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**Information Source Attributes and Terrorism Risk  
Preparedness among the Residents of Nairobi City  
County**

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## Information Source Attributes and Terrorism Risk Preparedness among the Residents of Nairobi City County



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### Abstract

**Purpose:** The main purpose of the study was to establish the association of source attributes and terrorism risk preparedness among the residents of Nairobi City County.

**Materials and Methods:** This study followed a mixed-methods design comprising mainly of a questionnaire survey complemented by observation, key informant interviews and document analysis. The design employed the Concurrent Convergent (Triangulation) Parallel strategy. According to the Kenya National Bureau of Statistics, Nairobi City County has a resident population of 4,397,073. A further estimated 2.5 million non-residents visit the city-county daily for business, work, or as tourists and travelers in transit to other counties. Therefore, the target population for this study was approximately 6.5 million. The study population was drawn using stratified purposive random sampling technique where the list of all the sampling locations was categorized into four strata. The sample size was 640 respondents who were proportionately randomly drawn from four different strata.

**Findings:** Regression of coefficients showed that source attributes and terrorism risk preparedness were positively and significantly related ( $\beta=0.379$ ,  $p=0.000$ ). Specifically, 53.6% of the respondents agreed with the statement that receiving information from credible sources on terrorism attacks provides motivation for preparedness in case of a terrorist attack. Similarly, 64.8% agreed

with the statement that consistency in terrorism risks communications provides motivation to preparedness behaviour adoption 62.6% of the respondents were in concurrence that competence among that communication terrorism risk preparedness was a motivating factor for preparedness. Further, only 43.1% of the respondents indicated that their organisations were using experts in terrorism risk communication and preparedness. 64.6% were of the opinion that involving non experts in decisions related to terrorism risk communications and preparedness can result in preparedness action taking laxity.

**Implications to Theory, Practice and Policy:** The study recommends that professionals charged with emergency risk communication for terrorism preparedness should particularly: demonstrate expertise and competence in the subject matter to instill confidence in their audiences that the information is reliable and useful. This can be achieved by involving qualified professionals, experts, or organizations with relevant experience in emergency risk preparedness and build trust by being transparent, honest, and reliable in communication. Trust can also be enhanced by providing accurate information, acknowledging uncertainties when applicable, and addressing any concerns or doubts promptly.

**Keywords:** *Source Attributes, Terrorism Risk Preparedness, Credibility, Competence*

## 1.0 INTRODUCTION

Terrorism is defined as the deliberate creation and exploitation of fear, coercion, or intimidation through violence or the threat of violence to achieve political, ideological, or religious objectives from a population or a specific target group (Schmid & Price, 2011). This form of violence is often carried out by organized groups, whether state-sponsored or non-state actors, with the aim of generating widespread fear and disrupting social, political, or economic systems (Johns, 2014; Kaczynski et al., n.d.; United Nations Office on Drugs and Crime (UNODC), 2018; Young & Dugan, 2014). Terrorist acts typically involve high-impact events, such as bombings, hijackings, or large-scale attacks, aimed at creating a psychological impact far beyond the immediate physical damage. The intention is to manipulate public perception and influence governments or societies to meet the terrorists' demands or conform to their ideologies (United Nations Office on Drugs and Crime (UNODC), 2018) Fischhoff argues for policies that treat terrorism risk communication as a critical two-way activity aimed at ultimately strengthening rather than weakening a society that is struggling with terror" (Fischhoff, 2011). He notes that achieving this goal is always confronted with technical, organizational, and political barriers. He further argues that terrorism risk communications may be of no value unless they contain the right information, and are get targeted at the right audiences using appropriate communication channels (Fischhoff, 2011). He, therefore, recommends that terrorism risk communications should always aim at first identifying the core set of critical facts, separating them from irrelevancies and channeling them consistently through trusted sources and channels to the specific publics in a dialogical, timely, accurate and complete manner.

Both Thorne(2010) and Fischhoff (2011) insist on the need for those charged with terror risk communications to acknowledge, that their task involves, not just communicating about the physical threats of potential attacks, but also countering the terrorist's threat messages and bravado (Fischhoff, 2011). Various other researchers support this view arguing that terror attacks are, of themselves, a form and a means of strategic communication pitting insurgents against authorities and aimed at polarizing public opinion, misleading enemies, winning converts, publicizing causes as well as spreading fear and despondency (Crelinsten, 2002; Miller and Landau,2005; Falkheimer, 2014). Terror attacks are also framed to coerce targets to accede to terrorists' aims (Ranstorp and Wilkinson, 2005).

Cleverly and by design, immediately following an attack, terrorism perpetrators inundate their targets with numerous follow up messages aimed at bolstering their attacks, justifying their cause and at times announcing further actions, real or imaginary (Falkheimer 2014; Papacharissi & Oliveira, 2008). Such bravado puts the first responders, in particular, the concerned government agencies expected to steer the crisis and risk communication activities, into a near communication void that defies the traditional linear process of standard, controlled crisis and risk communication planning and execution (Falkheimer, 2014).

Further, researchers aver that terror attacks fit snugly into media logic and news values ( Coombs 2007; Falkheimer & Heide, 2014; Falkheimer 2014), hence making terrorism a communication a media affair. Upon a terror attack, the media arena is swamped with public debate about contingency preparedness, search for information about victims and hostages as well as commentaries on the possible motives and the impact of the attacks (Rothenberger, 2012). This way, an information power struggle ensues pitting authorities and first responders on one hand and terrorists, journalists, and a myriad of other actors on the other hand. Consequently, this information power struggle denies the

responsible government agencies and other rescue and recovery agencies the media and audience attention that they would need to counter and mitigate the ensuing crisis with grave consequences for target communities.

