EVALUATION OF THE INFLUENCE OF SECURITY DRILLS ON COUNTER TERRORISM PREPAREDNESS AT JOMO KENYATTA INTERNATIONAL AIRPORT, NAIROBI, KENYA

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A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN GOVERNANCE, PEACE AND SECURITY IN THE DEPARTMENT OF GOVERNANCE, PEACE & SECURITY STUDIES SCHOOL OF HUMANITIES AND SOCIAL SCIENCES OF AFRICA NAZARENE UNIVERSITY

JUNE 2021

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DECLARATION AND APPROVAL

This thesis is my original work and has not been presented for a degree in any other university or any other award.

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This research was conducted under our supervision and is submitted with our approval as the university supervisors.

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DEDICATION

This research thesis is dedicated to Dr. Emily Okuto the Head of Department of Peace and Conflict studies in the Africa Nazarene University Nairobi Campus for the trauma she underwent when her daughter was injured during a security drill in Strathmore University in the year 2015.

ABSTRACT

Kenya has been hit by isolated terrorist attacks since her intervention in Somalia as part of Operation Linda Nchi and later AMISOM. Such attacks with the glaring ones including Westgate mall attack, Garissa university attack and Dusit D-2 complex attack exposed the vulnerabilities present in Kenya's preparedness for such security threats. Security agencies have embarked on using security drills to enhance emergency response. This study therefore aimed at evaluating the influence the post security drill approaches have on counter terrorism preparedness at JKIA. This was through evaluation of the post drill capacity building of security apparatus, assessment of the effectiveness of post drill emergency training offered to responders and analyzing the effects of multi-agency co-ordination on preparedness. To theorize objectives, the conditioned response theory of learning by Pavlov, 1926 and the inoculation theory by William J. McGuire in 1961 were utilized. This descriptive study clustered the different security agencies at the airport before conducting a simple random sampling on each cluster to select respondents of the questionnaires. Additionally, purposive sampling was conducted to determine respondents of key informant interviews. The study estimated a population of 252 security and emergency response personnel from the different clusters of security agencies within the airport. It then applied both qualitative and quantitative methodologies for data collection and analysis through the administration of a questionnaire and key informant interviews. The study subjected the study population to the Yamane formula of sample size calculation and obtained 154 personnel as the sample size. The analysis provided an objective measure of the influence of drills to preparedness through assessment of post-drill security posture of the target population. On the first objective, security drills are conducted in the institution after every two years. Majority of respondents were aware of available fire response emergency Standard Operating Procedures (SOP's) and had been trained in them, however, a majority were not aware of existence of SOP's of some contemporary emergency threats such as bomb threats and hostage situations/active shooter incidences. On the second objective, technological advancements such as installation of CCTV and digital walk through scanners have been incorporated to augment physical security with an emergency operations Centre in the pipeline. On the third objective, it was established that with every preceding drill, the response rate, multi-agency co-ordination of effort and unification of command improved immensely. The study concluded that fire and aircraft crash drills were the most conducted with less attention given to bomb threat drills, terrorist attacks, chemical and biological threats. Training is conducted at the department level mostly at entry level and most of the departmental response plans were not regularly rehearsed. It recommends emphasis on using of the post drill training through the CTRBT model by Biddle, 2013. Moreover, use of technology to tackle terrorism coupled with inculcation of technology and innovation towards creating situational awareness for responders and acquisition of correct equipment to counter arising scenarios is recommended.

ACKNOWLEDGEMENT

I would like to especially thank Dr. Duncan Ochieng, PhD, my lead supervisor, and Dr. Sarah Mueni posthumously for their extensive professional and personal guidance that enabled me gain great skill sets about scientific research and requisite procedures for a professional research thesis. I am also very grateful to Caroline Mueni Mutata for her selfless assistance and boundlessly spurring my motivation in the thesis journey. I thank Samuel Githogori whom I have had the pleasure to consult occasionally on critical issues that arose during my research writing process. I also thank Annastacia Loko for the tremendous assistance during the running of the research's pilot study. Above all am indebted to God for giving me the opportunity and zeal to come this far with the thesis.

OPERATIONAL DEFINITION OF TERMS

A Caliphate: It is an Islamic state, more so one ruled by a single religious individual who is also the political leader, (Hugh Kennedy, 2016). For the purpose of this study, it is a state governed through strict adherence to Sharia law.

Drill: They are activities that train through practice of specific skill sets by means of repeating them severally. An example is a military exercise intended to train and evaluate understanding of certain skills by soldiers, (Vexen Crabtree, 2004).

Preparedness: These are measures put in place to prepare for and reduce the impacts of disasters. That is, to predict and, where possible, prevent disasters, mitigate their impact on vulnerable populations, and respond to and effectively cope with their consequences, (International Federation of Red Cross IFRC, n.d) for the purpose of this study is the readiness capability of emergency and security responders at the airport.

Security drill: Is a specifically tasked procedure meant to respond to emergency situations such as a non-fire evacuation, lockdown, or active shooter situation and that is similar in duration to a fire drill, (2013 New Jersey Revised Statutes Section 18A:41-6). For the purpose of this study, it is an exercise practiced for preparing people for an emergency.

Terrorism:	Threats of violent action for political purposes, (Federal Bureau of Investigations, n. d). For this study, it means the threat of use or use of violence to inflict fear or cause injury to the public.
Security posture	Overall/Collective security status of an organization or agency in terms of measures put in place to respond to an emergency or security threat.
Post – drill	The period in between a preceding and a successive drill.
Post security drill capacity building	Skills developed, resources acquired and abilities strengthened to bridge gaps identified in a preceding drill in order to prevent re-occurrence in a successive drill.
Other Security stakeholders	Other personnel in the airport who are involved in securitization of the institution including private security firms, private investigators, National Youth Service personnel and personnel who have witnessed previous drills first-hand. This involved also the medical responders such as St Johns ambulance and the Kenya Red cross.
Responders	All the various departments that respond to emergencies and security threats in the airport.
Respondents	The personnel who supplied the researcher with the information on the questionnaires and key informant interviews.

ABBREVIATIONS AND ACRONYMS

AAR - After Action Review

APS - Administration Police Service

ATPU - Anti-Terrorism Police Unit

CAR - Central African Republic

CTRBT -Counter Terrorism Reality Based Training

DCI - Directorate of Criminal Investigation

FEMA - Federal Emergency Management Agency

FBI - Federal Bureau of Investigations

GSU - General Service Unit

HPSS - Humanitarian Peace Support School

ICS - Incident Command System

IFRC - International Federation of the Red Cross

JKIA -Jomo Kenyatta International Airport

KAA - Kenya Airports Authority

KAPU - Kenya Airports Police Unit

KCAA - Kenya Civil Aviation Authority

KDF - Kenya Defense Forces

NACOSTI - National Commission for Science Technology and Innovation

NCTC - National Counter Terrorism Centre

NDOC - National Disaster Operations Centre

NIS - National Intelligence Service

RDU - Rapid Deployment Unit

RRC - Rapid Response Capability

SOP - Standard Operating Procedures

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CHAPTER ONE
INTRODUCTION

1.1 Introduction

This study set out to evaluate the influence of security drills on counter terrorism preparedness at Jomo Kenyatta international airport (JKIA), Nairobi Kenya. The undermentioned subsections are included; background to the study, the problem statement, the purpose of conduct of the study, the study objectives, research questions, the study's significance, hypothesis of the study, the study's scope, delimitation and limitations of the research, assumptions, and the theoretical and conceptual framework.

1.2 Background

Terrorism is the threat of use or the use of violence to create fear in furtherance of an economic, political, or ideological cause. It is not a 21st century phenomenon but has its roots going deep to early political and resistance movements. After the siege of Jerusalem by Romans in the year 70AD the Sicarii, a Jewish terrorist group used the tactic of carrying daggers under their clothing with assignments to stab other Jews who collaborated with the Roman Empire rule. The group opposed Roman occupation of Judea and believed that the Jews were only supposed to be ruled by God and that Jews supporting the Roman rule were traitors, (Sharpe, 1766). The 18th Century French Revolution that bore the word terrorism from the phrase 'reign of terror' is a classic illustration of state terrorism. Modern terrorism ensued during the cold war period but it was not until the 11 September 2001 attack on the twin towers in New York commonly known as 9/11 that the war on terror was declared initially targeting the Al Qaeda, (Biddle, 2013). However, terrorist organizations are more of a starfish than a spider and a crackdown on one faction catalyzes it to disintegrate and form other terrorist factions, (Beckstrom and Brafman, 2006). This has led to

creation of several terrorist organizations in the world, the al-Qaida splinter groups: the Al Shabaab, ISIS in Middle East, Al Qaeda in the Maghreb, Boko Haram of Nigeria, and Al Qaeda in the Arabian Peninsula.

According to Burman (2016), the last decade has seen emergencies as Al Shabaab and ISIS terrorist attacks and other security threats occur within the Horn of Africa with the main aim of establishing an Islamic caliphate by 2020 that is envisaged to contain several lands amongst them "The Land of Habasha" which will consist of Kenya, Somalia, Ethiopia, Sudan, Central African Republic (CAR) and Cameroon, ISIS (See Appendix 7). The Al Shabaab have perpetrated terrorist acts in Kenyan over the last six years. The Westgate Mall in September 2013 located in the suburbs of Nairobi was hit by terrorists and at least 67 people lost their lives (Howden, 2013). In 2015, over 147 people, including students, staff, and security personnel, lost their lives after the Garissa university attack (BBC News, 2015).

Some of the pre-emptive measures adopted by security agencies and other institutions world over to counter terrorist attacks are security drills, which simulate fictitious scenario that resemble what could occur in a real-life threat and hence triggers a response to them. Exercises are important tools that enable an organization to test and validate its procedures, concepts, systems and tactics and practice its subordinate departments or multiple agencies on working together efficiently in various demanding crises. While this mechanism is a popular and effective option to enhance preparedness, it is imperative to constantly evaluate the performance of such exercises in terms of attaining their intended goals.

One of evaluation programs used to evaluate drills in the United States of America (USA) is the Homeland Security Exercise and Evaluation Program (HSEEP). The program is a

capabilities and performance-based exercise program. This is ensured through provision of a standardized policy, doctrine, and terminology for the design, development, conduct, and evaluation of homeland security exercises. The online toolkit in this program includes resources related to policy, guidance, and developing exercises. This programme evaluates exercises or drills while they run using checklists on Evacuation and personnel accounting, provision of Logistics, Command Post procedures, Search & Rescue drills, and Medical Team efficiency, (Federal Emergency Management Agency (FEMA), n.d).

Quarterly, after the security drill conduct, a follow-up assessment of participants in the form of a questionnaire or a web-based survey is key to assess the drill competencies that have been retained, how the skills acquired in the drill have been applied, and if further attempts in terms of training and capacity building have been done to build upon competencies addressed in the drill. This assessment usually is expected to include subjective questions on the participant's perception of the retained competencies coupled with an objective assessment using knowledge-based questions. Finally, a survey on participants in areas in dire need of additional support or training as per the After-Action Review (AAR) report is also crucial.

1.3 Problem Statement

A research problem constitutes the clear expression of a concern or a condition that needs improving, (Bryman, 2007). In evaluation of the influence of security drills, an ideal and realistic test of their impacts can be achieved through evaluating the procedures during the conduct of a full-scale emergency response exercise. During their conduct, evaluators are positioned to observe strengths and weaknesses and thus recommend to the organization a mitigation approach during the AAR. However, drills are expensive, and time consuming in both planning and execution and may not be conducted regularly. The drills are mostly followed by a lull period until the next drill.

Consequently, organizations that conduct drills once a year or every three years may be faced with changes in threat architecture that may need modification of the next drill rather than was proposed in the previous drill's AAR. This explains why some subsequent drills have caused liabilities like those of actual terrorists and terror attacks despite having been meant to avert it. In JKIA's Nov 2018 security drill, several people sustained injuries despite it not being the institutions first drill, (Citizen Digital, 2018). The success of a practiced response is not just that the procedures have been tested, but that the procedures are there and can be verified as being completely known, and practical. Thus, regular method, (monthly or quarterly) of evaluation of the influence of these drills towards the counter terrorism preparedness is crucial towards maintaining the counter terrorism tempo and suggesting an improved security posture.

1.4 Purpose of the Study

This study's purpose is to evaluate the influence of security drills on counter terrorism preparedness at Jomo Kenyatta International Airport, Nairobi County, Kenya.

1.5 Study Objectives

The specific objectives of the study were to:

a) Evaluate the post drill training conducted to enable security apparatus respond to terror threats in JKIA, Nairobi County, Kenya.
b) Assess the post drill capacity build-up to enhance counter terrorism preparedness in JKIA, Nairobi County, Kenya.
c) Analyse the developed multi-agency co-ordination towards a synergized response to terrorism threats in JKIA, Nairobi County, Kenya.

1.6 Research Questions

The study was guided by the following research questions

a) What post drill training have been conducted to enable security apparatus respond to terror threats in JKIA, Nairobi County, Kenya?
b) What post drill capacity build-up has been conducted to enhance counter terrorism preparedness in JKIA, Nairobi County?
c) What multi-agency co-ordination has been developed towards a synergized response to terrorism threats in JKIA, Nairobi County, Kenya?

1.7 Significance of the Study

Maillard (2013) argued that a study's significance "is effective if it reflects on the extent of the contribution made by the study to improve our understanding on the topical issue, to change a concept or to promote a new hypothesis in a particular field of research. This study is significant because in Kenya, some drills have caused liabilities like those of actual terrorists and terror attacks despite them not being the maiden drills conducted by the institutions. The conduct of drills has been traditionally followed by a lull period until the next drill is conducted. This was the case in a 2015 drill conducted at Strathmore University, which led to the loss of one life and up to 30 injuries to students and staff even though it was not an actual attack (Odumbe, 2015).

