSTRACT

Parents expect a secure 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 of 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 has been done to explore teacher attitude towards management of student safety in emergency incidents in public secondary schools. The objective of this study was to establish the contribution of teacher attitude to management of students' safety in emergency incidents in public secondary schools in Kisumu County. The study established that teacher attitude highly contributed with overall mean rating of 3.60. Findings of this study are important to educational administrators, policy makers and planners in understanding how teacher attitude contributes to management of students safety in emergency incidents in public secondary schools in Kisumu County.

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INTRODUCTION

An emergency incident means 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, and 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).

\*Corresponding author: Enose M.W. Simatwa, Department of Education Policy and Management, Tom Mboya University College, Kenya, (A Constituent College of Maseno University).

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. 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 lightening, 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

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; Migiro, 2012; Ng'ang'a, 2013). Other study findings, for example; Mangoa (2012) and Shibutse, Omuterema and China, (2014), confirm that while some schools are yet to implement the school safety manual at all, a number of schools have made some progress to implement the policy despite various challenges.

Moreover, attitude is also considered as relevant in preparing to respond to an emergency. Gowan, Sloan, and Kirk (2015) indicate that there are attitudes and behaviors that people can develop to increase their readiness and capacity for drastic life changes, encompassing not only health-protective preparedness actions but health-promoting attitudes for being sensitive to risk and improve resilience as also. Helander and Khalid (2016) further agree that risk attitudes that exist between cultural and genders affects perception, comprehension and projection during a disaster. They also revealed that attitudes and experience of disasters can influence survival of victims. Bin Shalhoub, Khan, and Alaska (2017) and Devnani (2012) also note that in an emergency, there are key safety practices that are important to put in place because safety facilitates passing of information that increases awareness in response and skills, resource allocation and planning in emergency. Findings of previous researches point to the possibility that disaster preparedness has a correlation with certain socio-demographic characteristics such as education, race, education, income, gender as well as age of individuals. For example, Zigelbaum et al. (2014), carried out a study to identify factors that impact willingness to deploy in the event of an emergency. In this study by Zigelbaum et al. background demographic variables such as education, age, minority ethnicity, and female gender were used as predictors of disaster preparedness. The findings of the study show that gender played a key role in willingness to deploy. The female were less willing to deploy during emergencies.

Similarly, a study by Reese, Johnston, Tuohy, Becker, and Coomer (2012) suggest findings as those of Zigelbaum et al. (2014). Reese et al. carried out a study on flood perception, preparedness and response to warning in Kaitai, Northland, New Zealand. They noted that some demographic factors such as; age, sex and family status were important in emergency preparedness and response. Schmidlin (2014) further notes that due to variation in socio-demographic characteristics, there should be disparities among individual disaster preparedness with respect to their age, race, education, gender, income. It is notable that studies on socio-demographic background focused on the community and hospital setup. While knowledge and skills acquisition is important in preparedness for emergency response, Martinez-Leon and Martinez-Garcia, (2011) recognize the fact that within an organization, a complex web of issues will contribute to efficiency in emergency response, and among these include; leadership, communication, facilities, policies and funding. 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 affirms that poor decision-making by leaders, hence poor emergency management and insufficient

calculation. This could result into a failed emergency response effort due to inadequate resource allocation. 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, Ricci, Griffin, Heslin, and Dobalian (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 note 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.(2016) 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. All these circumstances compromise the preparation of responders in an emergency.

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. The findings of a study of selected boarding secondary schools in Kenya, carried out by Maritim, Mwongeli, and Barmao (2015) report the implications of budgetary constraints for safety preparedness. 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 available 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 resources.