Indeed, relevant authorities in most jurisdictions have often been accused of failing to respond to the rapid information demands set by the media and other stakeholders in the face of terror attacks. Thus, the authorities lose their position as the first source of information on terrorism threats and associated risks(Falkheimer, 2014). Additionally, the short response time that most terror attacks occasion, coupled with a large number of agents involved, impedes coordination and cooperation between and among actors in the various response networks (Ruggiero & Vos, 2013; Wood et al., 2012). This scenario yields poorly understood communication goals, haphazard division of communication responsibilities, poorly developed messages and a lack of clarity on the best channels of communication to be used, hence constricting and constraining the fulfillment of effective risk communication, both internally and externally(B. Reynolds & Seeger, 2014). It is therefore against this backdrop that this study sought to establish the association of source attributes and terrorism risk preparedness among the residents of Nairobi City County.

### **Statement of the Problem**

Freedman (2005) notes that governments that say nothing when aware of terror threats, in the hope of countering looming attacks, are often accused of dereliction of duty, in case the threats are eventually actualized. Conversely, governments that regularly warn about impending attacks without much happening are accused of alarmism, Freedman concludes. Further, the reflexive nature of overt terrorism intelligence communications complicates this dilemma. Overt warnings on imminent terrorism activities serves to alert the insurgents that they are being watched. This may lead to the insurgents delaying their mission or changing their plans and targets altogether. In addition, overt terrorism threat announcements may generate panic among target audience. On the other hand, implicit or imprecise communication on imminent attacks generates apathy, poor risk perception, and resultantly inadequate preparedness and despondency with grave implications for at risk populations. Poor preparedness among populations facing recurrent terror threats, in turn, breeds loathe, against those charged with communicating terrorism risk and threat levels (Ropeik, 2005 Ruggiero & Vos, 2013; Wood et al., 2012). Additionally, ill-preparedness results in high rates of morbidity and mortality whenever terror attacks are executed.

Additionally, terrorism risk communication often pits the insurgents against authorities in competition for audience. Upon attacks, the information given by authorities has often been contradicted by the terror communication systems, thereby validating the claim that terrorism is in itself a complex persuasive strategic communication construct that calls for innovative pre-event, during the event and post-event risk communication initiatives to counter (Aradau C. & Munster, 2012). These terrorism risk communications related pressures have invariably heralded the need for a paradigm shift in the way governments and other responding agencies communicate terror-related information, Aradau and Munster (2012) argue. Despite a definitive call for innovative and strategic approaches to terrorism risk communication, scholars aver that most terrorism risk communication is usually reactive rather than proactive (Aradau C. & Van Munster, 2012; Mythen, 2006; Freedman, 2005).

## Objectives of the Study

To establish the association of source attributes and terrorism risk preparedness among the residents of Nairobi City County.

## 2.0 LITERATURE REVIEW Theoretical Framework The Social Amplification of Risk Framework

The Social Amplification of Risk Framework (SARF) is a comprehensive theoretical approach that provides insights into how risk perceptions are socially constructed and amplified through complex interactions of various factors(Kasperson et al., 2022). Proposed in 1998, the Social Amplification of Risk Framework (SARF) combines several risk perception theories into one robust approach (R. E. Kasperson et al., 1988; R. E. Kasperson & Kasperson, 1996; J. X. Kasperson et al., 2003). The paradigm was designed as a meta-framework(Kasperson et al., 2022), bringing together the social theories of risk perception “from media research; psychometric and cultural schools of risk perception research; and from studies of organizational responses to risk” (J. X. Kasperson et al., 2003; Kasperson et al., 2022). The theorist argue that depending on their portrayal in mediated and other communication sources, hazard events interact with information processes, institutional structures, individual demographics, among other factors, in ways that attenuate (decrease) or amplify (increase) risk perception(Kasperson et al., 2016, 2022; Renn et al., 1992).

According to the theory, social amplification is “the phenomenon by which information processes, institutional structures, social-group behaviour, individual demographics and social-economic attributes shape the social experience of risk, by either heightening or lowering risk perceptions (Gray & Ropeik, 2002; Sheppard et al., 2012; Ruggiero & Vos, 2002). Heightened or lowered risk perception has a direct impact on risk consequences (Kasperson et al., 1988, Eileen & Thorne, 2010) and indeed preparedness behaviour. Once a perception about risk has been formulated it can have “ripple effects”, and thus impacts at different levels the theorists conclude. In terrorism incidents, such consequences include high mortality and morbidity rates. Various researchers support this hypothesis (Brooke et al., 2007; Zinn, 2004; Jenkin, 2006; Karen, 2007; Caponecchia, 2012; Then & Loosemore, 2006). Hence, these factors require careful consideration while planning terrorism risk communication.

While SARF has primarily been applied to various environmental and health risks, its application in the realm of terrorism risk preparedness research offers a nuanced understanding of how societal processes shape risk perceptions, public responses, and policy interventions in the face of terrorism threats(Gray & Ropeik, 2002; Jenkin, 2006; Matusitz, 2007; Rogers et al., 2007). It offers a valuable lens to examine the interplay of psychological, social, and cultural factors that influence public perceptions of terrorism risks. For instance, the media's emphasis on dramatic imagery and sensationalist language can amplify perceptions of risk, leading to heightened levels of public anxiety and concern. Similarly, the government's communication strategies and actions can either attenuate or amplify risk perceptions based on the credibility and transparency of their messages (Matusitz, 2007). In this study the framework provides theoretical insight on factors that heighten or attenuate terrorism risk perception among Nairobi city county residents. SARF has been used to analyze how the interplay of several factors including the portrayal of terrorism in the different channels of communication, the attributes of government agencies charged with terrorism risk communication, the design of risk messages of advocacy groups, and the role of interpersonal communication helps in shaping terrorism risk perceptions among (Jenkin, 2006; Rogers et al., 2007). Applying the Social Amplification of Risk

Framework in terrorism risk preparedness research provides a robust analytical tool to comprehend the multifaceted dynamics of risk perceptions, communication processes, and public responses in the face of terrorism threats (Rogers et al., 2007).

### **Crisis and Emergency Risk Communication Model (CERC)**

Developed by the US Centres for Disease Control and Prevention (CDC) after 9/11, the Crisis and Emergency Risk Communication (CERC) model is an integrative risk communication paradigm combining image and reputation research with persuasion and strategic messaging research (Sheppard et al., 2012). The model amalgamates risk communication, issues management, crisis communication, and disaster communication best practices, incorporated from theory and practical applications (Seeger, 2006; CDC, 2014; Vos & Lund, 2011; Shari and Rebekah, 2013). The model has been adopted by the American Red Cross and other emergency response organisation in the USA (CDC, 2014).