It is therefore crucial to evaluate the influence of drills in preparing security personnel and civilians in major points of entry and exit into the country, such as international airports like JKIA, as these are some of the settings and infrastructure that are, globally, prone to terror attacks. Given aviation presents a 'soft' target; primarily at airports and in-flight aircraft and having been targeted globally by the virtue that they handle a lot of the human traffic entering and leaving the country, it is imperative to evaluate the influence of security drills conducted in Kenya's key airport, JKIA

to counter terror preparedness of the facility. The study will come up with recommendation on the most effective Post-drill security evaluation of the influence security drills impart on the counter terror posture after the drills are conducted. The methods will be universal and can be applied to any institution seeking to evaluate the influence that drills have had on improvement of their operational preparedness. It will also add to the less explored body of knowledge on security drill's influence to counter terrorism.

1.8 Scope of the Study

A study's scope is how far the research area has explored and parameters in that the study operated, (Lavrakas, 2008).The study focused on influence of security drills alone, as mechanisms used by security apparatus in Kenya, such as the Kenya Defence Forces (KDF), National Police Service (NPS) Kenya Civil Aviation Authority (KCAA) and Kenya airports authorities (KAA), to assess their preparedness for dealing with security threats such as terrorism, on a small and large scale. Drills are the prescribed mechanisms for security preparedness in the country and globally. The study was limited to those drills conducted at the JKIA due to the various drills they have conducted at the facility over time. Many drills have been conducted internally, and have yielded different outcomes, but there is little knowledge on the influence of those conducted in airports on the study's goals.

1.9 Delimitation

According to Marilyn, (2011) delimitations are the characteristics that limit the scope thus defining the boundaries of the study. The study confined itself to evaluating the influence of security drills to counter terrorism preparedness at key entry points in Kenya, alone. There is an insignificant number of security drills that have been conducted across the country. However,

JKIA over the last decade has undertaken various drills which can inform an influence on the institution's counter terror preparedness. Therefore, the study focused on drills conducted at JKIA.

1.10 Limitations

According to Prince and Murnan, a study's limitations are "the constraints on generalizability, applications to practice, and/or utility of findings that are the result of the ways in which you initially chose to design the study" (2004). With regards to the design of this study, some key limitations that were encountered include access to few respondents than anticipated for such a study given the nature of security drills and compounded by the existing pandemic 'Covid-19' that led to a reduction in the number of personnel available at the study location, JKIA. The airport departments had resulted to working in shifts to beat the spread of the virus. The collection instruments were however confidentially given to shift leads with instructions on the subject matter for administration to shift personnel and then returned to the security office for collection and processing. Further, many of the drills involved a controlled number of personnel, hence the difficultly in engaging, tracing and engaging respondents. This was however bridged through an introductory letter to conduct the research which was sought from the airport's security department. In addition, the study only addressed the influence of drills that are unique to points of entry such as airports but did not cover those conducted on typical institutions and business installations.

1.11 Study Assumption

Simon (2011) argues that assumptions are "the things that are somewhat out of the researcher's control, but if they disappear the study would become irrelevant". One of the study's key assumptions was that the respondents would provide accurate feedback. The other assumption was that secondary data like the AAR of previous drill would be availed by the relevant authority

regarding the nature of the study. The study also assumed that the security drills conducted at the ports of entry and exit reflect the nature of threats that are likely to occur in similar settings and other installations.

1.12 Theoretical Framework

It can be termed as the 'blueprint' or guide for a research (Grant & Osanloo, 2014). It is defined as the framework based on an existing theory in a field of inquiry that is related and/or reflects the study's hypothesis. This research was therefore anchored on the conditioned response theory of learning and the Inoculation Theory to assess the influence of security drills on counter terrorism preparedness at JKIA, Nairobi County, Kenya.

1.12.1 The Conditioned Response Theory of Learning

The Conditioned Response Theory by Pavlov, 1926 posits conditioning as a means of modification of the natural response. Generally natural stimulus results in natural response. However, natural stimulus may at times be substituted by an artificial stimulus (or simply a conditioned stimulus/response as it is called). Through this process, a new connection between the artificial stimulus and natural response is henceforth created.

Ivan Pavlov a Russian psychologist in 1926 conducted an experiment on this theory through the placement of a dog in a soundproof room that had a small window which permitted viewing from the outer side. When Pavlov presented meat powder to the dog, an observation from the dog's mouth was made. Just at the mere sight of the meat an automatic secretion of saliva was observed. Each moment the meat was presented to the dog a bell was rung. Therefore, ringing of the bell and sight of meat soon got inter-connected. On the next time, only the bell was rung but no meat was presented and surprisingly the dog salivated. Despite the natural stimulus (meat) being

absent, the artificial stimulus, i.e., the bell was alone responsible for the natural response, observed through the secretion of saliva.

Food in this case is the stimulus, as it motivates the dog to respond trough secretion of saliva. Food is the unconditioned or natural stimulus, by production of the response in a natural manner. Ringing of the bell is artificial or conditioned stimulus, while the dog's response when the conditioned stimulus alone is presented, is conditioned response. Similarly, Security drills work in a common manner in that the security drill invokes the security responders to respond in a synergized and organized manner than they would do if the responded naturally (mostly haphazard). The first objective on post drill training conducted to enable security apparatus respond to terror threats is anchored on this theory. This theory only touches on the training objective. Therefore, to further assess both objective two and three theoretically which are post drill capacity build-up to enhance counter terrorism preparedness and multi-agency co-ordination towards a synergized response to terrorism respectively, the Inoculation theory was further incorporated.

1.12.2 The Inoculation theory

To further augment the Conditioned Response theory in elaborating the influence of security drills to emergency response, and especially to theorize objective two and three more vividly, the Inoculation Theory which was created by William J. McGuire in 1961 to explain how attitudes and beliefs change, and more importantly, avenues on how to keep existing attitudes and beliefs consistent in the face of attempts to change them will be reviewed. The theory works in a similar manner to vaccines (inoculants) and in terms of this research security drills, in that exposing the receiver to a weakened counter argument (drill) will trigger a process of counter argument (response) which confers resistance to later, stronger persuasive messages (real attacks).

Success of inoculation banks on the fact that a threat (motivation for resistance) is excised upon these existing ideas or pre-emption capability (ability to build defenses against potential counterarguments) after the inoculation. The argument (threat) that is presented through inoculation must be strong enough to initiate motivation to maintain current attitudes and beliefs, but weak enough that the receiver will refute the counter – argument (Compton, 2013; McGuire, 1964). Similarly, security drills provide a simulated threat that is weaker than a real threat to trigger a response that now forms a basis on response to future threats thus improving response capability.

1.13 Conceptual Framework

This is the structure which best outlines the natural relationship of the phenomena being studied in the research, (Camp, 2001). Post drill emergency training based on identified gaps and Security drill skill sets provide a basis for subsequent responses to terror threats (Figure 1.1).

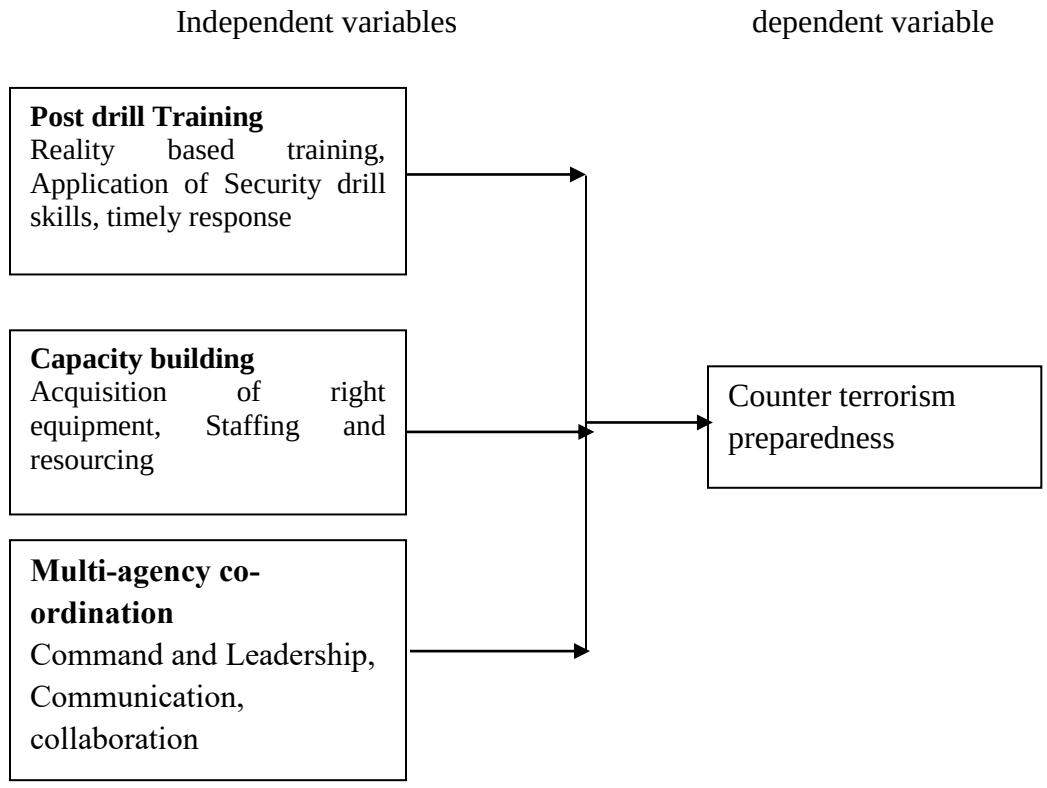


Figure 1.1: Conceptual Model, Source: Author (2021).

The capacity building of security apparatus in terms of requisite equipment, staffing and resources is directly proportional to the quantum of response during emergencies. Multi-agency co-ordination is fast becoming a critical requirement to effective emergency and counter–terror response strategies. This includes harmonized command and leadership, communication and collaboration based on the Incident Command System (ICS).

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter dealt with review of related literature of this study on the influence of security drills on counter terrorism preparedness at JKIA, Nairobi County. Specifically, the review of the post drill training, capacity of security apparatus and effective application of security drill skills in enhancing efficient response and analysis of the effects of multi-agency co-ordination on preparedness were investigated.

2.2 Empirical Review

2.2.1 Post Drill Emergency Training and Efficient Response

One of the major theoretical frameworks that have been applied worldwide in examining the training and capacity building of law enforcement officers for counter-terrorism response is the social constructivist framework, which also encompasses foundational learning strategies and theories. More specifically, the framework contains the experimental and cognitive learning theories. These theories form the basis of a training approach known as Counter Terrorism Reality Based Training (CTRBT) (Biddle, 2013). Reality-based training has been an area of academic and scientific interest for decades, the model is becoming increasingly important in security & emergency team's training as it seeks to address the dynamics of terrorism and counter-terrorism that prevail in a post-9/11 context. The framework has been used a blueprint for counter-terrorism preparedness in several parts of the world. The CTRBT model is especially useful since it is applicable across all major law enforcement contexts and agencies in the world.

Regionally the Inter-Governmental Authority on Development (IGAD), has a Counter Terrorism (CT) Pillar as part of its main goals whose activities are geared towards evaluating the

training needs of member states to bridge the gap of countering terrorism. This triggers a build-up of regional counter terrorism capacity and streamlines the sharing of information to counter terrorism, radicalization and extremist's violence (IGAD, 2014). The framework utilizes the CTRBT model for training and capacity building programs of its member states in consistency with the acceptable practices.

The Kenya National Strategy to Combat Violent Extremism was launched in 2016 by President Uhuru Kenyatta. He vowed that the plan which is headed by Kenya National Counter Terrorism Centre (NCTC), would pool resources from government, private sector and the civil society, in support of counterterrorism efforts, through emphasis on soft power rather than hard power military strategies, (West, 2016). The CTRBT model has already been incorporated in the KDF and NPS special operations forces units training and proposes eight learning components and knowledge areas that are also applicable in the assessment of these training programs' effectiveness.

In JKIA several drills have been conducted with the latest being in November 2018. The Kenya Airports Authority (KAA) training school has been equipping participants with the necessary skills on how to safely operate portable fire equipment so as to prevent fatalities and how to evacuate buildings in order to bridge gaps identified in former drills, (KAA, 2019). The Figure 2-1 below shows the proposed CTRBT assessment model. The model components also provide measures against which the influence of security drills can be assessed. The components provided this study with qualitative and quantitative measure when analysing findings for the first objective.



Figure 2.1: Counter-Terrorism Reality Based Training Model, Source: Biddle (2013).

2.2.2 Post Drill Capacity Building of Security Apparatus to Enhance Response counter terrorism preparedness in JKIA

The United Nations High Commissioner for Refugees (UNHCR) has in the last sixteen years responded to thirteen large-scale magnitude emergencies, whereby more than half a million people were internally displaced and in need of assistance, in different areas all over the world, (UNHCR, 2007). During this period, the UN has globally increased its emergency response

capacity in terms of staffing, emergency response resources and equipment as well as early warning systems.

Regionally the Eastern African Standby Force (EASF), is one of the five regional forces for Peace Support Operations of the African Standby Force. It consists of police, military and civilian components and constitutes the regional operational arm of the peacekeeping elements of the African Peace and Security Architecture, (EASF, 2011). To create capacity, the force is staffed by all its 10 member states, who also contribute towards its resourcing for effective interventions in emergencies facing Eastern Africa. The staff congregate in the Humanitarian peace Support School, HPSS in Embakasi for participation in emergency response drills like anticipated threats in the field in order to build a capacity for efficient response

The Kenya government has strived to fund the focal emergency response institutions in a bid to create the capacity commensurate to the threat to Kenyan security up to the county level government, (National Steering Committee on Conflict Management and Peace Building – the Conflict Management and Peace Building Directorate, n.d). When evaluating the security apparatus capacity to confront emergencies, security drills are brought aboard to focus on whether the salient response groups have been identified, accorded the requisite resources and staff and given prerequisite training to necessitate their response to emergencies.

However, according to Creswell (2009), for the learning to be effective, the participating individuals need to be at the center of it. Thus, in the case of security officers, the success of security drills for counterterrorism will depend largely on their constant participation in the exercises coupled with an understanding of their roles and the purpose of the trainings they undertake. One way of enhancing success of the drill's goals is by conducting a capacity building

in terms of resourcing, staffing and acquisition of relevant equipment for the various anticipated threats. Thereafter, a conduct of post-drill training to refresh the responders and rehearse them on utilization of the new equipment or strategies should follow especially concerning their roles in different types of emergencies, labelling of emergency exits and fire assembly areas and consequent rehearsals of the same regularly. These training activities are undertaken within the real-world working environments such as the locations where the officers offer security or emergency services, (Biddle, 2013).