**Research Objective:** The research objective was to establish contribution of teacher attitude to Management of Student Safety in emergency incidents in Public Secondary Schools

**Synthesis of literature on contribution of teacher attitude to management of student safety in emergency incidents**

**Attitude on Management of Risk in Provision of Safety in Emergency Incidents:** A study by Center for Disease Control (2015) showed that knowledge influences behavior, and that attitudes and beliefs, which are correlated with knowledge, might also influence behavior. To determine the association between knowledge and beliefs and household preparedness,

Center for Disease Control analyzed baseline data from Ready Center for Disease Control, a personal disaster preparedness intervention piloted among Atlanta- and Morgantown-based Center for Disease Control staff members during 2013–2015. Compared with people with basic preparedness knowledge, people with advanced knowledge were more likely to have assembled an emergency kit, developed a written household disaster plan and received county emergency alert notifications. Similarly, differences in household preparedness behaviors were correlated with beliefs and attitude about preparedness. Persons identified as having strong beliefs in, and positive attitude about the effectiveness of disaster preparedness engaged in preparedness behaviors at levels higher than those with weaker preparedness beliefs, and poor attitude. The findings assert the relationship between knowledge and beliefs on household disaster response preparedness, however, this relationship was established among households while the present study was done among teachers. According to Negradas-Varona et al. (2017), attitude and practices of the respondents on DRRM has a great impact especially during times of disaster. The aim of the study was to establish the relationship between the socio-demographic characteristics and attitude toward, knowledge on disaster risk reduction and management. This study employed both survey and correlational designs. Data was collected by use of questionnaires from Barangay officials in Philippines.

On their part, Helander and Khalid (2016) explored disaster risk attitudes in Kuala Lumpur, Malaysia. Their study focused on the effects of cultural groups and gender on risk attitudes on natural and human-induced disasters, considering several components of risk attitude. The findings of the study showed that risk attitude played a role in disaster response, and further confirmed that were significant differences in risk attitudes between cultural groups and gender. The study confirmed that there was an interaction using attitudes and experience of disasters in psycho-cultural analysis of social challenges. Similar findings were established by Ciampi, Gell, Lasap, and Turvill (2011), whose study sought to examine the relationship between gender and attitude in emergency. Their findings confirmed that due to their daily task of decision making in the family, men were more likely to be more composed and positive in making decisions with regard to response when faced with a stressful situation, as opposed to women. The two studies showed attitude about level of and exposure to risk played a role in decision making, hence influencing safety. Studies by Helander and Khalid (2016) and Ciampi et al. (2011), both confirm that risk attitude in emergency has a correlation with cultural groups and gender in terms of decision making, however, they do not quantify the contribution of attitude in risky or emergency situations. The studies were also carried out using small number of family group respondents whereas the current study used a larger sample of individual respondents, which led to more in-depth and diversified data. Equally, findings of Mahdaviyad and Abdolahifar (2014), showed that while the knowledge of households regarding disaster preparedness was encouraging, that of attitudes and practices needed to be improved. The aim of their cross-sectional survey study was to assess knowledge, attitudes, and practices of households regarding natural disasters in Shiraz, Iran. The data collection tool was a self-administered questionnaire. Mean scores for all knowledge, attitude and practices were higher in women and married participants. In other comparisons, the differences were statistically significant only for the associations between

gender and the score for practices. The mean knowledge score was lower in illiterate participants than in other categories of educational status. The method of analysis by use of mean scores is common between the study by Mahdaviyad and Abdolahifar, and the present study, however the former study sought to assess knowledge, attitudes, and practices of households but did not explore how the three factors contribute to safety. According to a study by Pekez-Pavliško, Račić, and Jurišić (2018), the lack of experience and positivity in ones' ability can hamper participation in emergency response. The aim of the study was to explore family physicians' attitudes, previous experience and self-assessed preparedness to respond or to assist in mass casualty incidents in Croatia. Study participants were recruited through a Facebook group that brings together family physicians from Croatia, and completed the questionnaire, which was distributed through internet. Knowledge and attitudes toward disaster preparedness were evaluated by Analysis of variance, Student t test and Kruskal-Wallis test t were used for statistical analysis. Findings of the study showed that the family physicians believed that they are not well prepared, hence incompetent to participate in the event of a national or even local community emergency response system for disaster. This study showed that attitude and belief in ones' ability can determine the extent of inclusion to provide safety, however, this study was done among doctors on a digital platform hence different from the present study.