As a merger of traditional notions of health and risk communication (Reynolds & W Seeger, 2005), the model presents the first theoretical efforts made to combine the previously independent notions of risk communication and crisis communication into a practice described as crisis and emergency risk communication (Reynolds, 2002). The proponents of the model argue that health risk communication in an era of bioterrorism and other emerging global threats, must be strategic, broad based, responsive, and highly contingent (Reynolds, 2002; Reynolds & Seeger, 2005). The Crisis and Emergency Risk Communication (CERC) model repositions communication as a central element throughout the entire risk and crisis communication process. It emphasizes the importance of ongoing, two-way risk communication as necessary for the public, agencies, and stakeholders to understand uncertain situations and make decisions about managing and mitigating threats. CERC proponents aver that communication plays a significant role in fostering self-efficacy in emergency risk and crisis communication and management.

Messages that convey actionable, step by step guidelines on how to, prevent harm to self and others can contribute to risk reduction, crisis preparedness, community organization, and learning. They argue for crisis risk communication messages that seek to motivate self-efficacy(Hewitt et al., 2008; U.S. Department of Health and Human Services, 2014b) (belief in one's ability to handle a situation) and sense-making (the process of interpreting and understanding information). Further, they note that in emergency risk and crisis communication, there is no one size fits all solutions and call for case by case analysis of each situation. They also acknowledge that the communication processes will change as a risk evolves into a crisis and as a crisis transitions to the post-crisis and recovery phases, thus suggesting that different crisis stages and conditions will impact communication processes differently. Importantly CERC theorists underscore the interdependence between risk and crisis communication arguing that pre-crisis risk messages can influence post-crisis perceptions, expectations, and behaviours, and that crisis responses can shape subsequent risk messages. The model also emphasizes the importance of understanding how communication constraints and influences shape subsequent communication processes, thereby insisting on the importance of communication processes monitoring and stakeholder feedback as critical lessons for future similar endeavours(CDC, 2014b; Reynolds & Seeger, 2012).

Regarding source attributes the Crisis and Emergency Risk Communication (CERC) model, proposes that effective spokespersons should have a high level of credibility among the affected population(CDC, 2014; Reynolds & Seeger, 2012, 2005; U.S. Department of Health and Human

Services, 2014). They should be seen as knowledgeable, reliable, and trustworthy to convey accurate information and guidance during a crisis. Additionally, they should demonstrate empathy and compassion towards those affected by the crisis. This helps in connecting with the audience on an emotional level, showing understanding and concern for their well-being(Reynolds & Shenhar, 2016). The model further emphasises the need for those charged with crisis and emergency risk communications maintaining consistency in messaging to ensure that their messages align with the overall communication strategy and that there is coherence in the information being disseminated across different platforms and interactions(CDC, 2014; Reynolds & Shenhar, 2016).

Other source attributes according to the CERC Model include Transparency, Clarity, accessibility, cultural sensitivity and adaptability. On openness and transparency, the model roots for spokespersons being forthcoming with information, sharing both what is known and what is uncertain, while avoiding misleading or incomplete information. Regarding clarity, the model proponents argue that communication during a crisis should be clear and easily understandable( Reynolds & Shenhar, 2016). Spokespersons should avoid jargon, use simple language, and provide information in a concise manner to ensure the audience comprehends critical messages. Spokespersons should also be accessible and available for communication. This includes being reachable through various communication channels and platforms, being responsive to inquiries, and addressing concerns promptly. Similarly, understanding and respecting cultural differences is vital. Spokespersons should be sensitive to diverse cultural backgrounds and adapt communication strategies to resonate with various communities affected by the crisis. Last but not least, crisis and emergency spokespersons should be adaptable. In rapidly evolving situations, the ability to adapt communication strategies and messages based on new information or changing circumstances is crucial for effective crisis communication(CDC, 2014; Reynolds & Shenhar, 2016; Reynolds & Seeger, 2012; U.S. Department of Health and Human Services, 2014).

In essence, the CERC model highlights the importance of spokespersons possessing not only expertise in the subject matter but also key communication skills and attributes that foster trust, understanding, and empathy with the affected audience during a crisis or emergency.

In this study, the model serves as an assessment tool for source attributes during terror attacks in Kenya. The model also provides theoretical insights into the characterization of terrorism emergencies across the evolution stages. It guides in the mapping out of international best practices in crisis and emergency risk communication to these phases (Seeger, 2006; CDC, 2014; Vos & Lund, 2011; Shari and Rebekah, 2013).

### **Source Credibility Model**

Another risk communication theory that focuses on the impact of information source attributes is the Source Credibility Theory (SCT) also known as the Source Credibility Model. Proposed in the mid20th century, by Carl Hovland, alongside his colleagues, in the 1950s, this theory has long been a cornerstone in understanding persuasion and communication processes. In their research, SCT proponents highlighted the significance of source characteristics (expertise, trustworthiness, and attractiveness) in determining the persuasiveness of a message. In particular, SCT posits that the perceived credibility of a message's source significantly influences the recipient's acceptance and processing of the information (Kumkale et al., 2010; Wertgen & Richter, 2020).

According to this theory, information from a credible source is more likely to be perceived as trustworthy and reliable, leading to greater acceptance and adherence to the communicated message. On the other hand, information from a less credible source may be met with skepticism and resistance, reducing its effectiveness in influencing behavior or decision-making during a crisis or emergency. The theory suggests that credibility is composed of two main dimensions: trustworthiness and expertise. Trustworthiness refers to the perceived honesty and sincerity of the source, while expertise relates to the perceived knowledge, experience, and competence of the source on the given topic. A highly credible source is more likely to be persuasive and influential in conveying its message to the audience (Kumkale et al., 2010; Lamm et al., 2016; Wertgen & Richter, 2020).