2.2.3 Multi-Agency Co-Ordination and Preparedness Strategies

Post 9/11 clearly brought the importance of multi-agency co-ordination on preparedness and response to threats. It led to the creation of the National Incident Management System (NIMS) in the USA that created a synergized response by all agencies, to include Federal Bureau of Investigation (FBI), state and local police, medical responders and victim assistance organizations for an efficient counter terrorism response while utilizing the ICS for the purposes of incident command (Smith and Budinger, 2011). This enables monitoring and evaluating co-ordination of multi-agencies.

Some evaluations have been conducted on counter-terrorism preparedness and reveal that the major agencies involved in security drills are in law enforcement. The study by Biddle (2019) focused on police officers in the United States following the 9/11 terror attack. Another study by Farhat (2017) done in Pakistan revealed that the major responders in counter-terrorism security drills are also police officers. This triggered a study by Jones (2017), to prove that counter-terrorism drills and exercises are not exclusive to law enforcement officers only. They are more effective when they involve multiple stakeholder agencies in both the private and public sectors. Such include private security agencies, civilians, retailers, and policymakers

Kenya drafted her national disaster management plan in 2009, with the National Disaster Operations Centre (NDOC) mandated with coordinating response to emergencies at the national level, (Government of Kenya, 2009). This later translated to multi-agency drills conducted whenever there is a threat facing the country like the Exercise Maliza Magaidi - 2016 conducted to streamline response to terrorist attacks and Exercise Dumisha Utulivu – 2017 conducted to sensitize all responders to the probability of chaos during and in the aftermath of the August 2017 Kenyan General elections, (MOSD, 2017). The mode of evaluating likelihood of a coordinated response after these drills has however, not been forthcoming as there is no clear structure on how it can be done.

In Kenya, some of the security drills that have been conducted have failed because they lack collaboration between the stakeholders involved, (Howden, 2013). It is imperative that evaluation of multi-agency involvement and sharing after drills be prioritized to maximize their effectiveness during future threats. This will lead to information sharing, improved inter-agency communication and thus a synergized response.

2.3 Summary of Literature Review and Research Gaps

The literature discussed above outlines some of the pertinent sources of conflict/violence that predisposes the world to terror threats. The theories discussed also form a basis for knowledge of the threat posed, which further triggers a coping mechanism to counter the threatening factor. The coping mechanisms are generally the emergency response and counter – terror capacity building, formulation of preparedness strategies and multi-agency coordination to synergize the response to real attacks. This is one of the key reasons the multi-agency National Counter Terrorisms Centre (NCTC) was formed and is always working round the clock with the aim of

making speedier interventions to counter terrorists' preparations, plans and the execution of attacks (Otipi et al. 2013).

However, should failure to detect emergencies or threats lead to an attack, then the agencies conduct internal drills to simulate anticipated attacks especially through the reality-based training. Institutions further plan security drills to encompass all agencies and prepare them for would be attacks. These drills though being primarily aimed at developing an emergency plan also have a crucial role in evaluation of the capabilities of these agencies, determination of training capacity relevant to the response and assessment of multi-agency coordination. It helps safeguard the nation from casualties through terror attacks, bolster and secure the economy, and eradicate the periodic attacks from these people. Indeed, the security measures taken in the preparation and conduct of the Kenya's Multi agency Rapid Response Capability (RRC) Exercise in 2016 enabled a synergized response in the Dusit D2 attack incident along 14 Riverside Drive in Nairobi.

Much has been studied on training programmes and security drills conducted by emergency responders. Various training programmes like the counter terrorism reality-based training have necessitated realism in crafting preparedness strategies and streamlined the conduct of security drills. It is a requirement that all international airports are expected to conduct a full-scale security or emergency drill within every three years, in order to adequately prepare the responders, (KAA, 2019).

Most scholars have covered the structure of security drills and their conduct but there exists a gap in why injuries and fatalities occur in successive drills despite the drill's having been made to avert that. Some successive drills have not only led to failure, but also caused injury and fatalities as well as trauma to unsuspecting participants. This implies either, a non-implementation of after-

action reviews of previous drills or complacency in the preparation and conduct of the drills. The period in between the successive drills is not well utilized to mend for weaknesses observed during the after-action review of preceding security drill thus leading to resurgence of previous flaws.

This research evaluated the influence of these drills towards counter terrorism preparedness of security and emergency response apparatus. Focus was on how the drills have either improved or affected the security posture of the organization. It looked at what happens after the conduct of drills and its impact in the response during subsequent drills and based on the responses or after-action review reports, came up with a structure on how to run a post drill evaluation. This will enable security drills to have a positive impact on future drills and consequently improve preparedness towards countering terrorism.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The chapter covers the methods used in conducting the research. There is a description of the methods used in collection of data, measurements, and analysis of data from the study area which is JKIA. More specifically, the chapter has been structured into the following subcategories: research design, study area, sampling design, target population, instruments used in data collection, analysis of data and legal and ethical considerations.

3.2 Research Design

This is a detailed outline of data collection methods, the various instruments that the collection used, how they were used and the means for analysing the collected data, (Bastos et al, 2016). A descriptive survey research design method was utilized in the study. The design method was aimed at obtaining detailed information in order to evaluate the effectiveness of security drills in ensuring security preparedness. The descriptive method is a useful tool used in research design when the subject in context is not intended to relate specific relationships nor to correlate directly to one variable (Ader, Mellenbergh, & Hand, 2008). This research design tool is particularly important whenever conclusive findings are needed and especially in the testing of a theory when a survey is conducted using questionnaires (Hale, 2011).

3.3 Study Location

This is simply the place where people conduct research (Metcalf et al, 1996). The research site is one of the most significant decisions facing a researcher. The study was based in the Nairobi County, Kenya and more specifically at the JKIA. There are five international airports in Kenya namely JKIA in Nairobi, Moi in Mombasa, Kisumu, Eldoret, and Wajir. However, the significant

location of JKIA, 15 kilometres from the Country's capital, with over 4 million people residing in the capital city, is an incredibly significant gateway to the country. The airport handled approximately 7 million passengers in 2018, and consequently ranked the second fastest growing cargo airport in the world in 2019, (KAA, 2019). This coupled with having been recently awarded Category 1 status i.e. direct flights to the USA makes JKIA a strategic and a vital security installation. Several security drills have been conducted at the airport and thus, this site was suitable for the study (see Appendix 4). It served as a primary data source.

3.4 Target Population

In each study, the target population represents the actual list of sampling units from which the sample is selected, (Creswell, 2009). Thus, the study population is representative of the groups of people or study units for which the findings of the research is meant to generalize. This research targeted security apparatus and personnel involved in conducting security drills in Kenya (Table 3.1).

Table 3.1: Study population

Security Apparatus	Population	%
Kenya Defense Forces (KDF)	35	13.89
National Police Service (NPS)	65	25.79
National Intelligence Services (NIS)	8	3.18
Kenya Airports Authority (KAA)	100	39.68
Kenya Civil Aviation Authority (KCAA)	20	7.94
Other Security Stakeholders	24	9.52
Total	**252**	**100**

Source: KAA (2020).

Since this research seeks to unearth the influence of security drills, the target population was thus the security personnel and authority figures who are based at JKIA and are primarily involved in conducting of security drills.

3.5 Study Sample

3.5.1 Sample Size

With reference to Dattalo (2008), a sample size is a population subset that is the outcome of sampling strategy. The number of participants was recruited from each subgroup in an equal measure to their proportion in the population as per the sampling frame in Table 3-1 above. The study applied the Yamane (1967) formula for calculating sample size. It is represented as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where: ***n*** is the sample size required, ***N: is*** the target population 252, ***e:*** is the acceptable error limit (0.05)

NB: This study estimated a population of 252 security personnel and other responders at JKIA involved in security drills. After subjecting it to the Yamane (1967) formula, the results were:

$$n = \frac{N}{1 + N(e)^2}$$

n = 252

1 + 252 (0.0025)

n = 154 respondents

Therefore, the study will have = 154 emergency response personnel (Table 3.2)

Table 3.53.2: Sample Size

Security Apparatus	Sample	%
Kenya Defense Forces (KDF)	21	13.89
National Police Service (NPS)	40	25.79
National Intelligence Services (NIS)	5	3.18
Kenya Airports Authority (KAA)	61	39.68
Kenya Civil Aviation Authority (KCAA)	12	7.94
Other Security Stakeholders	15	9.52
Total	**154**	**100**

Source: Author (2020).

3.5.2 Sampling Procedure

This study's sampling procedure was probabilistic in nature. According to Bastos et al. (2016), "in probabilistic sampling, all units of the target population have a non-zero probability to take part in the study". Specifically, this study applied the cluster sampling technique. This technique randomly selects targets from already existing or naturally occurring subgroups (clusters), (Bastos et al, 2016). This research selected targets from the different security agencies (clusters) within JKIA. Therefore, the study utilized KDF, NPS, NIS, KAA, KCAA and other security stakeholders at the airport as clusters of the security personnel population to represent the target population. Thereafter, from each cluster, a simple random sampling was used to obtain a representative sample from the cluster based on the percentage in the population. This gave every member of the cluster and subsequently the population an equivalent opportunity of being picked for the sample.

3.6 Data Collection

3.6.1 Data Collection Instruments

Questionnaires and scheduled interviews were used as the primary method for the collection of primary data from the sample respondents with a larger bias on questionnaires. Key (1997) defines questionnaires as "a means of eliciting the feelings, beliefs, experiences, perceptions, or attitudes of some sample of individuals". Questionnaire was therefore suitable for this study because the data required was both quantitative and qualitative. Questionnaires are also cheap to administer, are highly effective and collect different types of data. Questionnaires serve as a cost-effective means of data collection, (Fox, Hunn & Mathers, 2007). The questionnaire design follows the standard format. Interviews were used for collection of information from the study's key informants including heads of departments and senior level management in the clusters to corroborate the findings from the questionnaires. The secondary data used was obtained from official records of drills conducted within JKIA, including the technical aspects and outcomes of such exercises.

3.6.2 Pilot Testing of Research Instruments

Pilot testing of the instruments was done on a 10% of the sample size (16 respondents), prior to the study and involved the administration of questionnaires to security experts who are familiar with drill exercises. The experts did not participate in the actual study. The pilot testing was done at the Humanitarian Peace Support School (HPSS) at Embakasi, which is close to the JKIA geographically. The school conducts similar drills and evaluations to prepare emergency response personnel from different security agencies. The experts scrutinized the questionnaires to identify any problems that were present in the test instructions, possible unclear instructions, formatting or typographical errors, the legality of information sought by the research instruments,

and other issues that could have emerged within them. The issues identified in the instruments were then adjusted, refined, and corrected to ensure their validity and reliability.

3.6.3 Instruments Reliability

Reliability is one of the two main indicators of measuring instruments' quality. Reliability is mainly concerned with "stability of measures, internal consistency of measurement instruments, and interrater reliability of instrument scores" (Kimberlin, 2008). It is basically the degree that an instrument renders the same results when repeated on severally to measure the same things (Slavin, 2007).

A pilot study was carried out to establish the reliability of the instruments. The exercise was run at HPSS among the School's instructors and role players. The researcher then subjected the outcomes from the instrument to Cronbach's coefficient Alpha test where a (α) coefficient 0.7 and above is normally termed as reliable. Of the 16 target respondents for the pilot study, 12 (which corresponds to 75%) of their return results were deemed valid for reliability analysis and subjected to SPSS Cronbach's Alpha reliability test which achieved a reliability of 0.86. This shows a high internal consistency and that the test instruments were reliable (Table 3.3).

Table 3.3: Reliability Statistics

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.860	.867	12

Source: Field Data (2020).

All the items in the questionnaire appeared to be worthy of retention. The deletion of any question led to a decrease in the alpha and thus they were retained with changes in structure like

the change of measure values in question 10 in part 2 of the questionnaire. This was changed from the Likert scale of strongly agree – strongly disagree to major improvement – no improvement. The overall descriptive statistics for the questionnaire are as shown in Table 3.4.

Table 3.4: Overall Questionnaire Descriptive Statistics

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
37.36	85.855	9.266	12

Source: Field Data (2020).

3.6.4 Instruments Validity

It is the degree to which a collection instrument effectively assesses the concept it is supposed to evaluate, (Slavin, 2007). According to Thomas & Brubaker, (2008), a candidate's supervisors, peers/fellow scholars, and experts outside one's department are key if involved in various stages of the study. The researcher sought to use the supervisors, fellow graduate students and experts at the site of pilot study for testing instruments validity. Constituent's validity of the collection instruments was attained by use of two peers, two senior security drill instructors at the HPSS and the researcher's assigned supervisors who validated the instruments while the criterion and construct validity were conducted by two security experts (peers) during the pilot study stage. Each of the evaluators worked independently to provide an honest feedback to the researcher who then used it to revise the instruments.

3.6.5 Data Collection Procedures

The researcher administered the Key informant interviews guide face to face with the selected key informants and incorporated two research assistants to assist in distribution of the questionnaires to the sample respondents.

3.7 Data Analysis

The descriptive analysis method was employed to analyse the quantitative data (structured questions). Frequencies and percentages were augmented with other measures of central tendency to describe various statistical phenomena in the study. The data was obtained from the structured questions in the questionnaire. It was processed and analyzed using MS Excel to obtain facts, detect patterns, and develop explanations on the influence of security drills. Microsoft Excel program was used in order to generate graphs, pie charts, polygons from the tabulated data. Likewise, feedback from unstructured questions on respondents' opinion were jotted down to necessitate thematic content analysis aimed at answering the research questions.

3.8 Legal and Ethical Consideration

One of the key ethical considerations is ensuring that data provided by the study's respondents is not used maliciously. To safeguard the right to privacy of the respondents, the study did not ask for any personal identifiable information. Therefore, the questionnaires did not ask for names, phone numbers or addresses. Similarly, prior to and while administering the questionnaires and conducting interviews, the researchers and research assistants constantly clarified that the information sought was to be used for academic purposes only.