**Attitude on evacuation in the provision of safety in emergency incidents:** Dixit, Wilmot, and Wolshon (2012) carried out a study whose aim was to provide planners and practitioners with an ability to measure a person's risk attitude and develop appropriate strategies that could motivate people to evacuate. The study used the Hurricane Andrew response data in conjunction with time-dependent data on the probability of a hurricane strike and the category of the hurricane data to develop a model for evacuation departure choice. Findings of their study showed that among other factors such as time of day, length of time spent in a region, and whether a mandatory evacuation order, risk attitudes affected the rate of evacuation, reducing levels of safety among victims. Equally, Lim, Lim Jr. and Piantanakulchai (2013) carried out a study to establish evacuation decision during flood disasters indicates the choice of households to evacuate or stay from area at risk. This may be viewed as simple decision but involves complex behavioral and other external factors. Evacuation decision serves as key input to transportation planning in the event of flood, hence, careful consideration of the factors that determine this decision should be done. Such factors include broadly the characteristics of households and their capacity as well as risk attitude-related factors. On the other hand, findings by Kimoto, Fujimi, Yoshinda, and Kim (2016) in Japan showed that the main cause promoting precautionary evacuation behaviour was fear of the natural disaster. The study found that there was precautionary evacuation in Aso city and Minamiaso village, however, participation rate of precautionary evacuation found to be been very low. With this discovery, the study further interrogated factors that promote and impede precautionary evacuation behavior among evacuees basing the process on protection motivation theory. The factors impeding precautionary evacuation behaviour were predominantly psychological aspects such as the annoyance and negative attitude with regard to moving to a shelter or staying at a shelter which is shared with other evacuees.

In their study, Sun, Yamori and Kondo (2014) argued that negative attitudes toward tsunami risk reduction seen among community residents due to the reappraisal of tsunami predictions by Japanese government agencies after the 2011 Great East Japan Earthquake. They summarized the negative attitudes into three types: overly optimistic, overly pessimistic, and overly dependent. The study adopted “single-person drill” to alleviate these attitudes, for example by shifting tsunami risk reduction from the community level to the individual level. In addition, school children have participated in the drill by actually supporting the evacuees, disaster education thus was improved concurrently with intergenerational risk communication. Activities of both tsunami evacuation and disaster education are expected to make contributes to tsunami risk reduction. From the study, it is apparent that alleviation of these negative attitudes improved risk reduction and supported evacuation cues from community members. While the studies reviewed on evacuation attitude show its positive contribution in providing safety, it is clear that these studies were focusing on evacuees’ attitude rather than responders’ attitude. Meaning that there is apparent lack of studies on responders’ attitude and how this contributes in the provision of safety. The current study will therefore bridge this gap of knowledge by looking at the contribution of attitude of teachers’, who form on site responders in emergency in schools.

**Attitude on communication and provision of safety in emergency incidents:** Being positive in communication can make a great contribution during the in-crisis stage by assisting the decision-makers during the response stage, empowering them to get the best possible result for the crisis. Appropriate in-crisis communication can thus assist to lessen the crisis and aid in crisis recovery (Hale, Duluk, and Hale, 2005). Specifically, corporate communication practitioners need to step up to the plate to unlock the value of communication during the in-crisis situation. Beggs (2018) notes that timely, succinct, and accurate messaging to the public are critical components of risk communication during a disaster. Crisis and emergency risk communication is the process of understanding public perceptions and, in response, developing messages to address public concern and provide information on how to respond to a disaster to minimize morbidity and mortality. Fundamental principles and best practices should be followed and developed into a plan to create messaging to the public that is easy to understand and follow. Expanding forms of social media have provided great opportunities to reach affected communities. However, challenges and barriers to Crisis and emergency risk communication methods can result in public confusion and distrust. Therefore, it is essential that great care is taken with Crisis and emergency risk communication message development and dissemination during disasters.

Further to that, a study by Strang (2014) sought to establish several variables on evacuees’ attitude in emergency. Among different elements, he studied; peri-event cues, evacuation and safety-related beliefs and attitudes, peri-event behaviors, attitudes, and perception of risk and evacuation route beliefs, and perception of risk. Items were on risk perception, including whether or not the evacuee believed authorization or permission was needed prior to evacuation, importance of fire safety in the workplace, and belief in one’s preparedness based on prior safety training and length to initiate and complete evacuation. Post-positivist ideology was employed, quantitative data were collected from an online survey, and

analyzed using correlation, stepwise regression, ordinary least squares regression, and logistic regression. According to the findings of the study, a Public Address System was more effective in persuading individuals to leave zones of danger, and evacuate compared to using responders to persuade individuals to leave. Strang emphasized that an effective evacuation must be focused on use of Public Address system, as it asserts the aspect urgency in people’s mind, they respond positively, making them evacuate. He further reports that the findings about an interdisciplinary research study was conducted by public health scientists from the Mailman School of Public Health at the Columbia University in the New York City had similar findings. However, both studies by Strang, and Beggs (2018) employed purely quantitative methods of data analysis, while the present study included the use of qualitative data obtained through interviews.