Source Credibility Theory has been widely applied in fields such as advertising, public relations, and persuasive communication, contributing to our understanding of how the perceived credibility of a source can affect the success of communication efforts. However, the theory has sparked extensive scholarly debate, with proponents and critics engaging in discourse surrounding its foundational principles and applicability. Critics argue that SCT oversimplifies the multifaceted nature of credibility by primarily focusing on expertise and trustworthiness, neglecting other critical factors such as dynamism, goodwill, and sociability. The theory fails to adequately account for the situational and contextual factors that might influence the perceived credibility of a source, such as cultural differences, audience demographics, and evolving media landscapes. Some studies have found inconsistent results when attempting to predict persuasive outcomes solely based on source credibility, indicating that other variables might play a more substantial role in persuasion (Williams et al., 2022).

### **Empirical Review**

Information sources in emergency preparedness communications may be official or unofficial including neighborhood meetings, friends, relatives, government agencies, employers, institution managers and local authorities(Balakrishnan, 2011; Norris et al., 2008). The attributes of these message sources are of critical importance in determining the acceptance or rejection of risk messages(Longstaff & Yang, 2008) (Longstaff & Yang, 2008). The audiences' perception of the source of the communication, directly impacts on their attitudes towards the message and eventually their willingness to adopt or ignore the preparedness measures and actions being communicated (Fischhoff, 2011). Source credibility, competence, consistency and structure (Darrell, 2003; Rogers et al., 2007); and consistency with disseminated messages (Reynolds, 2002) are key source attributes that require careful consideration when developing crisis and emergency risk communication frameworks and messages.

According to Trumbo and McComas (2003), credibility is acutely a precious commodity for those communicating risk. This is particularly true for governmental risk communicators, who are typically considered "less credible" sources. This view is reinforced by Darrell, (2008) who underscores the importance of trust and credibility as preconditions for successfully handling major emergencies. Connors (2009) notes that decisions, recommendations and messages produced by a lead response organization are likely to be met with some skepticism if the organization is not seen as credible by the audiences. Connors (2009) concludes that communication from a response organization that is considered not to be credible 'may give rise to anger and resentment, or arouse bitter indignation' amongst the audience.

Another source attribute is competence. This is the capacity or know-how to execute a task. In crisis and emergency risk communication, competence may obtain from formal communication education and training or the knowledge gained over time and through experience. Competence is a key source attribute that determines how target audiences react to the message being communicated. Darrell (2003) emphasizes that theoretical knowledge and experience are key building blocks of credibility of the individuals managing communication' during a major emergency hence influencing how well the information will be accepted and assimilated by the target audiences. Reynolds (2002) underscores the necessity for members of the major emergency communications team to have requisite experience in handling all aspects of the communication function at all stages of an emergency situation. Connor (2009) proposes secondment to programmes, particularly international relief agencies, as a way of building 'hands-on' major emergency communication knowledge and experience. In the absence of real 'hands-on' experience Connors argues that some communication practical knowledge can be gained through the use of realistic scenario-based drills.

The other critical source attribute that influences risk perception and preparedness is message and source consistency (Wood et al., 2012). Consistency refers to the constancy, uniformity and similarity across different messages over multiple channels including those from different sources over time (Rogers, 2002). Indeed, the significance of consistency is implicit in most communication theories. According to diffusion of innovations theorists (Rogers 2002; Rogers 2003) lack of consistency in messages breeds dissonance and eventually leads to target audiences questioning the adoption of an innovation. Often, dissonance results in the innovation being rejected (Rogers, 2003; Wood et al., 2012). Similarly, inconsistencies in terrorism incidents risk communication would lead to apathy and rejection of preparedness actions (Connors, 2009 ; wood et al, 2012) besides creating confusion among those who receive it, hence constraining preparedness action-taking.

The structure of the lead-organization and other agencies engaged in crisis and emergency risk communication may impede or enhance message understanding and adoption (Boin & 'T Hart, 2010; Gentle & Mount, 2008; Pancic, 2010). With regard to crisis and emergency risk communication, a well-structured organisation is characterized by clear distinction of communication roles and responsibilities, Clear lines of authority, defined decision-making processes, established communication protocols as well as flexibility and adaptability(Doerfel & Harris, 2017; Lee & Li, 2021). An effective organisational structure can enhance the effectiveness of emergency risk communications by facilitating clear messaging, efficient decision-making, effective coordination and collaboration among different stakeholders, and flexibility in response to changing circumstances(Pancic, 2010). Connors (2009) concludes that, major emergency planning, preparation and decision-making are the responsibility of public service organisations that are generally hierarchical with closed structures and clear protocols regarding interaction with the media, stakeholders and the public. Closed structures, often impede rather than facilitate crisis and emergency risk communication. This notion is supported by ILGRA (1998), who argue that many governments often consider the communication function as a mere 'bolt on', where the process is 'institutionalized...and the art of listening is seldom applied'(ILGRA,1998).

Contemporary theorists, such as NRC (2004) and Darrell (2003), emphasize placing communication close to the highest level of decision-making, thereby ensuring that communication managers are present at every step of the planning process. To ensure that all elements of the strategic communication approach are fully embraced, senior decision-makers at the highest level must fully understand and <https://doi.org/10.47672/ajc.1887>

appreciate the value that the process can bring to the overall risk communication effort and provide the necessary resources required to support it. According to Marra (1998) with the acceptance of the role of communication throughout the entire major emergency response structure, any fears of breaking with traditional top-down and closed forms of communication can be reduced.

### Research Gaps

Despite repeated terror attacks within the country and against Kenyan military camps in Somalia, terrorism crisis and emergency risk communication in Kenya has been limited and far from satisfactory (Eboi, 2015). Few studies have been conducted to evaluate the source attributes and terrorism risk preparedness prior to, during and after terror attacks. Majority of available literature on terrorism in Kenya focuses on other aspects of the subject such as counter terrorism and human rights abuse, the role of Kenya in the global war on terror, the media and terrorism coverage as well as emergency services and training (Kingdom, & Cup, 2012; Mogire & Agade, 2011; Abraham, 2014). Further studies from the Developed North, though numerous, may be far removed from the Kenyan scenario and other developing nations realities including the north-south social-economic and demographic variances. Such studies though numerous may not be aptly generalized for the Kenyan situation.