Prior to the administration of the data collection tools such as questionnaires and interviews, informed consent was sought from the respondents. The questionnaires contained a

disclaimer that the information is obtained anonymously, and that personal identification information was not to be collected. Formal authorization to conduct the study was also sought from the board of post graduate studies, the ministry of Education National Commission for Science Technology and Innovation (NACOSTI) and all the agencies identified in the study population.

CHAPTER FOUR
DATA ANALYSIS AND FINDINGS

4.1 Introduction

This study was intended to evaluate the influence of security drills on counter terrorism preparedness at Jomo Kenyatta International Airport, Nairobi. To accomplish this, questionnaires and key informant interviews were administered to respondents. This chapter therefore provides an analysis and interpretation of data collected. Results were then organized in sections; the first section being on the back ground information specifically on the personal information of the respondent, the other sections were based on the capacity of security apparatus to respond to emergencies, the effectiveness of post-drill emergency training in enhancing efficient response, the effects of Multi agency coordination on preparedness & response to security threats and the measures taken to improve security drill impacts on preparedness of security apparatus.

4.2 Demographic Information

4.2.1 Response Rate

The study had a sample size of 154 to which questionnaires were administered. After sorting through the questionnaires, 31 of them were found to be incomplete and therefore not valid for the study due to crucial missing data. There were 123 questionnaires and interview reports which represents 80% of the total respondents which were complete and valid to be used for the analysis as indicated in Figure 4.1.

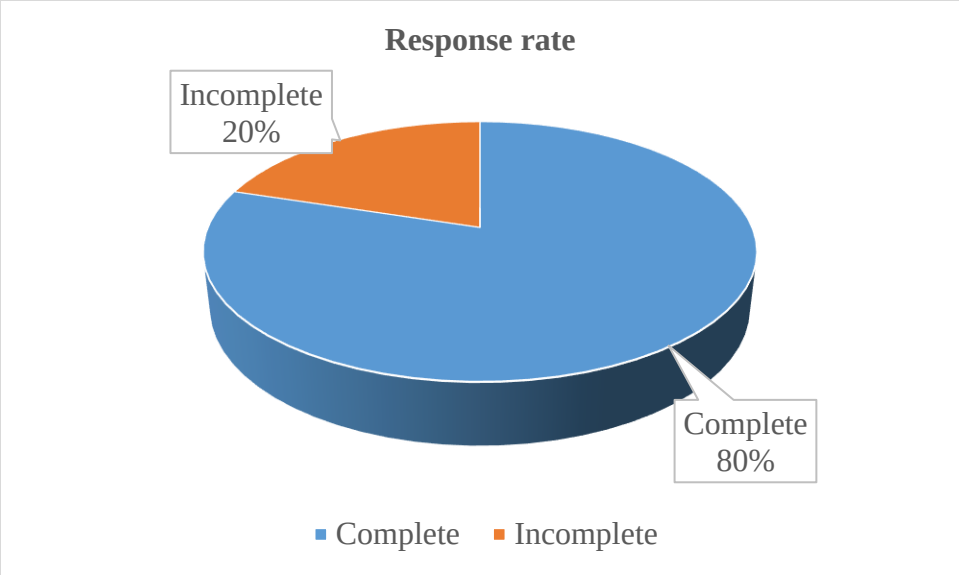


Figure 4.1: Response Rate**, Source:** Field Data (2020).

4.2.2 Gender

The research noted that a majority (80%) of the respondents were male while the remaining minority (20%) were female as indicated in Figure 4.2. Since the research employed a simple random sampling from the naturally existing security and safety clusters, this situation clearly showed that there were more males engaged in safety and security agencies in the institution.

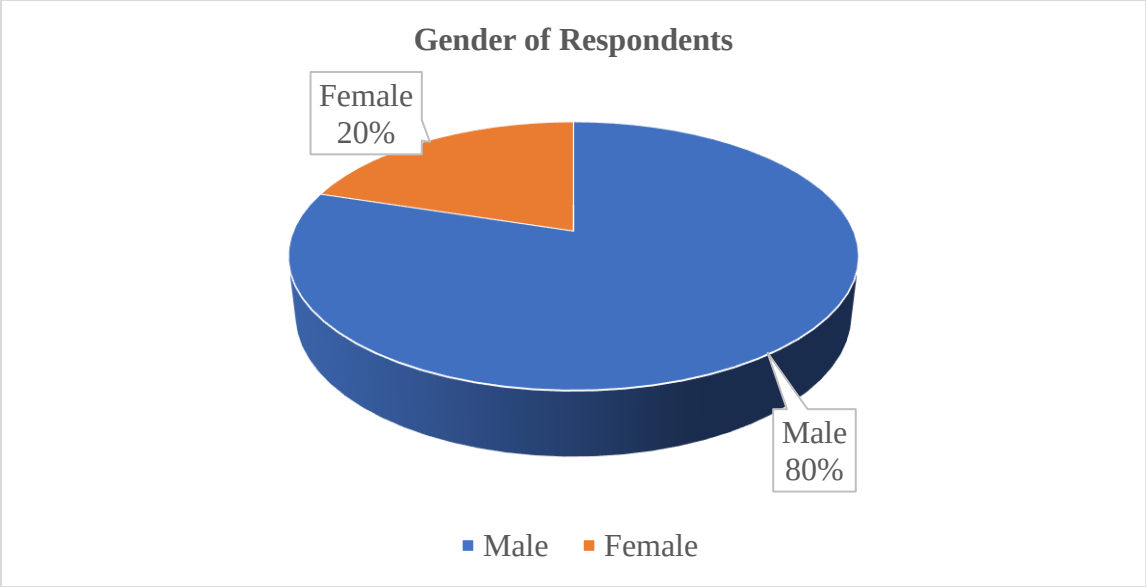


Figure 4.2: Gender or Respondents**, Source:** Field Data (2020).

4.2.3 Age Category

The respondent's age categories as shown in Figure 4.3 indicate that 21% were between the ages of 20-29, 33% between the ages of 30-39, 29% between the ages of 40-49, while 17% were above the age of 50. The modal age was 30-39 years.

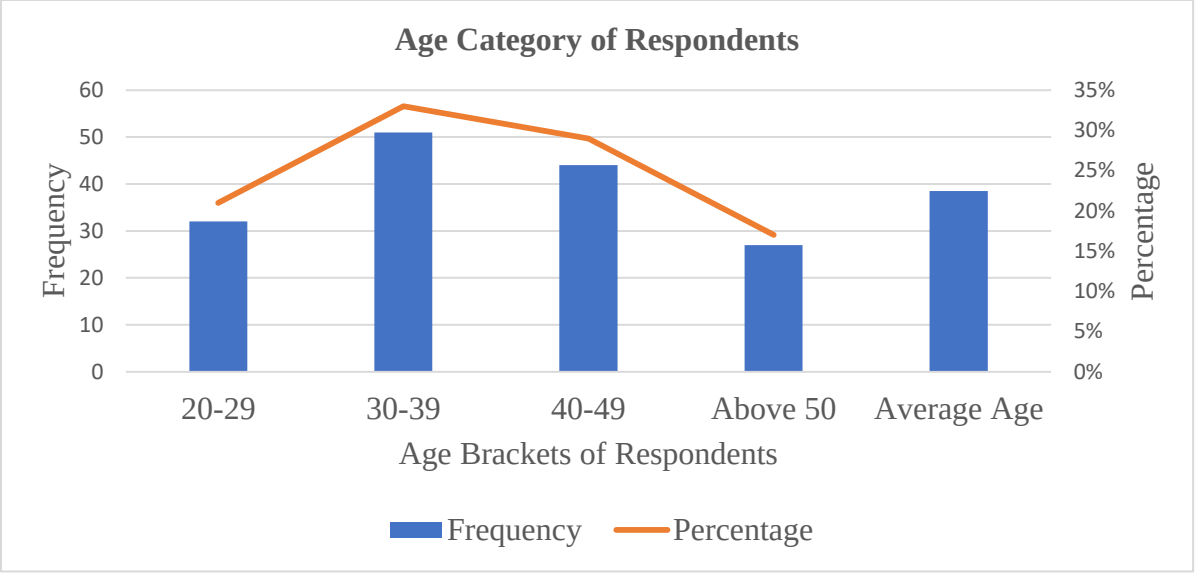


Figure 4.3: Age Category **, Source:** Field Data (2020).

4.2.4 Academic Qualifications

As shown in Figure 4.4, approximately 30% of the respondents had a high school certificate only, 51% had an undergraduate degree only, and 19% had a post-graduate degree. A total sum of 70% respondents had a graduate degree.

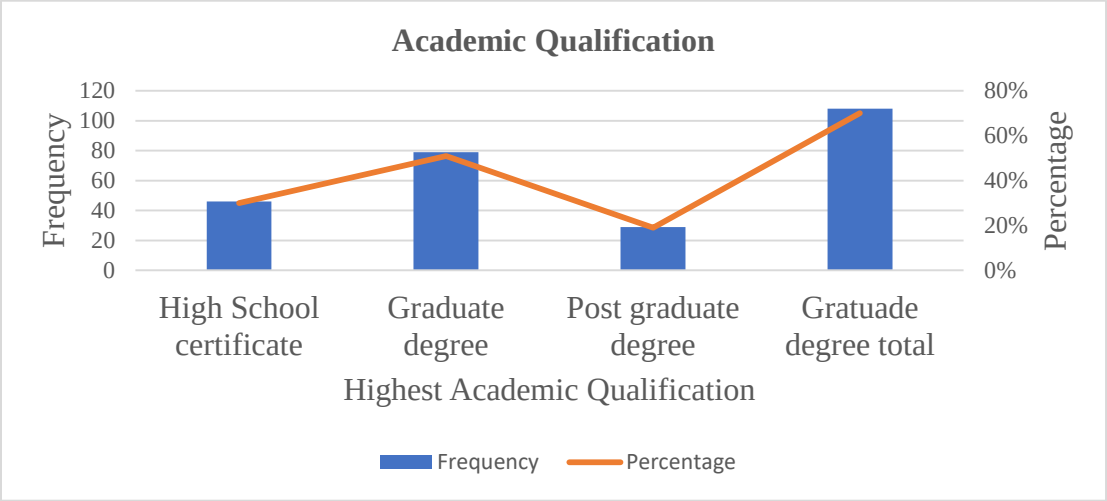


Figure 4.4: Highest Academic Qualification**, Source:** Field Data (2020).

4.2.5 Organization Employed, Area of Specialization and Length of Service at JKIA

The study maintained the administration of the questionnaire and interviews according to the study sample as shown in figure 4.5 whereby 13.89% were administered on the KDF, 25.79% to the NPS, 3.18% to the NIS, 39.68% to the KAA, 7.94% to the KCAA and 9.52% to other security stakeholders within the airport.

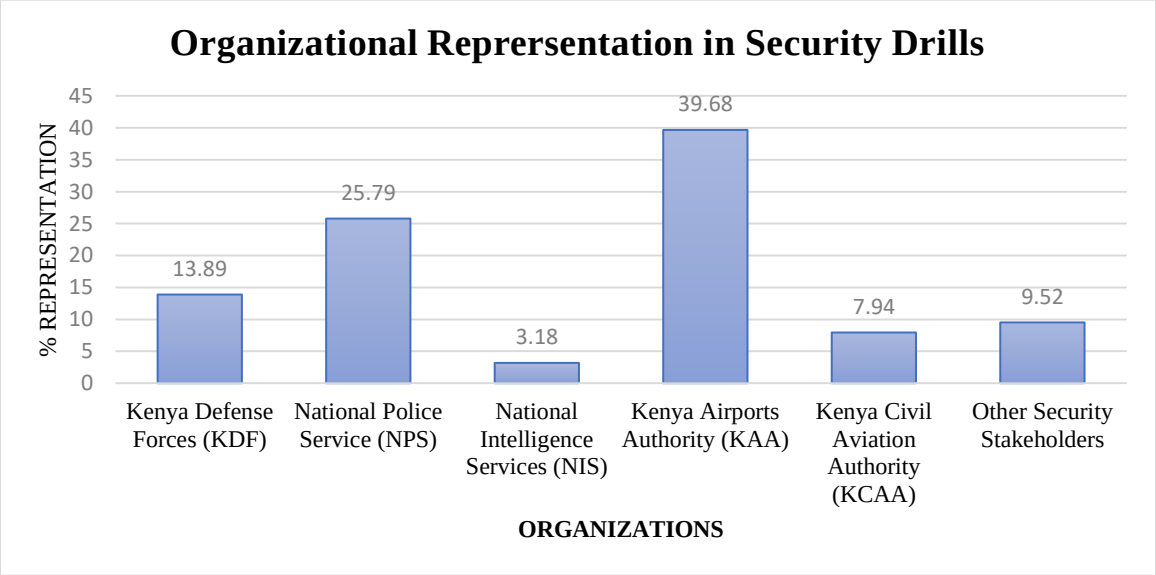


Figure 4.5: Organizations participation in Security Drills**, Source:** Field Data **(**2020).

The area of specialization for majority of the respondents was in security services (42.86%). Other respondents were drawn from the fire department, safety department, airport operations, and privately contracted security providers, who combined for a total representation of 51.74%. From the responses received, 51% of the respondents had worked in the said institutions for more than 10 years while 49% have worked for less than 10 years as indicated by Figure 4.6.