In another study, Vieira, dos Santos, and de Moraes (2014) used a qualitative approach through documentary analysis based on reports to analyze types of communication in the aviation operational environment. They concluded that there was need for an improvement on attitude on implementation of emergency Communication skills training to aviation professionals, in order to develop abilities to detect threats and communicate clearly the need for support to manage risks. Communication effectiveness and efficiency represent the most important pillars to maintain safety in an in operations. Viera et al. (2014) concluded that; aviation professionals have a great responsibility and they ought to be positive in providing a fully understandable communication process, otherwise the consequences can be catastrophic; also, they noted that continuously address resources and make efforts to build up a real safety operation through a reliable and shared communication process will create a safety-oriented culture. The former study recognizes that as professionals, aviation staff should pay attention to detail of communication. This was one of the areas that was the concern of the present study, but the present study considered teachers as interest group. In terms of methodology, Viera et al. collected their data from reports, by employing content analysis which a departure from this study, whose data was collected using interview schedule and questionnaires.

**Attitude on rescue procedures and provision of safety in emergency incidents:** Li, Jiang, Jin, Qui, and Shen, (2012) who carried out a study whose aims were to assess a baseline level of first aid knowledge and overall attitudes regarding first aid among staff members in Shanghai preschools, and their data was collected by use of a questionnaire. While results of the study indicated that overall staff knowledge of first aid was lacking, they reported that teachers had a very positive attitude towards use of First Aid. For attitudes towards administering first aid, the majority felt positive that knowledge and provision of first aid is vital in the safety of learners. Regarding attitudes towards learning first aid, the vast majority felt that it was important and useful skill for them to learn. Li et al. considered knowledge and attitude on first Aid only while this study will explore more aspects of knowledge on teacher preparedness. Furthermore, Li et al. carried out their study among teachers in a preschool context, while the present study will be done in secondary schools. The findings of Merchant, Leigh and Lurie (2010) also confirmed that training programs for emergency responders are critical in training of health personnel is positively associated with development of a positive attitude and willingness to volunteer and deploy in the

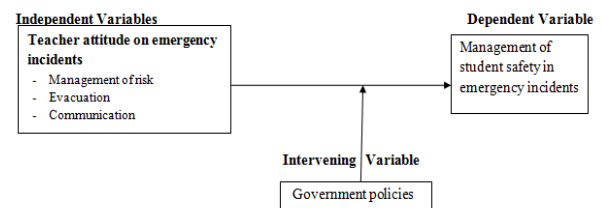
event of a disaster. These findings underscore the importance of attitude and willingness as an important element in preparedness as it closely linked to acquisition of skills and enhances positive self-perception, improving safety during an emergency response effort by responders. At the same time, a study by Merngany (2016), revealed that teachers had considerably scanty knowledge regarding the first-aid management of dental trauma. The study noted that most of the participants had a positive attitude toward management of the traumatic dental injuries. The aim of the study was to assess the level of knowledge and attitude of Sudanese school health teachers in Khartoum state regarding first aid management of dental trauma. A cross sectional study of self-administered questionnaire consists of; demographic data, self-assessment, knowledge and attitude, was filled by respondents in schools like was done in this study. Inadequate knowledge regarding the management of tooth fracture and avulsion was observed. Most participants were unsatisfied with their awareness and suggested further education on the topic should be offered. He noted that there is no statistical significant difference, while significant relationship was found between attitude and first aid training. Merngany sought to establish relationship between knowledge and demographic variations like was done in the present study. Merngany (2016) like Devi and Sharma (2015) also used self-administered questionnaires as was done in the present study, however, the scope of the present study covered first aid knowledge beyond dental trauma incidents.