### 3.0 MATERIALS AND METHODS

This study followed a mixed-methods design (Bian, 2007; Creswell & Pioano Clark, 2007; MolinaAzorin, 2016) comprising mainly of a questionnaire survey complemented by observation, key informant interviews and document analysis. The design employed the Concurrent Convergent (Triangulation) Parallel strategy. According to the Kenya National Bureau of Statistics, Nairobi City County has a resident population of 4,397,073(KNBS, 2019). A further estimated 2.5 million nonresidents troupe to the city-county daily for business and employment or as tourists and travelers in transit to other counties (County Government of Nairobi City County, 2018.). Therefore, the target population for this study was approximately 6.5 million.

The study population was drawn using stratified purposive random sampling technique where the list of all the sampling locations was categorized into four stratas. The sample size was 640 respondents who were proportionately drawn randomly drawn from four different strata. The strata included 19 main university campuses (CUE, 2016) 14 officially designated bus termini, 35 approved public markets and 34 approved shopping malls. For this study data were first coded and entered into the computer using the statistical Package for Social Scientist (SPSS) it was then analyzed using both descriptive and inferential statistics. Descriptive statistics were used to establish frequency distribution of variables. Descriptive statistics were also enable the researcher to summarize and organize data in an effective and meaningful way and reducing information to an understandable form. The data was then subjected to inferential statistics to determine the differences between variables and significance of the results and the probability that they did not occur by chance.

The relationship between the dependent variable (risk perception and preparedness) with the independent variables (source attributes) were determined using inferential statistics which contained both the correlation and regression. Both linear and multiple regression model was used.

In this study, factor analysis was done using principal component analysis. The aim was to identify the least number of factors that account for common variance in a set of variables Wu et al. (2017). All variables in the study were subjected to SPSS version 24 for factor analysis and the outputs summarized

in the tables. Pernecky (2016) assert that researchers should use a factor loading threshold of 0.4 given that any higher loading than this may not be met in real life data.

#### 4.0 FINDINGS

**Terrorism Risk Preparedness among the Residents of Nairobi City County** The dependent variable for the study was Terrorism Risk Preparedness.

#### **Sampling Adequacy for Terrorism Risk Preparedness Table 1: Kaiser-Meyer-Olkin Measure for Terrorism Risk Preparedness**

##### **KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.874
Bartlett's Test of Sphericity	Approx. Chi-Square 689.239
	Df 276
	Sig. <b>0.000</b>

The value of the KMO measure of sampling adequacy for terrorism risk preparedness was 0.874 as indicated in Table 1, which would be labeled as 'meritorious'. The significance of the KMO coefficient was evaluated using a chi square test and a critical probability value (p value) of 0.05. A chi square coefficient of 689.239 and a p value of 0.000 imply that the coefficient is significant. Field (2005), KMO Value/level of Common Variance of 0.90 to 1.00 is "Marvelous", 0.80 to 0.89 is "Meritorious", 0.70 to 0.79 is "Middling" 0.60 to 0.69 is "Mediocre", 0.50 to 0.59 is "Miserable", 0. 00 to 0.49 is "Don't Factor".

#### **Descriptive Results**

This section contains descriptive analysis for Terrorism risk preparedness results. The respondents were asked to indicated whether their organization had put in place the following measures.

#### **Table 2: Measures of Terrorism Risk**

	<b>Yes</b>	<b>No</b>
Built emergency exit doors in all buildings.	68.70%	31.30%
Uses metal detectors to screening staff and visitors at all entry point	76.00%	24.00%
Has employed the services of professional security companies to man entrances and patrol the premises	71.20%	28.80%
Engages the police to man entrances and patrol the premises	70.90%	29.10%
Installed fire extinguishers at strategic places within all facilities.	58.90%	41.10%
Holds Sensitization meetings, briefs and circulates memos on security and terrorism awareness	60.90%	39.10%

Periodically carries out emergency drills /simulations	62.30%	37.70%					
Results revealed that 68.7% indicated that their organization had built emergency exit doors in all buildings. In addition, majority of the respondents who were 76.0% indicated that their organization used metal detectors to screening staff and visitors at all entry point. The results further showed that majority of the respondents who were 71.2% indicated that their organization has employed the services of professional security companies to man entrances and patrol the premises. The results further showed that majority of the respondents who were 70.9% indicated that their organization engages the police to man entrances and patrol the premises. The results further showed that majority of the respondents who were 58.9% indicated that their organization installed fire extinguishers at strategic places within all facilities. The results further showed that majority of the respondents who were 60.9% indicated that their organization holds Sensitization meetings, briefs and circulates memos on security and terrorism awareness. The results further showed that majority of the respondents who were 62.30% indicated that their organization periodically carries out emergency drills /simulations							
A Likert scale with options of strongly disagree, disagree, neutral, agree and strongly agree were presented for answering by the respondents. The results were presented in form of percentages, mean and standard deviations.							
<b>Table 3: Terrorism Risks Knowledge and Terrorism Risk Preparedness among Residents of Nairobi City County</b>							
Statement	SD	D	N	A	SA	Mean	Std. Dev
I understand about the different types devices used in terrorism attacks	14.10%	20.50%	21.60%	26.10%	17.70%	3.13	1.31
I don't know know what to do in case of suspected terrorist threats	22.00%	19.00%	22.00%	25.00%	12.00%	2.86	1.34
I know what to do to protect myself and others during a terror attack	13.50%	17.90%	23.90%	32.30%	12.40%	3.12	1.23
Our organization has protective equipment such as breathing masks, ear muffs in case of a terrorist attack	27.80%	38.00%	14.70%	16.20%	3.20%	2.29	1.13
Our organization regularly holds training on terrorism risk preparedness	26.50%	38.50%	16.90%	13.90%	4.30%	2.31	1.13
Our organization has invested in security and protective gear (Fire extinguishers, Emergency exits, burglar proofing)	23.10%	16.50%	16.70%	38.90%	4.90%	2.86	1.29
Screening is done at all points of entry into our premises	15.80%	12.20%	16.90%	41.20%	13.90%	3.25	1.29
I always take heed of police warning to avoid certain places	16.00%	15.00%	17.10%	37.00%	15.00%	3.20	1.31
I am vigilant for suspicious behaviours	7.90%	13.90%	25.20%	47.90%	5.10%	3.28	1.03
I know how to use emergency response equipment e.g. fire extinguishers in the facility. Emergency exits	10.50%	25.40%	9.60%	41.50%	13.00%	3.21	1.25
I Participate in evacuation and security drills at my workplace	17.10%	13.00%	13.70%	41.50%	14.70%	3.24	1.33
<b>Average</b>						<b>2.98</b>	<b>1.24</b>