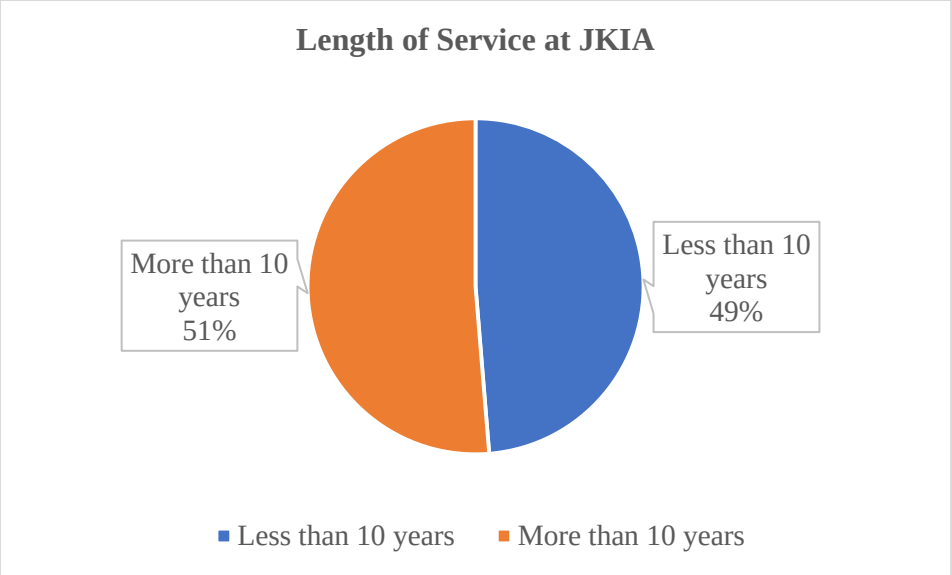


Figure 4.6: Length of Service at JKIA**, Source:** Field Data (2020).

4.2.6 Security Drills Conducted at JKIA

In order to achieve this the researcher sought out information on whether the respondents have participated in any drill, and if so, what type of drill it was. Further to that, the researcher garnered information on the number of drills conducted from 2016 to 2020. Based on the findings represented in Figure 4.2-8, respondent data indicates that 39% of drill participants underwent aircraft drill, 32% in fire drill, 16% in bomb threat drills, 7% on chemical threats and the minority where the active shooter/terrorist attack drills with 6%.

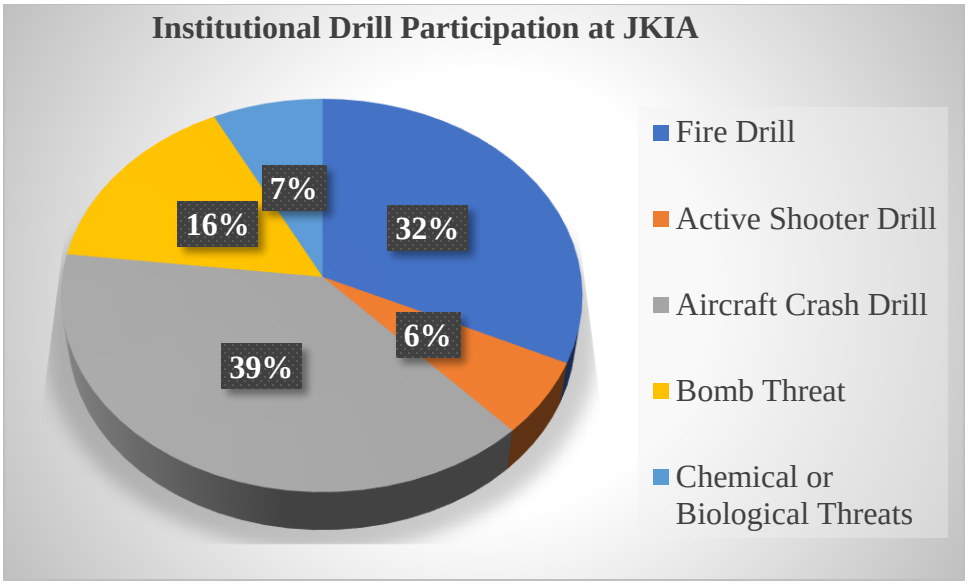


Figure 4.74.2: Institutional Drill Participation in JKIA**, Source:** Field Data (2020).

4.2.7 Frequency of Security Drills Conducted at JKIA

From the data collected as shown in Figure 4.8, there was a security drill in 2016 and 2018. Information from the informant interviews showed that there was also a drill in 2014 implying the drills are conducted after every 2 years. The respondents' feedback on the frequency of drills were 72% that a drill was conducted in 2016, 49% that there was no drill conducted in 2017, 73% that there was a drill conducted in 2018, 71% that no drill was conducted in 2019 and 82% that no drill was conducted in 2020.

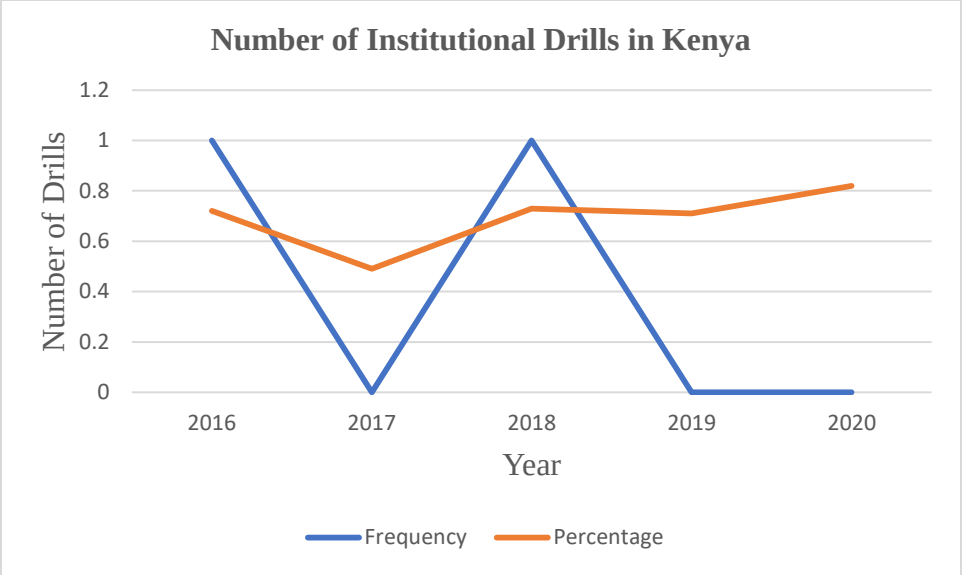


Figure 4.8: Number of Institutional Drills in JKIA**, Source:** Field Data (2020).

4.3 Presentation of Research Analysis, Findings and Interpretation as per objective

The data from the findings and interpretation of the reports were analyzed and presented as follows:

4.3.1 Post-Drill Trainings Enabling Security Apparatus to Respond to Terror Threats

The first specific objective of this study was to evaluate what post drill training has been conducted to enable security apparatus respond to terror threats in JKIA, Nairobi. This was through the inquisition of whether there were available written emergency plans of action commonly known as the Standard Operating Procedures (SOP) and whether they are regularly rehearsed, impact of the security drills on the response abilities, training gaps identified during security drills and how they have been bridged, impact of post-drill training on efficiency of response and the overall security drills influence in bolstering safety and security in the institution.

The multiple response data obtained indicated that more than half of the respondents (68 %) were aware of the available Fire emergency plans as shown in Figure 4.9. 61% were aware of

aircraft crash SOP, on the bomb threat 41% said that there were no existing SOP while 40% maintained that they were not aware of its existence. 84% were unaware of existence of chemical or biological attacks while 77% were unaware of SOP's on hostage taking. Respondents were much divided on the presence active shooter SOP. 33% claimed that they were existent, 28 % claimed they were non-existent while 39% claimed they were not aware of their existence.

From the interviews with most shift leads and institutional heads it came out that personnel had been institutionally trained to respond to emergencies that need a response from their department. From one of the key informants, it was clear there were emergency plan in place as the respondent said:

> "There are emergency plans in place for reacting to incidences based on previous challenges in drills or real security/safety threats. Most of the plans are based on airport publications and correspondences from aviation security committee (Respondent Alpha)."

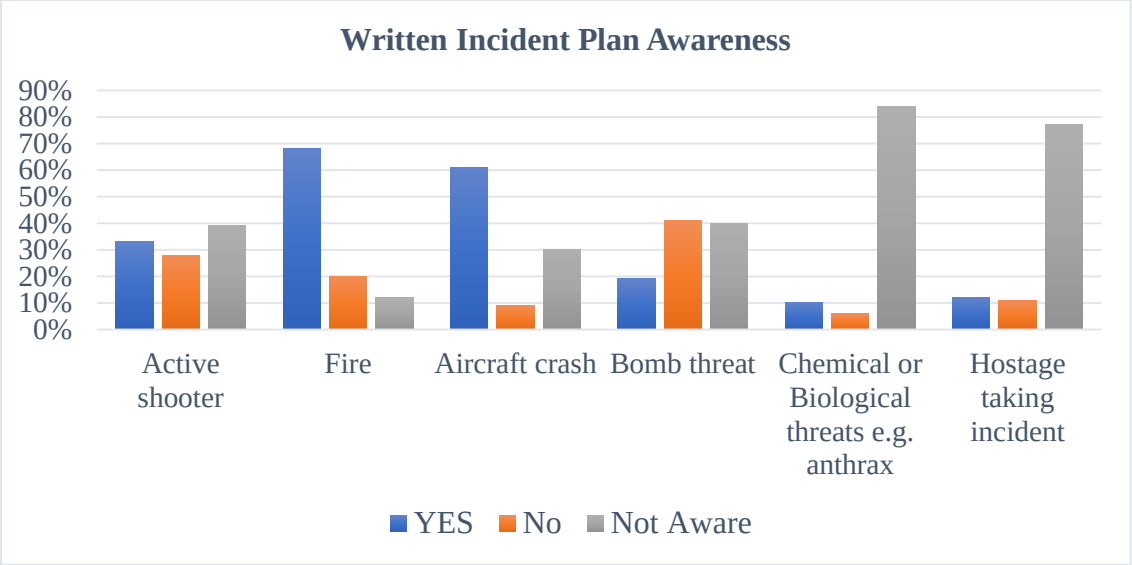


Figure 4.34.9: Written Incident Plan Awareness**, Source:** Field Data (2020).

The study sought from the responders whether they were privy to a Rehearsal of the emergency plans/Standard Operating Procedures in between successive drills. Results from the study indicate that awareness levels are quite low when it comes to the major security threats under study. Respondents reporting that their organizational departments had existing emergency plans, only 44% of the respective institutions did rehearse its personnel on use of the plan for disaster response.

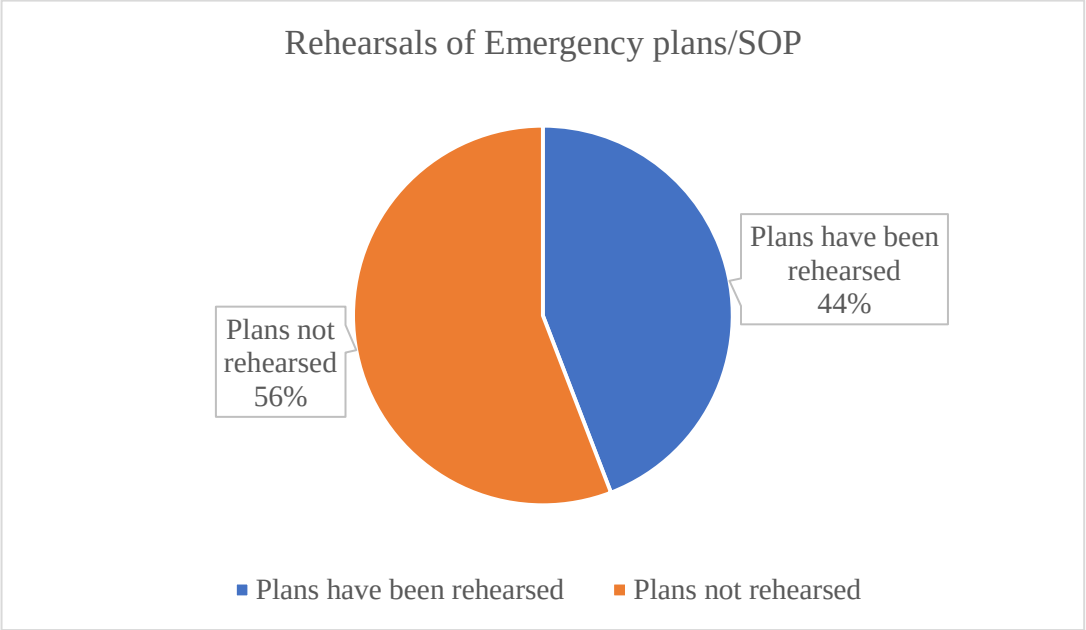


Figure 4.10: Rehearsals of Emergency Plans/SOP**, Source:** Field Data (2020).

On the impact of security drills on the respondents' ability to respond to emergencies, 80% of the respondents strongly agreed that they could escape a fire incident. On average more than 50% of the respondents agreed that they could escape a fire incident, prevent a possible air incident, identify the emergency assembly areas, save colleagues trapped in a fire incident, escape an active shooter attack, and survive a hostage taking. However, on average less than 50% agreed that they were able to save colleagues trapped in an active shooter attack or were able to identify a bomb or explosive ordinance/chemicals. Only 18% percent agreed that they could survive a chemical or

biological weapon attack.30% of the respondents were also undecided on whether they could escape an active shooter/ terrorist attack. In addition, 69% of the respondents commented that the security and safety drills have positively influenced the safety procedures at JKIA.