Similar findings are recorded by 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. On attitude, they found that respondents' attitude toward emergency preparedness was positive, and believed that they needed to have knowledge about emergency planning for better response in emergency to enhance safety. However, Adenakan et al. carried out their study did not employ quantitative analysis in their study, and so were unable to quantify contribution of attitude in emergency incidents. Ronoh and Wambua (2009) investigated the adequacy of procedures, precautions and infrastructure to respond to fire outbreaks and destructive violence with a view to making recommendations for improving safety conditions in schools in Kenya. The study adopted a survey research design in which a random sample of 210 respondents was drawn from seven secondary schools in Turkana District, Kenya, which included students, head teachers, teachers, non-teaching staff, community members and key informants. Observation method was also used to complement interviews in data collection. They analyzed data by using both descriptive and inferential statistics. The findings showed that there were no awareness programs of school safety needs in Turkana District; teachers were not keen on improving their skills, hence poorly prepared to respond to fire outbreak and destructive violence. Based on these findings, they concluded that schools should be advised to improve teacher competence, involvement and perception through fire drills and talks periodically in order to improve the attitude, and the level of awareness on school safety needs; the schools should also conduct training of staff and students on how to prevent violence in order to improve preparedness; schools should not over depend on reactive policies and legislation at the expense of pro-active programs that seek to involve other stakeholders like community in management of

The findings of the study underscore the role of training, drills and talks to improve attitude, perception and skills which contribute to safety.

## 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 and Stipp, 2009).



**Figure 1. Conceptual Framework showing contribution of teacher attitude to management of Student Safety in emergency incidents**

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. Two types of variables were used in the conceptual framework; independent variables and dependent variable. Independent variables was attitude. 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 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 and 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 was interrogated to understand how they related

On the basis of relevance to this study; age, sex, level of education, years of experience and marital status was interrogated to understand how they related 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 teacher attitude are; management of risk, evacuation, communication, and rescue activities. Gender, age, academic qualification, years of experience and marital status were considered as demographic characteristics. 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.

## MATERIALS AND METHODS

The study adopted descriptive and correlational research design. The study population was 42 principals, 324 teachers, and 6 Sub County Quality Assurance and Standards Officers. Saturated sampling was used to select 37 principals, 299 teachers and 4 Sub County Quality Assurance and Standards Officers after the pilot sample was set aside. 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 means and  $t$ -test while qualitative data was coded, transcribed and organized thematically.

## RESULTS

### Research Question

The research question responded to was: To what extent does teacher attitude contribute in the management of student safety in emergency incidents? Table 1 shows that teachers and principals' attitude on readiness to identify evacuation points had mean ratings of 3.23 and 3.19 respectively, with an overall mean rating of 3.21. These indicated no significant difference [ $t(300) = 0.325, p > .05$ ] between the mean rating of teachers' and principals' on readiness to identify evacuation points. Thus, suggesting that teacher attitude on readiness to identify evacuation points moderately contributed in the provision of student safety in emergency incidents. Also, Table 1 on readiness to assess risky emergency situation indicates mean ratings of 3.56 for teachers and 3.28 for principals', with an overall mean rating of 3.42.

These mean ratings were not significant different [ $t(300) = 1.942, p > .05$ ]; hence, indicating that teacher attitude on readiness to assess risky emergency situation highly contributed in the provision of students' safety in emergency incidents. Equally, Table 1 shows that the mean ratings on readiness to participate in risky situation were 3.55 for teachers and 3.38 for principals, and with an overall mean rating of 3.47. The ratings had no significant difference [ $t(300) = 1.057, p > .05$ ], implying that teacher attitude on readiness to manage a risky situation highly contributed in the provision of student safety in emergency incidents. However, all in all the mean ratings on management of risk in the provision of student safety in emergency incident of 3.45 for teachers and 3.28 for principals had an overall mean rating of 3.36. This showed that there was significant difference [ $t(300) = 2.136, p < .05$ ] between the teachers' and principals' mean ratings. This means that the teachers' mean was higher than the principals mean. Thus teachers overallly rated the contribution as high while principals rated it as a moderate. Table 2 shows that the teachers mean rating was 3.63 and for principals 3.50 on interest to evacuate victims/casualties via alternate exits or safe routes, with an overall mean rating of 3.57.