Where strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA) The respondents were asked to answer questions related to their levels of knowledge regarding terrorism risk and the measures taken by their organisations in preparedness for terrorism attacks. The results are as outlined in Table 3 above. A majority of the respondents at 43.8% agreed with the statement that they understand about the different types of terrorism attacks. The results further indicated that majority of the respondents 41.0% disagreed with the statement that they do not know what to do in case of suspected terrorist threats. 44.7% of the respondents agreed with the statement that they know what to do to protect themselves and others during a terror attack while 65.8% agreed with the statement that their organization has invested in security and protective equipment such as screening equipment, fire hydrants and extinguishers, emergency exits which may be hardy in case of a terrorist attack. 55.1% of the respondents agreed with the statement that screening is done at all points of entry into their premises. The results further showed that majority of the respondents who were 52.0% agreed with the statement that they always take heed of police warnings to avoid certain places in times of heightened terror threats. The results further showed that majority of the respondents who were 53.0% agreed with the statement that they are vigilant for suspicious behaviors while 54.5% agreed with the statement that they know how to use emergency response equipment e.g. fire extinguishers, fire hydrants and emergency exits in the facility while 56.2% agreed with the statement that they participate in evacuation and security drills at their workplace.

The respondents asked to state how keen their organization was in providing information and education on terrorism threats and terrorism risk preparedness. The results revealed majority of the respondents stated that their organization held seminars, trainings and drills to help their employees understand terrorism risks and the need to adopt preparedness behaviour. Other respondents indicated that their organization do not hold any training or seminars or provide any form of information on terrorism risk preparedness.

Finally, the respondents were asked to indicate whether their organization works with the national security agencies and security excerpts to collaborate information on terror threats and to sensitize employees and other stakeholders on terrorism risk preparedness. The results revealed that majority of the respondents indicated that they work with security agencies and experts to prepare, test and disseminate terrorism risk information while only a few who indicated that they do not work with any security agencies to prepare, test and disseminate terrorism risk information

### **Source Attributes and Terrorism Risk Preparedness**

The second objective of the study was to establish the association of source attributes and terrorism risk preparedness among the residents of Nairobi City County. Sources are individuals or organisations charged with emergency risk communications.

### **Test for Sampling Adequacy for Information Attributes**

In order to check if the eight statements used to measure information attributes were correlated or factorable, test of sampling adequacy was done and the findings are displayed in Table 4.

**Table 4: Kaiser-Meyer-Olkin Measure of Source Attributes**

#### **KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.853
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Bartlett's Test of Sphericity	Approx. Chi-Square	507.721
	Df	120
	Sig.	<b>0.000</b>

The value of the KMO measure of sampling adequacy for source attributes was 0.853 as indicated in Table 4 above, which would be indicated as 'meritorious'. The significance of the KMO coefficient was evaluated using a chi square test and a critical probability value (p value) of 0.05. A chi square coefficient of 507.721 and a p value of 0.000 imply that the coefficient is significant. This implies that there was a significant correlation between the statements measuring source attributes and terrorism risk preparedness. Field (2005), KMO Value/level of Common Variance of 0.90 to 1.00 is "Marvelous", 0.80 to 0.89 is "Meritorious", 0.70 to 0.79 is "Middling" 0.60 to 0.69 is "Mediocre", 0.50 to 0.59 is "Miserable", 0.00 to 0.49 is "Don't Factor".

### Descriptive on Source Attributes

For the content analyses the coders were required to rate a total of 483 documents sources on a fourpoint source attributes comprising Competence, Credibility, Consistency and structure (transparent and openness). The rating criteria used is explained in appendix the code sheet and codebook.

**Table 5: Source Attributes Ratings**

Variable Attribute	Frequency	%
Competence	453	94%
Credibility	311	64%
Consistency	367	76%
Structure	304	63%

The results are presented in Table 5 indicated that 94 % (n=453) of sources were rated component, 64% (n=311) were rate credible, 76% (n=367) were rated consistent 63% 99(n=304) and were rated as open and transparent. For the survey, the respondents were required to agree or disagree with provided statements on a likert scale with options ranging from strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA). The results are presented in the form of percentages, mean and standard deviations in Table 6 below.

**Table 6: Descriptive on Source Attributes**

Statement	SD	D	N	A	SA	Mean	Std. Dev
Receiving information from credible and competent sources on terrorism attacks motivates my organization to be prepared in case of terrorism attack	7.30%	8.30%	8.80%	53.60%	22.00%	3.75	1.11
I find those who communicate about terrorism risk and terrorism risk mitigation measure competent and credible	19.40%	1.70%	16.20%	35.70%	26.90%	3.49	1.41

Consistency in terrorism risks communications provides motivation to be prepared in case of terrorism attack	12.20%	12.00%	11.10%	46.40%	18.40%	3.47	1.26
In case of suspicious activity I know competent people and agencies to whom and I would report	20.50%	10.70%	15.00%	39.70%	14.10%	3.16	1.37
Our organization has a credible team charged with terrorism risk preparedness	26.70%	10.50%	13.70%	29.90%	19.20%	3.04	1.50
Our organization involves experts in decisions related to terrorism risk communications and preparedness	38.20%	10.90%	7.70%	25.40%	17.70%	2.74	1.59
Involving non experts in decisions related to terrorism risk communications and preparedness can result in laxity	16.90%	7.30%	11.30%	48.10%	16.50%	3.40	1.32
<b>Average</b>						<b>3.29</b>	<b>1.37</b>

Where strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA) Specifically, 53.6% of the respondents agreed with the statement that receiving information from credible sources on terrorism attacks provides motivation for preparedness in case of a terrorist attack. Similarly, 64.8% agreed with the statement that consistency in terrorism risks communications provides motivation to preparedness behaviour adoption 62.6% of the respondents were in concurrence that competence among those communication terrorism risk preparedness was a motivating factor for preparedness.