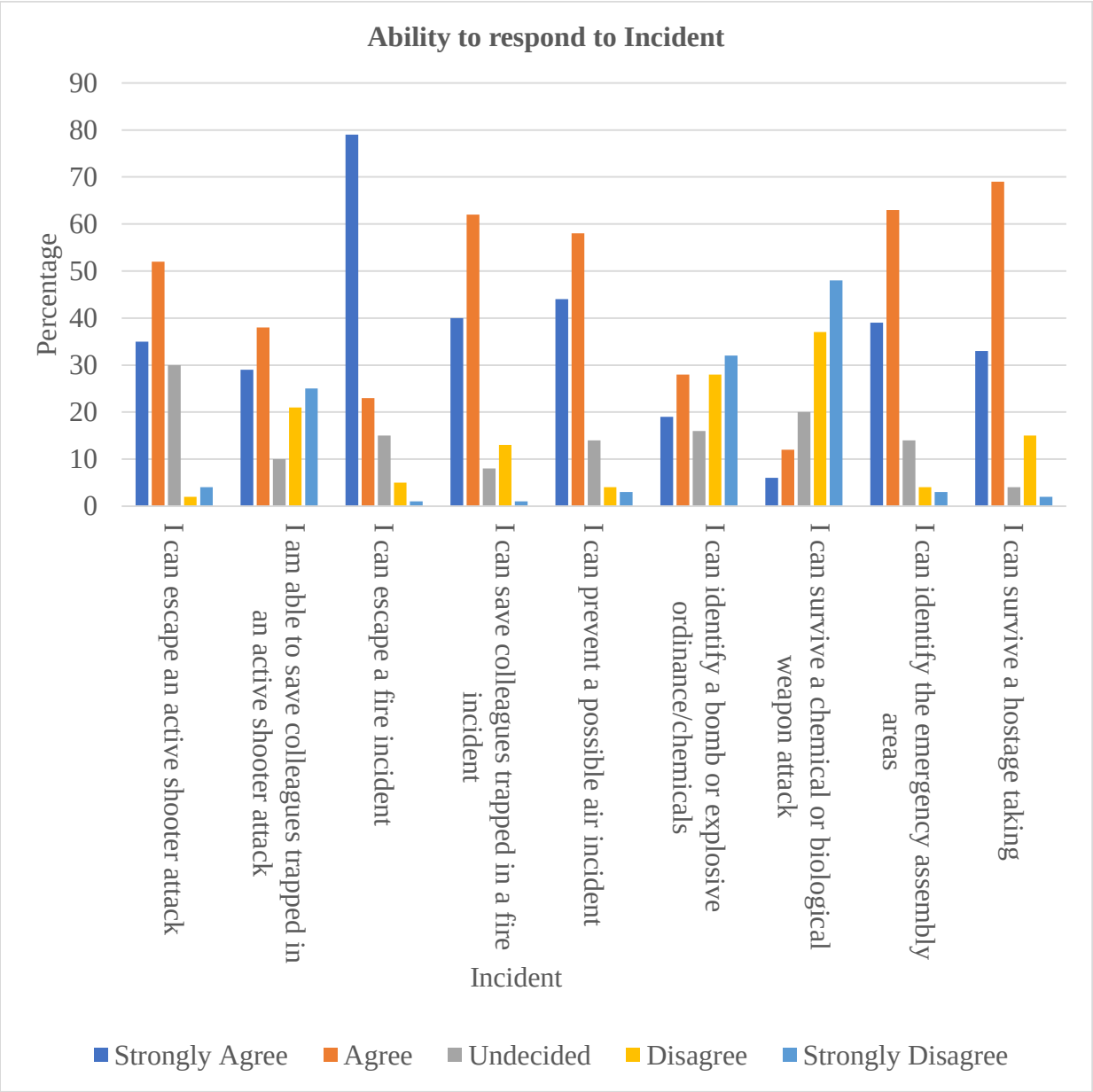


Figure 4.11: Ability to respond to Incident**, Source:** Field Data (2020).

4.3.2 Post Drill Capacity Build-Up in Enhancing Counter Terrorism Preparedness

The second specific objective of the study was to assess whether the post drill capacity build up enhanced counter terrorism preparedness in JKIA, Nairobi. In order to determine this, the researcher sought information about the availability of documented procedures to be followed during crisis, respondent's involvement in reality based training, respondents ability to apply the security drill skills and whether the training has led to timely responses during the drills.This evaluation put into consideration the criticalness and relevance of capacity given relative to the expected terror threats. It enabled determination of whether personnel/departments within the airport were capable of an effective response after undergoing various drills.

When it comes to the extent that security drills have improved the workability of the undermentioned response capabilities in JKIA, the multiple response findings were such that in counter-terrorism police intervention, 12% indicated major improvement, 60% indicated minor improvement while 28% indicated not improved. For bomb disposal department intervention 30% indicate major improvement, 55% reported minor improvement and 15% indicated not improved, as shown in Figure 4.12.

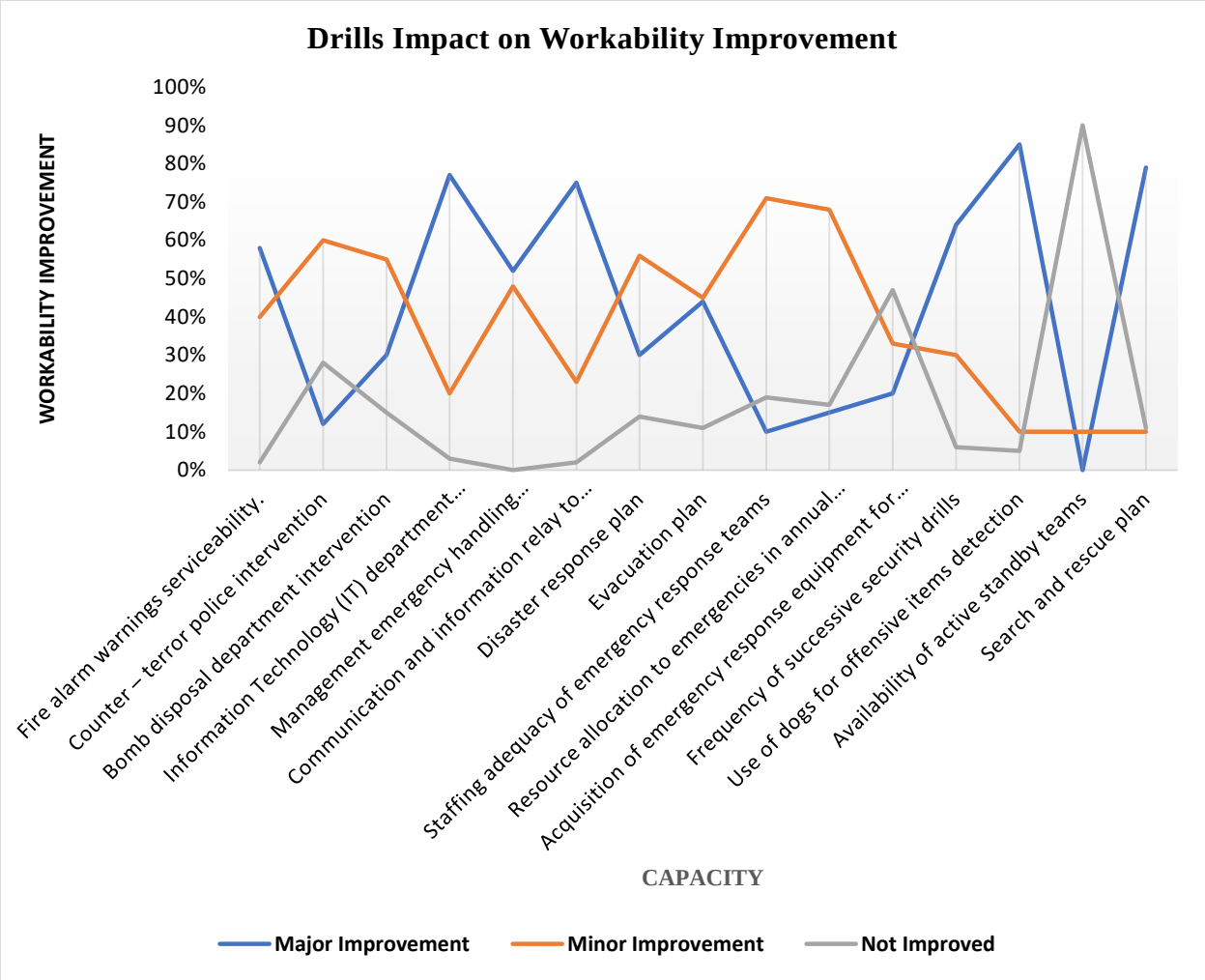


Figure 4.12: Drills Impact on Workability Improvement**, Source:** Field Data (2020).

From the interviews with key informants, most respondents agreed that drills helped the institution identify key inadequacies in terms of equipment shortfall. A key informant reported that,

> "Some of the equipment that has been procured over the last 5 years to boost emergency preparedness and response include communication radios, fire tender vehicles and hydrants, CCTV cameras to enhance coverage of the airport, security dogs, fire alarms, bomb detection devices and an emergency operation center, which has been proposed and had its budget approved, Respondent Foxtrort."

The interviews brought out that every drill always posed a challenge of manpower as the institution keeps growing rapidly with new structures and operations that call for consequent

staffing. Respondents agreed that due to the advent of technology, posts that earlier on required physical security (Personnel presence) have now been augmented with technological measures such as CCTV coverage in all halls with an operations room manned by fewer security personnel and a smaller response team. Also crucial in the capacity building is training of multi-agency responders who are non-airport staff by the Kenya Airport Authority to boost the knowledge base for a more efficient response.

Responders reported that immediately after security drills post-mortem briefs are held to address on shortcomings which are further included in the agency preparedness plans. The plans were restricted in nature and could not be disclosed to the researcher for matters of security. However, the key informant interviews reported that the plans are in place and are updated whenever they conduct exercises or security drills to feature current security and safety frameworks.

4.3.3 Multi-Agency Co-Ordination towards a Synergized Response to Terrorism Threats

The third specific objective of the study was to determine the effects of multi-agency coordination on preparedness and response to security threats at JKIA, Nairobi County. This was through evaluation of the agencies that have participated in security drills at the institution, their competency levels, their level of coordination with one another and how they performed in the November 2018 security drill at the institution.

The respondents were asked on the agencies that have participated in drills at the institution and noted that the agencies mentioned; KDF, KAPU, GSU, NIS, DCI, RDU, KAA, KCAA, Fire Marshalls, medical teams, Bomb disposal teams, sniffer dog teams, media, and National Disaster Operations Centre (NDOC) have taken part in emergency drills at JKIA. Most agencies that

participated were rated as having been very competent and competent. Only a small number of the respondents (8%), were undecided on the general level of competence of all teams.

During preceding security drills, respondents pointed out that 34% of the teams worked alone, with 15% of teams responding haphazardly. Only 28% of the responders worked under a unified command with 23% not coordinating with the JKIA management. In the succeeding drills however, 73% of the responders were well coordinated with a unified command, 15% worked alone, 7% worked alone and 5% of the external teams did not coordinate with JKIA management.

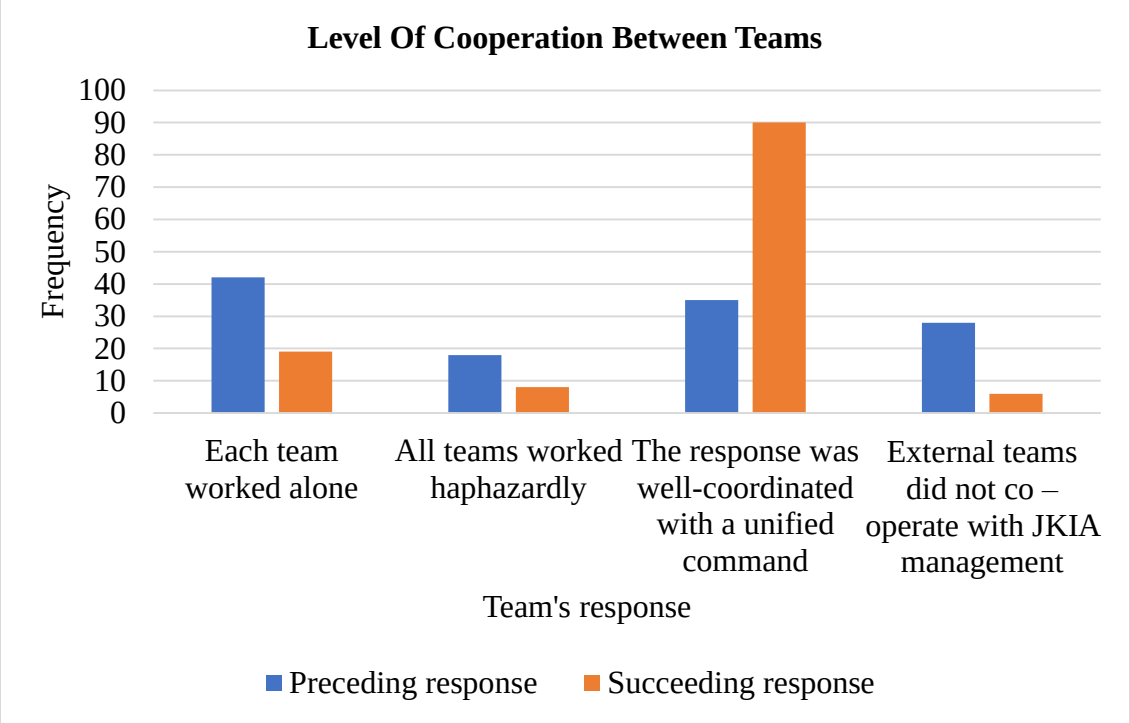


Figure 4.3: Level of cooperation between teams**, Source:** Field Data (2020).

Most of the respondents opined that despite the 2018 drill being a learning opportunity on counter-terrorism preparedness for future threats, that it was the most coordinated drill ever

performed. The drill that mimicked an explosion incident at the terminal 2 of the airport coupled with a potential security incident having; injured “passengers,” objects on fire and terminal evacuations also played a part in the airport’s comprehensive drill training which took 2 months to plan. An interview with one of the planners explained that it was planned without the knowledge of the responders but with planning members drawn from all agencies within the airport. With the OCPD being the incident commander relaying all information to the emergency operations center on required resources most respondents alluded that the drill was quite a success.

4.3.4 Additional Measures to Improve Security Drill Impacts on Preparedness of Security Apparatus

The researcher in addition sought additional information on measures that could be undertaken in general to improve security drill impacts on preparedness of security apparatus at the institution through seeking for measures to avoid the repeat of previous mistakes and security analysis procedures that can be done to boost Counter-terrorism preparedness at JKIA.

The respondents attributed that training should be prioritized with incorporation of scenarios that mirror real like scenarios. It was also observed that in the lounges there are civilian employees who have no idea of the required responses to attacks and required to be equipment with this knowledge. Improvement of the infrastructure to enable terror proof entrances and coverage of the entire perimeter of the airport by CCTV was viewed as critical.