The mean ratings showed no statistically significant difference [ $t(300) = 0.749, p > .05$ ]. This implied that teacher attitude on interest to evacuate casualties highly contributed in the provision of student safety in emergency incidents. Table 2 also indicates that the teachers and principals mean rating of 3.79 and 3.81 respectively, on willingness to guide victim/casualties to the assembly point, and with an overall mean rating of 3.80, had no significant difference [ $t(300) = 0.133, p > .05$ ]. Hence, teacher attitude on willingness to guide victims to assembly point highly contributed in the provision of students' safety in emergency incidents. Similarly, Table 2 indicates that the mean ratings of 3.61 and 3.41 for teachers and principals' on teacher willingness to rollout lock-down activities, with an overall mean rating of 3.51 was not significantly different [ $t(300) = 1.147, p > .05$ ]. Table 2 shows that all in all the mean ratings of 3.68 and 3.57 for teachers and principals, and with an overall mean rating of 3.63 on teacher attitude to evacuation were not significantly different [ $t(300) = 1.008, p > .05$ ]. This meant teacher attitude on evacuation highly contributed in the management of student safety in emergency incidents.

Table 3 indicates that the mean ratings for teachers (3.78) and (3.66) for principals on readiness to report emergencies to the relevant service providers, and with an overall mean rating of 3.72 showed no statistically significant difference [ $t(300) = 0.690, p > .05$ ]. Table 3 shows that the mean ratings for teachers and principals at 3.47 and 3.38 respectively, on promptness to trigger alarm signals with an overall mean rating of 3.43 indicates no significant difference [ $t(300) = 0.497, p > .05$ ]. This implied teacher attitude on promptness to trigger alarm signals moderately contributed in the provision of student safety in emergency incidents. Lastly, on readiness to report emergencies to school administration indicates teachers' mean rating of 3.69, principals' mean rating of 3.66 and an overall mean rating of 3.68. These mean ratings between teachers and principals showed no statistically significant difference [ $t(300) = 0.182, p > .05$ ]. Thus, suggesting that teacher attitude on readiness to report emergencies to school administration highly contributed in the provision of student safety in emergency incidents. In overall, Teacher attitude to incidental communication indicates that between the mean

**Table 1. Teacher attitude on management of risk in the provision of student safety in emergency incidents (Teachers, n=270 and Principals, n=32)**

Aspects of teacher attitude on management of risks	Respondent	Mean Rating	Overall Mean Rating	t- test
Readiness to identify evacuation points	Teachers	3.23	3.21	t(300)=0.325, p=.747
	Principals	3.19		
Readiness to assess risky emergency situation	Teachers	3.56	3.42	t(300)=1.942, p=.058
	Principals	3.28		
Readiness to participate in a risky emergency situation	Teachers	3.55	3.47	t(300)=1.057, p=.291
	Principals	3.38		
Management of risk	Teachers	3.45	3.36	t(300)=2.136, p=.034
	Principals	3.28		

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 2. Teacher attitude on evacuation in the provision of student safety in emergency incidents (Teachers, n=270 and Principals, n=32)**

Aspects of teacher attitude on evacuation	Respondent	Mean Rating	Overall Mean Rating	t- test
Interest to evacuate victim/casualties via alternate exits or safe routes	Teachers	3.63	3.57	t(300)=0.749, p=.454
	Principals	3.50		
Willingness to guide victim/casualties to the assembly point	Teachers	3.79	3.80	t(300)=0.133, p=.895
	Principals	3.81		
Willingness to roll out lock-down activity	Teachers	3.61	3.51	t(300)=1.147, p=.252
	Principals	3.41		
Evacuation	Teachers	3.68	3.63	t(300)=1.008, p=.314
	Principals	3.57		

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 3. Teacher attitude on communication in the provision of student safety in emergency incidents (Teachers, n=270 and Principals, n=32)**