On whether their organisations had a competent and credible teams charged with terrorism risk preparedness, only 49.1% of the respondents answered in the affirmative, agreeing that their organizations had credible teams while 53.8% agreed that in case of suspicious activity they knew of competent people to whom they could report the suspicions. This is despite 61.60% of the respondents agreeing that receiving information from competent people/organisations provides motivation to prepare in case of terrorism attack. Further, only 43.1% of the respondents indicated that their organisations were using experts in terrorism risk communication and preparedness. 64.6% were of the opinion that involving non experts in decisions related to terrorism risk communications and preparedness can result in preparedness action taking laxity.

These findings agreed with that of Fischhoff (2011) who argued that how the audiences perceive the source of the communication directly impacts on their attitudes towards the message and eventually their willingness to adopt or ignore the preparedness measures and actions being communicated. The respondents were further asked to indicate the organisation they would most credit with their knowledge on terrorism threats and preparedness tactics. The results are provided in Table 7.

**Table 7: Sources of Information on Terrorism Threats and Preparedness Behaviour**

Statement	Yes	No
Ministry of Interior and National Coordination	64.70%	35.3%

National Disaster Operations Centre	51.80%	48.2%
National Counter Terrorism Centre	19.2%	80.8%
The Kenya Police service	77.3%	22.7%
My Employer/organization	65.7%	34.3%
Friends and Family	68.30%	31.7%
Newspapers	73.40%	26.6%
Radio	64.70%	35.3%
Television	64.70%	35.3%
Average		

The results revealed that 64.7% of the respondents received their information on Terrorism threats and terrorism risk preparedness cues from the Ministry of Interior and National Coordination, 51.80 % indicated the National Disaster Operations Centre (NDOC), 19.20 % indicated the National Counter Terrorism Centre (NCTC) while 77.3% credited the Kenya Police Service as the organisation most responsible for their Knowledge on terrorism threats and terrorism risk preparedness information. In addition, 65.7% received their information from their employer/organization, 73.4% received information from newspaper, 64.7% received information from radio while another 64.7% received information from television. These perspectives were shared by the Key Informants: -

## Key Informant 2

*Kenya's government is notoriously unreliable when it comes to sharing information on terrorist attacks. During Westgate, nearly everything government officials said turned out to be false. They maintained an elaborate fiction of fighting terrorists while the military looted the mall.*

On transparency another **Key informant 5** noted:

*To date the government has refused to disclose the number of casualties suffered by our defense forces, in El Adde. The government's version of what happened at there was greatly exaggerated to include three massive truck bombs and "truckloads of suicide bombers" yet the al-Shabab propaganda video of the attack shows just one suicide vehicle bomber),*

Another key Informant opined that government and government agencies could not be relied upon to provide credible information on terrorism threats or even terrorism risk preparedness. He said: - *Every time there is a huge terror attack in the country government social media accounts are deployed not to educate citizens on the risks posed by insurgents and how they can best protect themselves from future attack but rather to urge citizens to stick to the official line and not to share any "unverified" information. Yet the so called official line is often misinformation. The main stream media too are never useful. All they do is regurgitated the governments misinformation.*

## Factor Analysis for Source Attributes

The next characteristic of interest was to evaluate how strong the eight statements measuring in source attributes were in measurement of the predictor. As a result, the next factor analysis output generation for information attributes was Total Variance Explained (TVE) using the rotation sums of squared loadings values. The findings are displayed in the Table 8. Tables 8 represent the distribution of the variance after the varimax orthogonal rotation of the statements measuring the variable.

**Table 8: Total Variance Explained for Source Attributes**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.555	65.069	65.069	4.555	65.069	65.069
2	0.808	11.547	76.616			
3	0.694	9.921	86.537			
4	0.38	5.428	91.965			
5	0.307	4.393	96.357			
6	0.164	2.347	98.704			
7	0.091	1.296	100			

Eigen values associated with each linear component were listed before extraction, after extraction and after rotation as shown in Table 8. Before extraction, SPSS had identified seven linear components within the data set. The eigenvalues associated with each factor represents the variance explained by that particular linear component and it is displayed in terms of percentage of variance explained. Further the results showed that there was only one critical factor influencing terrorism risk preparedness which accumulated to 65.069% of the total variance in this construct.

In order to evaluate the constructs for the source attribute, one component was generated and the results of the varimax orthogonal rotation are presented in Table 9.

**Table 9: Rotated Component Matrix for Source Attributes**

	Source Attribute
Receiving information from trustworthy sources on terrorism attacks motivates my organization to be prepared in case of terrorism attack	0.779
In case of an attack our organization has trustworthy people/body that deals with terrorism that we can inform	0.814
In case of suspicious activity we have competent people that deal with terrorism that our organization can inform	0.92
Receiving information from competent people that deal with terrorism motivates my organization to be prepared in case of terrorism attack	0.768
Consistency in terrorism risks communications motivates my organization to be prepared in case of terrorism attack	0.738
Our organization involves experts in decisions related to terrorism risk communications	0.691
Involving non experts in decisions related to terrorism risk communications can result in needless delays	0.909

The results above showed that statements on source attributes can only be regrouped into one variable. The seven measures of information attributes were subjected to factor analysis and all the items attracted coefficients of more than 0.4. Therefore, the seven statements were retained for analysis.