The respondents also noted that there is a deep resources challenge that would have however boosted the capacity of responder’s equipment, personnel increase and investment in better technological capabilities to boost physical security and safety.

Most respondents identified the auditing of systems in the institution as one of the key procedures to boost counter-terror preparedness. Conduct of table top exercises to prepare

personnel before the real exercises was also identified as critical to enabling a pre-mortem analysis is necessitated. Timed evaluation of progress in comparison with the trending threats was also identified as key to boosting counter-terrorism preparedness strategy.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of key data findings, conclusion drawn from the findings and recommendation made there-to. The conclusions and recommendations drawn were focused on addressing the influence of security drills on counter terrorism preparedness at Jomo Kenyatta International airport, Nairobi Kenya.

5.2 Discussion

The study evaluated the 123 valid questionnaires which represents 80% of the total respondents. This is a very high rate of validity and implies that the respondents were well versed with the topic of study.

The research noted that a majority 80% of the respondents were male while the remaining minority 20% were female. Since the research employed a simple random sampling from the naturally existing security and safety clusters, and who have participated in security drills, this situation clearly showed that there were more males than females engaged in security drills in the institution. These findings were consistent with those of Nicholas (2012), Schuck and Schuck (2014), which revealed a misrepresentation of women in policing and law enforcement. This underrepresentation has the potential to undermine efforts to equip law enforcement agents with relevant and up to date counterterrorism training because one gender is effectively locked out of the security drill exercises.

Majority of the respondents 70% had an undergraduate degree with only a small percentage 19% having only a secondary school certificate as their highest degrees of academic qualification.

They also attested that they have had undergone institutionalized training at their departments, some of the training being equivalent to diplomas, to enable them to discharge their operational duties diligently. This shows that the literacy levels in the institutions and especially on personnel who respond to emergencies and security drills are very high. These findings are consistent with those of a study by Brand-Gruwel et al. (2005), which classified participants possession higher education competencies as being experts in information problem solving processes, while those with lower education qualification or levels as being novices in the same. Therefore, when it comes to law enforcement and security agent, higher education levels correlate positively with their participation in information-driven security drills.

Most of the respondents were from Kenya airports authority representing 40% of the personnel involved in security drills in the airport. This is attributed by the fact that they are the facility management with most other organizations being regulators and security augmentation teams. The researchers estimate that the authority was the largest department engaged in the security drills was confirmed through the research instruments. Through an interview the authority has five sub-branches namely; Fire, Security, Airport operations, Safety and Ground Flight Safety which are involved in the day to day aviation operations and thus form the largest responders at the facility.

The specialization of most of the responders were security and safety providers given the nature of the drills are aimed and necessitating safe and secure aviation operations. These were the government security agencies KDF, NPS, NIS, and the safety and security departments of KAA, KCAA and privately contracted security agencies.

Half (51%) of the respondents had served in the institution more than 10 years. Nearly half (49%) had served for less than 10 years. This is attributed by the fact that the security and safety

departments keep on rotating their employees to other facilities to avoid complacency that otherwise arises when one has overstayed for long at one facility.

The drills conducted in the institution were Fire and aircraft crash drills accounting for 32% and 39% respectively. The active shooter or rather terrorist drills were at 6% while the bomb threat was at 16%.From the analysis of drill participation data at JKIA, it emerges that the most commonly executed drill scenario is the aircraft crash drill, which accounts for 39% of all executed drills.

The high frequency of the aircraft crash drill, relative to the other drill scenarios, is likely due to the fact that the setting is an airport and flights are at the primary activity carried out at that setting. Therefore, it is reasonable that many of the drills undertaken there will be flight oriented. It is, however, alarming that active shooter drills account for only 6% of all the drills undertaken at JKIA. Even though there are stringent security measures implemented at the airport's entry point to prevent illegal entry of weapons, there are still many opportunities for such and occurrence, hence there is a dire need to increase the number of active shooter drills undertaken in this facility. This will enable the institution to match up to the contemporary threat of Counter-terrorism preparedness. Moreover, during a single surety drill more scenarios could be put to play so that all departments and threat scenarios are rehearsed on the mostly anticipated threats.

The study outlined that the institutions conducts security drills every 2 years. As a procedure airports that are under the ICAO regulations and standards are normally obligated to do Security and safety drills once every two years in order to put to task their personnel's level of preparedness and safety standards, (KAA, 2019). This explains why the institution conducted the drill in 2016, 2018 and possibly could be targeting to do it in 2020. This however offers a long lead time (2 years) before the next security drill. With the highly technological contemporary

world, by the time of the next drill, most of the drill constituents would have been obsolete and the institution would possibly experience flaws in the response to a new threat. Therefore, more emphasis should be put to increase the frequency of drills beyond the ICAO cap for stringent preparedness measures.

5.2.1 Post Drill Trainings Enabling Security Apparatus to Respond to Terror Threats

According to the study findings, fire drills are some of the widely practiced trainings at JKIA. This observation is consistent with findings from the study by Creswell (2009), which concluded that effective learning requires active and regular participation by the parties involved, which is the case of fire drill participants at JKIA. Based on the interviews the plans for emergency response on terrorist/active shooter attack, chemical and biological attack and a hostage taking were in place at the operational level. From the questionnaire which was administered to mostly, personnel from the tactical level, this means that information on the emergency plans had either not trickled down entirely to the men on the ground or rather had been controlled due to the sensitivity of the plans in that knowledge of the plans by the adversary would mean they would be a step ahead of the security apparatus. There is need for the management in the institution to avail the plans to the tactical level if it does not compromise the plan's integrity.

Despite not being aware of the specific plans most of the respondents however, alluded they were cognizant of standard responses to the threats especially in their docket of response signaling that they had been internally trained on the standard responses at entry level. This, therefore, means that there is need for all the institutions to put specific emphasis on rehearsing its personnel on how to use the available plans for disaster response.

On the impact of security drills on the respondents' ability to respond to emergencies, the data obtained showed that security drills were positively impacting on the respondents, an

indication it was increasing the ability of responders. It is evident from the response that fire drilling was the most conducted at the institution. The ability to respond to fire incident was incredibly high because historically most anticipated incidents in the institution would highly likely culminate in a fire. Respondents ability to escape a chemical and biological attack is low and a significant number of the respondents being undecided on whether they could escape a terrorist attack is a gap that exists in the institution. It is important to give more weight to strength through channeling of more time and resources towards security drills in order to achieve better performance on the identified weak points.

The institution identified Communication, Command and Control as the pertinent training needs identified that were gaps in previous drills. This is due to the variety of agencies operating at the airport who all have their different commands and even different ministries thus Command and control becoming a challenge in responses. The same was rectified through the kick starting of the aviation security committee which has all key responders integrated with key monthly meetings and social groups to share information in real time in order to incorporate the multi-agency setup. Agencies are incorporated on need basis thus closing these gaps.

The need for training is critical to develop capabilities at pace with the latest innovations. The aviation security committee had reportedly created programs to be partaken by the various agencies throughout the year in order to bridge gaps that were identified in preceding security drills. This was alluded as the reason why false calls that have been raised at the airport recently to simulate real threats, have shown tremendous improvement in the response, cooperation, and professionalism of various departments.

As a result of the evaluations of challenges during after action reviews of security drills and exercises the facility has implemented stop gap measures such as the outsourcing of security

vehicles and ambulances by various agencies as procurement plans for the same are being factored in the future. The aviation security committee has sub-committees of members incorporated from various agencies who move across various airports doing Security and Safety risk assessment with recommendations to the aviation security committee on matters critical to the safety of the institutions. This has improved the general security awareness and risk aversion.

5.2.2 Post Drill Capacity Build-Up in Enhancing Counter Terrorism Preparedness

90% of the respondents agreed that security drills had increased the use of dogs for offensive items detection, 80% pointed out that the information technology department's capability of information had been greatly improved with 60% alluding that the fire alarms warning serviceability had been increased through security drills exposure. However, trailing very low were the counter-terror police intervention improvement in responses at 15% staffing adequacy of emergency response teams at 10% and availability of active standby teams. The technology has been well integrated, and personnel trained on fire response with fire equipment being boosted to a larger extent. However, more needs to be done on the counter-terror capability and the availability of active standby teams at the airport for a very efficient response.

The institution has been able to use technology to cater for inadequacies identified during prior security drills like the incorporation of CCTV to boost the physical security present. The use of walk through metal detectors/scanners has necessitated avoidance of a situation whereby someone would easily walk in with weapons or explosives to target the facility. This machine-human integration is boosting capacity at the airport security. Unlike physical security, technology incorporation like the CCTV can monitor critical high-risk areas while at the same time maintaining a total (360 degree) field of view.

At high value target facilities such as airports, football stadiums and even malls this can be partnered with artificial intelligence software to necessitate the profiling of people, therefore being a step ahead in determining risk mitigation before they develop into something serious. This technology can also be linked to turnstiles so that banned personnel or targeted terrorists are restricted or caught while accessing the areas, (Steve Gardner, 2019). The institution has also acquired state of the art fire tenders with a higher capacity and speed to boost both a timely and a sustained response.

The interviews brought out that every drill always posed a challenge of manpower as the institution keeps growing rapidly with new structures and operations that call for consequent staffing. Further with the incorporation of technology to boost capacity the airports authorities and security institutions have increased the manning levels and keep on training more to cover for the high turnovers that are experienced at the facility.

The key informant interviews informed that there were departmental and inter-departmental committees formed immediately after the after-action reviews were shared to make amendments on their response plans based on either inadequacies or to cater for emerging trends in the threat architecture. This was confirmed by a significant number of the questionnaire reports as having been undertaken with the most recent one being the designation of the topmost security officer as the incident commander in case of an emergency.

5.2.3 Multi-Agency Co-Ordination towards A Synergized Response to Terrorism Threats

The fact that most respondents pointed out that all the agencies under review had participated in security drills and further rated them as Very competent and competent is a good indicator that the agencies were well versed or rehearsed in the response threat that was being

drilled. Only a small percentage were undecided about the competency of generally all teams indicating that they did not witness the response at the scene but were involved in the drills at different capacities that exist in the institution.

The institution has not conducted a terrorist attack security drill which could have been a good key of evaluating the agencies' counter-terror preparedness competence. However, irrespective of this fact, the involvement of all these critical agencies in previous security drills, which are teams that have been involved in counter-terror direct action at real attacks such as the 2019 Dusit D2 attack along riverside drive which was identified as a marked success in Kenya's counter-terror capability signals that they would equally react in a similar manner were the same attack occur at the airport.

The level of cooperation between response teams increased to a high percentage during succeeding drills indicating that the multi-agency setup was being employed and the fact that more than 70% of the teams worked together under a unified command then the incident command system is being well incorporated as a result of experiences/inadequacies in the preceding drills. The 2016 Exercise Maliza Magaidi, a security drill aimed at creating synergy and a rapid response capability to terrorist attacks led to the formation of the National Multi Agency Coordination Centre NMACC to coordinate responses in both the national and county governments. It has the two-prong approach setting up the national center at Nairobi with satellite centers at each county mirroring all related agencies. At the county level it is called the County Multi Agency Coordination Centre CMACC, (MOSD, 2016).

The formation of coordination centers rather than command centers necessitates a equal working environment among agencies thus a unified response. The key informant interviews found out that JKIA has also budgeted for an Emergency Operations Centre (EOC) to cater for

emergency coordination's during incidences. Despite the secrecy in planning, very few real injuries were noticed indicating a crucial growth in awareness in both the public and the responders. The agencies were also reportedly quick to react in co-ordination to quell the threat. On the part of command and control, a more impressive structure of information flow was seen despite having had multi-agency responders. However, the drill was very short-lived due to the nature of the institution; in that a diversion of several aircraft would lead to a lot of losses in airline revenue.

5.3 Conclusion

The study was evaluating the influence of security drills on counter terrorism preparedness with the case study being JKIA. It evaluated the post-drill effects findings based on three specific objectives; training, capacity building and multi-agency coordination to bring out the implication of the findings to the general body of knowledge and with a view of contributing to further development of theories suggested that were suggested for the study.

The study found out that a large percentage of the drills conducted in the institution and which could be the same in other institutions are the fire and aircraft crash drills. This meant that less attention was given to bomb threat drills, chemical and biological threats as well as active shooter drills which are one of the contemporary emergencies expected in most institutions. The training is conducted at the department level and mostly at entry level. Due to the busy schedule of personnel, not much time is available for throughout the year refreshers. Most of the departmental response plans were not regularly rehearsed also.

As identified by most respondents, equipment is, sometimes, acquired without the end user being incorporated in the planning programme thus leading to mismatch of the equipment to the tasks at hand. Staffing has also been greatly affected due to the limitation in resources especially

budget allocations and thus may pose a challenge when met with an extremely large emergency. There are however several agencies within the reach of the airport who have assisted in response to emergencies whenever they are stretched.

There are very little multi-agency drills though the coordination at managerial level exists and especially through established multi-agency committees in the airport such as the aviation security committee from various agencies that sits monthly to evaluate threats posed to the institution. Some emergency responses have witnessed the duplication of efforts by similarly trained personnel from different agencies.

5.4 Recommendations

In order to mitigate the re-occurrence of mistakes observed in preceding security drills during future security drills and also to provision for Continuity in counter-terrorism operations it is imperative to emphasize on using of the CTRBT by Biddle, 2013 that forecasts would be future threats. It then creates a scenario that mirrors to a real attack to train responders. This would fill in the gap that exists that it is difficult to conduct drills frequently in airports and especially extended ones because of the nature of airports. An hour's drill in an international airport would deeply inconvenience airlines and passengers. Trainees and instructors who have been made privy to this training have praised its effectiveness in conceptualizing the response compared to the general training of responders. This training is scheduled to give sustainment training and evaluations through rehearsal of contingency plans throughout the year thus can inculcate contemporary changes in the threat architecture to training thereby increasing the response skills-sets. This will exponentially augment the traditionally anticipated emergencies such as the fire drills and aircraft crash drills in ports of entry and other institutions.