Aspects of teacher attitude on communication	Respondent	Mean Rating	Overall Mean Rating	t- test
Readiness to report emergencies to the relevant service providers	Teachers	3.78	3.72	t(300)=0.690, p=.490
	Principals	3.66		
Promptness to trigger alarm signals	Teachers	3.47	3.43	t(300)=0.497, p=.619
	Principals	3.38		
Readiness to report emergencies to school administration	Teachers	3.69	3.68	t(300)=0.182, p=.856
	Principals	3.66		
Communication	Teachers	3.65	3.61	t(300)=0.784, p=.433
	Principals	3.56		

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 4. Teacher attitude on rescue activities in the provision of student safety in emergency incidents (Teachers, n=270 and Principals, n=32)**

Aspects of teacher attitude on rescue activities	Respondent	Mean Rating	Overall Mean Rating	t- test
Confidence to administer First Aid to the casualties	Teachers	3.53	3.33	t(300)=2.062, p=.040
	Principals	3.13		
Desire to assist those in immediate danger	Teachers	3.88	3.79	t(300)=1.182, p=.238
	Principals	3.69		
Management of irrational behavior	Teachers	3.66	3.61	t(300)=0.551, p=.582
	Principals	3.56		
Rescue activities	Teachers	3.69	3.58	t(300)=2.234, p=.026
	Principals	3.46		

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 5. Contribution of Teacher attitude to management of student safety in emergency incidents (Teachers, n=270 and Principals, n=32)**

Aspects of Teacher Attitude	Respondent	Mean Rating	Overall Mean Rating	t- test
Teacher Attitude	Teachers	3.61	3.54	t (300)=2.814, p=0.005
	Principals	3.47		

**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

ratings for teachers (3.65) and principals (3.56), and with an overall mean rating of 3.61, there were not significantly different [ $t(300) = 1.007, p > .05$ ]. Table 4 indicates that the mean ratings of teachers and principals at 3.53 and 3.13 respectively on teacher confidence to administer First Aid to the casualties, and with an overall mean rating of 3.33 showed significant difference [ $t(300) = 2.062, p < .05$ ]. This suggested that teacher confidence to administer First Aid to the casualties moderately contributed in the provision of students' safety in emergency incidents. Table 4 also shows that there was no significant difference [ $t(300) = 1.182, p > .05$ ] between the mean ratings of 3.88 and 3.69 for teachers and principals respectively on the desire to assist those in immediate danger. Teachers' and principals' mean ratings of 3.66 and 3.56 respectively, and with an overall mean rating of 3.61 on management of irrational behavior, showed no statistical significant difference [ $t(300) = 0.551, p > .05$ ] between the mean ratings of teachers and principals. Hence, teacher attitude on management of irrational behavior through what is said or done highly contributed in the provision of student safety in emergency incidents. In overall, Table 4 shows that the mean ratings between the teachers (3.69) and principals (3.46) on rescue activities, and with an overall mean rating of 3.58 indicated significant difference [ $t(300) = 2.234, p < .05$ ]. Therefore, the mean rating for teachers was greater than the mean rating for principals. Hence, teacher attitude on rescue activities contributed highly in the provision of student safety in emergency incidents compared to the principals mean rating. From Table 5, finally it can be observed that all in all the contribution of teacher attitude in its totality to management of student safety in emergency incidents was high, though principals' ratings were lower than teachers ratings [ $t(300) = 2.814, P < 0.05$ ].

**DISCUSSION**

Mean rating for the teachers was greater than the mean rating for principals. Teacher attitude on management of risk highly contributed in the provision of student safety in emergency incident compared to the principals'. This was in agreement with Sub County Quality Assurance and Standards Officer's interview finding. For instance the Sub County Quality Assurance and Standards Officer 3 stated: "Our teachers are very positive when it comes to response in emergency. In fact when they are advised on what to do, they are usually receptive, and usually implement what they are told. Most of the teachers, especially those in charge of different departments like boarding, games, senior teachers, deputies and principals are very receptive" Sub County Quality Assurance and Standards Officer for further reiterated. Teacher attitude on willingness to rollout lock-down activity highly contributed in the provision of student safety in emergency incidents.