## Correlation Results

Correlation between source attributes and terrorism risk preparedness was conducted in Table 10. **Table 10: Correlation Results**

		<u>Risk preparedness</u>	<u>Source Attributes</u>
Risk preparedness	Pearson Correlation Sig. (2-tailed)	1	
Source Attributes	Pearson Correlation Sig. (2-tailed)	.682** 0.000	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

The results revealed that source attributes have a significant association with terrorism risk preparedness among the residents of Nairobi City County ( $r = 0.682$ ,  $p = 0.000$ ). This infers that source attributes moderately correlates with terrorism risk preparedness among the residents of Nairobi City County. These findings agreed with that of Fischhoff (2011) who argued that how the audiences perceive the source of the communication directly impacts on their attitudes towards the message and eventually their willingness to adopt or ignore the preparedness measures and actions being communicated.

## Regression Analysis between Source Attributes and Terrorism Risk Preparedness

Regression analysis was done to determine the relationship between source Attributes and terrorism risk preparedness among the residents of Nairobi City County. Results were presented below.

**Table 11: Model Fitness for Source Attributes and Terrorism Risk Preparedness**

<u>Model</u>	<u>R</u>	<u>R Square</u>	<u>Adjusted R Square</u>	<u>Std. Error of the Estimate</u>
1	.682a	0.465	0.464	0.33342

Source attributes was found to be a satisfactory variable in explaining terrorism risk preparedness. This is supported by coefficient of determination also known as the R square of 27.3%. This means that source attributes explain 46.5% of the variations in the dependent variable which is terrorism risk preparedness. This also implies that 54.5% of the variation in the dependent variable is attributed to other variables not captured in the model. These findings agreed with that of Fischhoff (2011) who argued that how the audiences perceive the source of the communication directly impacts on their attitudes towards the message and eventually their willingness to adopt or ignore the preparedness measures and actions being communicated. Table 12 provides the results on the analysis of the variance (ANOVA).

**Table 12: Analysis of the Variance (ANOVA)**

	<u>Sum of Squares</u>	<u>Df</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig.</u>
Regression	44.97		44.97	404.527	.000b
Residual	51.803	466	0.111		

**Total                    96.773                    467**

The results indicate that the overall model was statistically significant as supported by a p value of 0.000 which is lesser than the critical p value of 0.05. This was supported by an F statistic of 404.527 which imply that source attribute is a good predictor of terrorism risk preparedness. These findings agreed with that of Fischhoff (2011) who argued that how the audiences perceive the source of the communication directly impacts on their attitudes towards the message and eventually their willingness to adopt or ignore the preparedness measures and actions being communicated. **Table 13: Regression of Coefficient for Source Attributes and Terrorism Risk Preparedness**

	<b>B</b>	<b>Std. Error</b>	<b>T</b>	<b>Sig.</b>
(Constant)	1.932	0.068	28.489	0.000
Source Attributes	0.379	0.019	20.113	0.000

Regression of coefficients showed that source attributes and terrorism risk preparedness were positively and significantly related ( $\beta=0.379$ ,  $p=0.000$ ). This infers that an improvement in source attributes by one unit would lead to an improvement in terrorism risk preparedness by 0.379 units. These findings agreed with that of Fischhoff (2011) who argued that how the audiences perceive the source of the communication directly impacts on their attitudes towards the message and eventually their willingness to adopt or ignore the preparedness measures and actions being communicated.

$$Y = 1.932 + 0.379X_1 + e$$

Where Y is Terrorism Risk Preparedness

$X_1$  is Source Attributes

### **Hypothesis Testing for Source Attributes and Terrorism Risk Preparedness**

The hypothesis stated that Source attributes do not significantly influence terrorism risk preparedness among the residents of Nairobi City County. The results revealed that  $F_{\text{cal}}(404.527) > F_{\text{critical}}(3.94)$  and thus the null hypothesis was rejected. The results further indicated that the p value was less than 0.05 ( $p=0.000$ ). Therefore, the study concludes that source attributes significantly influence terrorism risk preparedness among the residents of Nairobi City County. These findings agreed with that of Fischhoff (2011) who argued that how the audiences perceive the source of the communication directly impacts on their attitudes towards the message and eventually their willingness to adopt or ignore the preparedness measures and actions being communicated.

## **5.0 CONCLUSION AND RECOMMENDATIONS Conclusions**

The study concluded that source attributes including expertise or competence, credibility, consistency, perceived intentions and structure significantly influence reception and application of emergency preparedness information. In particular, trustworthiness and competence were seen to play a crucial role in the effectiveness of information sources for emergency risk preparedness communications. When individuals find their sources competent and trustworthy, they are more likely to perceive the information as credible and reliable. This can lead to increased willingness to take necessary precautions and follow recommended actions during emergency situations. Conversely, if the source of information is not trusted, and is found lacking in competence audiences may be more skeptical and less likely to act on the information provided. Therefore, establishing trust in information sources is essential for effective communication in emergency risk preparedness. Further the study reveals that,

in emergency contexts, official sources, such as government agencies, emergency services, and recognized experts, are often perceived as more credible due to their authority and expertise.

### Recommendations

The study recommends that professionals charged with emergency risk communication for terrorism preparedness should particularly: -

- i. Demonstrate expertise and competence in the subject matter to instill confidence in their audiences that the information is reliable and useful. This can be achieved by involving qualified professionals, experts, or organizations with relevant experience in emergency risk preparedness.
- ii. Build trust by being transparent, honest, and reliable in communication. Trust can also be enhanced by providing accurate information, acknowledging uncertainties when applicable, and addressing any concerns or doubts promptly.
- iii. Maintain consistency in messaging across different communication channels and over time. Ensure that information is aligned with official guidelines and recommendations. Avoid contradictory or conflicting statements that may undermine trust and confuse the public.
- iv. Ensure efficient and effective information source organisations structure characterized by clear distinction of communication roles and responsibilities, Clear lines of authority, defined decision-making processes, and established communication protocols as well as flexibility and adaptability. This can enhance the effectiveness of emergency risk communications by facilitating clear messaging, efficient decision-making, effective coordination and collaboration among different stakeholders, and flexibility in response to changing circumstances.

By implementing the foregoing recommendations, emergency risk preparedness sources will be perceived as reliable and credible. This can lead to increased willingness, among their audience, to take necessary precautions and follow recommended actions during emergency situations hence reducing morbidity and mortality during terror attacks.

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