In events of aggression, lock down activities can save lives. This is because they curtail access of aggressors or authorized entry in to a school compound or even into individual buildings, rooms or offices. It also helps to contain victims by restraining their movements which can lead to further exposure to danger, hence ensuring their safety. Teachers' have a positive sense of responsibility in discharging their services to the students in the event of an emergency incident. Upon being interviewed, Sub County Quality Assurance and Standards Officer's 4 said; "Our teachers' attitude when it comes to evacuation is good. On several occasions, teachers have showed commitment in ensuring that students are evacuated. Some of the teachers who stay outside the school compound have availed themselves quickly when an emergency occurs, within very short notice. Some of them who even just get to hear information from other sources other than the principals have always responded without being notified by the school. This has always ensured that students are kept away from danger as much as possible" Findings of Centre Disease Control (2015) reported that attitudes and beliefs, which are correlated with knowledge, and preparedness behaviors were also correlated with beliefs about preparedness. Centre for Disease Control (2015) confirmed that effectiveness of disaster preparedness engaged in preparedness behaviors at levels 7%–30% higher than those poor attitudes with weaker preparedness beliefs, therefore agreeing with the findings of this study on attitude of teachers on evacuation. Teacher attitude on readiness to report emergencies to the relevant service providers highly contributed in the provision of student safety in emergency incidents. Help in an emergency can only be obtained if the person in danger relays that information to a respondent for help. Therefore, when teachers who are first responders in school take that action, then it definitely contributes highly to positive and favourable outcomes in an emergency incident, as was shown in the present study.

Hyvärinen, Laajalahti, and Vos, (2015) carried out a study whose aim was to clarify how citizen response to crises is being enhanced, and how it might be possibly increased. Its findings show that emergency response organizations in member states of the European Union has low commitments to the prevailing strategies and tools among organizational responders. Like in the present study, Hyvärinen et al. (2015) recognize that individual and community attitude in communication is critical to disaster preparedness and response to ensure that morbidity and mortalities are minimized. In response to the question on the extent to which attitude on triggering of alarms helps in provision of safety, Sub County Quality Assurance and Standards Officer 2 noted that; "On the whole, trigger of mechanical alarms has played a very small role because a large number of schools do not have such facilities. Teachers are more positive using of verbal alarms like in case of fire; they simply shout "fire, fire".



I believe that if alarm facilities are in better supply, and teachers learn to appreciate them, then it mean better safety levels for the students” Teacher attitude on incidental communication highly contributed in the provision of student safety in emergency incidents. It is apparent that teachers are committed to readily share the information that they have with the school administration. This could be imply that the school administrators have an open door policy when dealing with teachers with regard to information sharing between them and teachers on information on provision of safety of students. It is also possible that communication channels are clear enough, and therefore facilitating easy reporting of incidents. Teacher attitude on desire to assist those in immediate danger highly contributed in the provision of student safety in emergency incidents. First Aid and assisting those in danger are the immediate actions that are taken by first responders at an emergency site. When teachers have a positive attitude in administering first aid, it will ensure that those have been injured in different ways, for example, those who are bleeding from being cuts from sharp objects, in shock, have inhaled smoke or exposed to dangerous chemicals, are attended to before they are taken for medical attention. Reluctance to get into active response to assist those in immediate danger, therefore, yields the opposite results. Sentiments echoed by Sub County Quality Assurance and Standards Officer’s in their responses indicate that while teachers have a positive attitude to rescue, they often feel inadequate to effectively assist students in danger. They noted that the inadequacy that is displayed by teachers can be tackled with increased drills and training so as to make them more competent. These sentiments are further echoed in a study by Ersoy and Kocak (2015, who 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. In overall, findings from that study showed that teachers did not have a positive attitude or belief that they are well trained to handle a crisis situation, and could not effectively offer safety at their schools because they felt that they did not have adequate competency. 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.

### Conclusion

Teacher attitude on management of risk moderately contributed in the provision of student safety in emergency incidents. However, teacher attitude on evacuation, communication and rescues procedures highly contributed in the provision of student safety in emergency incident. It emerged that teacher attitude on identification of evacuation points was the least rated.

### Recommendations

- Teacher attitude on identification of evacuation points was the poorest, hence this should be improved upon.
- Teachers should attend workshops to enhance their attitude so to improve their ability to identify safety evacuation points during an emergency.
- Both teachers and students should be encouraged to develop a positive attitude towards utilization of

facilities used in management of student safety in emergency incidents, for example fire extinguishers.

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