The training type also identifies gaps using technology to tackle terrorism. Inculcation of technology and innovation towards creating situational awareness for responders is being adopted in counter terrorism capacity building. Scenarios that mirror real terrorist attack strategies in shoot houses are simulated and a video recording is done as the responders react to the scenario. The responders then sit down and watch how they reacted thus punching holes on bad practices which consequently enhances the perfection required in such surgical strikes. This also assists in the avoidance of killing hostages during the rescue. This explains the success of the raid at Osama bin Laden's compound in Pakistan, (Peter, B. et al, 2011**)**

In capacity building, acquisition of the right equipment for efficient response to counter terrorist attacks is key. But the acquisition should be user oriented rather than seasonal. Staffing of the multiple agency response teams to reflect a security footprint all over the institutions is critical to increasing capacity. Terrorist prone areas should be top priority in order to shorten the response/reaction time to thwarting a terror attack should intelligence sources fail to foil it.

Conduct of table top exercises to augment the CTRBT in creating awareness and modelling a response based on the current capability is very key in establishing gaps and enabling necessary stop-gap or corrective measures. This is also an enabler to updating of the current security response plans and standard operating procedures (SOP's).

Creation of an annual multi-agency exercises such as the 2016 Exercise Maliza Magaidi or a similar training competition is very important as a skills exchange Programme between agencies. This also boosts enhancement of interoperability and synergy in different response teams. Teams with similar capacity can being grouped together by specialization to enable economy of effort during response. Through this, the private sector such as media, school institutions can be engaged and invited to witness the security drills to create awareness in the public and private sectors.

In real-life incidents that demand a form of disaster response, it is possible that multiple agencies will be participating in the exercises. Therefore, the low levels of coordination and cooperation between agencies, in the execution of security drills can prove to be a potential setback in the efficient response to terror attacks, by multiple agencies.

While there is potential value in conducting multi-agency counter-terrorism drills, the greatest hindrance to this strategy is the absence of elaborate manuals and protocols that are universal and applicable to multiple organizations. For example, the KPS, KDF, GSU, and NIS are all security agencies with independent drill protocols for different scenario. It is difficult for one agency's protocols to apply seamlessly to another agency. The absence of a universal approach of response that incorporates most of these agencies' guidelines and protocols is a significant setback to the successful implementation of coordinated drill exercises across multiple agencies, in coordination. This should be investigated and re-developed time and again to feature the updated/current response capabilities of existing security and safety agencies.

Even though multiple agencies participate in security drill at the JKIA, independently, very few of these engage in joint drills, as a mechanism for multi-agency co-operation. For example, of the annual security drills that are conducted at the JKIA, fewer than 10% engage in any form of collaboration for post-drill training, according to insights derived from the expert interviews.

The conduct of security drills is a very expensive venture and due to limitation of resources required to sustain, may be difficult to conduct as often as would be desired. However, security apparatus cannot sit and wait for the scheduled drills in a rapidly evolving world and therefore this study suggests a time-bound post-drill Security Evaluation Framework (PSEF) to augment these drills and enable sustainment of gains made during preceding security drills.

5.5 Areas of Further Research

5.5.1 Scope of Security Drills

The research covered security drills and restricted itself to the airport as a port of entry. It assumed that challenges faced in ports of entry are mostly similar to those at other public institutions, learning institutions and other critical infrastructures in the country. There however exists a difference where institutions such as schools have not been resourced with various security agency and that would lead to a longer lead time in emergency response. Research should be conducted to identify how this lead time can be reduced towards an expedited response.

5.5.2 Representation of Gender in Policing and Counterterrorism Preparedness

As the study reveals, there is a gross underrepresentation of the female gender in general policing and by extension, in counterterrorism preparedness through security drills. With an 80% male representation and a mere 20% female representation in the respondents surveyed for this study, there is a disproportionate gender gap, which translates to underrepresentation of women in peace and security strategies, even though their input could be of significance especially in broadening perspectives when it comes to counterterrorism dialogue. Therefore, additional research is necessary to investigate the factors that underly this trend, and possible remedies to the same, which would see a balance in gender representation.

5.5.3 Diversification of Security and Emergency Preparedness Drills

The study also demonstrates a wide variation in participation of personnel in the different categories of drills that exist and are regularly undertaken in Kenya's ports of entry. In the case of JKIA, participation in chemical and biological threats' drills, and active shooter drills is very

low. The reason for this low participation can be attributed to the infrequent occurrence of related threats. However, determining the prioritization of drills in critical environments should be grounded on sound evidence, which ensures that the drills and related measures for counterterrorism preparation are dynamically shifting in accordance with the equally evolving nature of threats and emergencies.

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APPENDICES

Appendix 1: Introduction letter to participants

David Mutua Mutwiwa,

Africa Nazarene University,
P.O. Box 53067 – 00200,
Nairobi, Kenya.

Dear Sir/Madam,

RE: REQUEST FOR RESPONSE TO DATA COLLECTION INSTRUMENT

I am carrying out a research as a pre-requisite for attainment of the Master of Science Degree in Governance Peace & Security. My study topic is: The evaluation of the influence of Security drills to counter terrorism preparedness in JKIA, Nairobi County, Kenya. The findings of this study will be used to improve the security apparatus response to emergencies and terrorism threats and attacks in Key entry ports in Kenya which you are part of.

I kindly request your collaboration in responding to the attached data collection instrument. As an assurance of confidentiality and to enable your ease in responding to the questionnaire, kindly do not write your personal details or name on it for purposes of maintenance of anonymity.

Thank you in advance for your cooperation.
Yours faithfully,

Mutwiwa, D.M.

If you agree to participate in the study, kindly sign below

Signature……. Date……

Appendix 2: Questionnaire

Evaluation of the influence of Security Drills on counter terrorism preparedness in JKIA, Nairobi County, Kenya.

Much gratitude for your willingness to fill in this questionnaire. You are assured of complete confidentiality and anonymity.

Part 1: Background Information (*Tick where necessary)*

1. Gender: Female [ ] Male [ ]
2. Approximate age
   20-29 [ ] 30-39 [ ] 40-49 [ ] 50 and above [ ]
3. Highest academic qualification
   (Specify) …….
4. Which organization are you from?
   KDF [ ]
   NPS [ ]
   NIS [ ]
   KAA [ ]
   KCAA [ ]
   Other Security stakeholders. (Specify)…….
   Any other stake holder. Specify……
5. Area of specialization. (E.g. Air Traffic Controller) ……..……...
6. For how long have you served in your organizational capacity at JKIA?
   Give an approximate duration in number of years. ……
7. Have you participated in a security drill at the institution?
   [ ] YES [ ] NO
   If your answer above is (YES) kindly specify
   a. How many times ……..
   b. Month & year of participation……..
   c. What was your role in the security drill. [ ] responder [ ] Planner
8. What was the scenario of the security drill you participated in?
   a. Fire drill [ ]
   b. Active shooter drill [ ]
   c. Aircraft crash drill [ ]

d. Bomb threat [ ]
e. Chemical or Biological threats [ ]

9. To the best of your knowledge, how many times has your institution conducted security/safety drill in:

a.	2016	None [ ]	Once [ ]	Twice [ ]	Thrice [ ]	Above 3 [ ]
b.	2017	None [ ]	Once [ ]	Twice [ ]	Thrice [ ]	Above 3 [ ]
c.	2018	None [ ]	Once [ ]	Twice [ ]	Thrice [ ]	Above 3 [ ]
d.	2019	None [ ]	Once [ ]	Twice [ ]	Thrice [ ]	Above 3 [ ]
e.	2020	None [ ]	Once [ ]	Twice [ ]	Thrice [ ]	Above 3 [ ]

Part 2: Training

10. Has your institution developed a written plan that describes the procedures to be performed in the following crises?

S/NO	*Incident*	*Availability of a written plan*		
		YES	*NO*	*Not Aware*
1.	Active shooter			
2.	Fire			
3.	Aircraft crash			
4.	Bomb threat			
5.	Chemical or Biological threats e.g. anthrax			
6.	Hostage taking incident			

11. If yes on Q10 above, has the institution/department rehearsed its personnel on the use of this plan for disaster response after the previous security drill?

S/NO	Incident	If "Yes", have personnel been rehearsed on this plan after last security drill?	
		YES	NO
1.	Active shooter		
2.	Fire		
3.	Aircraft crash		

4.	Bomb threat		
5.	Chemical or Biological threats e.g. anthrax		
6.	Hostage taking incident		

12. To what extent have the security drills imparted on your ability to respond to the above-mentioned emergencies? Kindly tick (√) your level of agreement towards each statement: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD). Tick (√) once for each statement

S/NO	*Ability to respond*					
	INCIDENT	SA	A	U	D	SD
1.	I can escape an active shooter attack					
2.	I am able to save colleagues trapped in an active shooter attack					
3.	I can escape a fire incident					
4.	I can save colleagues trapped in a fire incident					
5.	I can prevent a possible air incident					
6.	I can identify a bomb or explosive ordinance/chemicals					
7.	I can survive a chemical or biological weapon attack					
8.	I can identify the emergency assembly areas					
9.	I can survive a hostage taking					

Any additional comments. (Optional)……
……
……

13. What are some of the training needs/gaps identified during the preceding drills?

……

……

……

14. What post drill training has been offered to the departments to bridge gaps identified in preceding security drills?

……

……

……

15. Has the post – drill training been effective in preparing responders to efficient response during the drill?

[ ] YES [ ] NO

(Kindly state why it has been so) ……

……

……

16. Have security/safety drills influenced adherence to safety procedures at JKIA? i.e. (Risk measurement & risk aversion)

[ ] YES [ ] NO

(Kindly state why it has been so) ……

……

……

Part 3: Capacity of security apparatus to respond to emergencies

17. To what extent have security drills improved the workability of the undermentioned response capabilities in JKIA? Kindly tick (√) your level of agreement towards each statement:

S/NO	*CAPACITY*	*Major Improvement*	*Minor Improvement*	*Not Improved*
1.	Fire alarm warnings serviceability.			
2.	Counter – terror police intervention			
3.	Bomb disposal department intervention			

S/NO	*CAPACITY*	*Major Improvement*	*Minor Improvement*	*Not Improved*
4.	Information Technology (IT) department capability of information control			
5.	Management emergency handling procedures/tactics			
6.	Communication and information relay to responding teams. E.g. Radio communications			
7.	Disaster response plan			
8.	Evacuation plan			
9.	Staffing adequacy of emergency response teams			
10.	Resource allocation to emergencies in annual budget			
11.	Acquisition of emergency response equipment for tackling threats			
12.	Frequency of successive security drills			
13.	Use of dogs for offensive items detection			
14.	Availability of active standby teams			
15.	Search and rescue plan			

18. Mention any equipment acquired because of identified inadequacy during a security drill

S/NO	*Identified Inadequacy*	*Equipment Acquired*
1.		
2.		

S/NO	*Identified Inadequacy*	*Equipment Acquired*
3.		
4.		

Mention equipment bought to boost a capacity not identified in drills inadequacy if any

……

……

19. Comment on personnel strength increase/ redeployment as a result of identified inadequacy during a security drill

……

……

20. Comment on revisions/amendments made to the institutions Disaster Response Plan as a result of inadequacies/confusion occurring during a security drill

……

……

Part 4: Multi agency coordination on preparedness & response to security threats

21. Have the undermentioned agencies participated in a security/safety drill at the institution? Kindly tick (√) for each response and the level of competence during successive drills: Tick (√) once for each resource or service. Very Competent (VC), Competent (C), Undecided (U), Incompetent (I), Very Incompetent (VI).

S/No	Agency	Participated			If "Yes", Tick their level of competence in successive security drills?				
		YES	NO	Not Aware	VC	C	U	I	VI
1.	Kenya Defence Forces (KDF)								

S/No	Agency	Participated			If "Yes", Tick their level of competence in successive security drills?				
		YES	NO	Not Aware	VC	C	U	I	VI
2.	Kenya Airports Police Unit (KAPU)								
3.	General Service Unit (GSU)								
4.	National Intelligence Service (NIS)								
5.	DCI Anti-terrorism police unit (ATPU)								
6.	APS Rapid deployment unit- RDU								
7.	Kenya Airports Authority (KAA)								
8.	Kenya Civil Aviation Authority (KCAA)								
9.	Fire Marshall								
10.	Medical teams								
11.	Bomb Disposal team								
12.	Sniffer dog teams								
13.	Media								
14.	National Disaster Operations Centre (NDOC)								

22. To the best of your knowledge, which of the under listed statements best describes the response teams' level of cooperation with one another in response to the security drill you

witnessed or participated. Tick for the 1st and 2nd drill if you have witnessed/participated in two drills?

a. Each team worked alone. 1st [ ] 2nd [ ]
b. All teams worked haphazardly. 1st [ ] 2nd [ ]
c. The response was well-coordinated with a unified command. 1st [ ] 2nd [ ]
d. External teams did not co – operate with JKIA management 1st [ ] 2nd [ ]

Comment on observations (Optional) ……

……

23. How was the different agencies response during the Nov 2018 Security drill at JKIA (or any JKIA drill you recently participated)?

……

24. To the best of your knowledge how was the Nov 2018 drill (or any JKIA drill you recently participated) in terms of Command and control

[ ] Adequate [ ] Inadequate

Kindly give reasons ……

……

……

Part 5: Measures to improve security drill impacts on preparedness of security apparatus

25. What can be done to avoid a repeat of the same mistakes witnessed in previous drills in preceding security drills at JKIA?

……
……
……

26. What security analysis procedures can be done to boost Counter-terrorism preparedness at JKIA?

……

……

……

Appendix 3: Key informant interview guide

Title of the study: Evaluation of the influence of Security Drills to counter terrorism preparedness in JKIA, Nairobi County, Kenya.

Much gratitude for your willingness to fill in this questionnaire. You are assured of complete confidentiality and anonymity.

1. How does the post drill training affect the response to emergencies at JKIA?

……
……

2. How has the building of capacity after drills enhanced efficient response to emergencies in JKIA?

……
……

3. Comment on equipment acquired as a result of identified inadequacy during a security drill

……
……

4. Comment on revisions made to the institutions Disaster Response Plan as a result of inadequacies/confusion occurring during a security drill

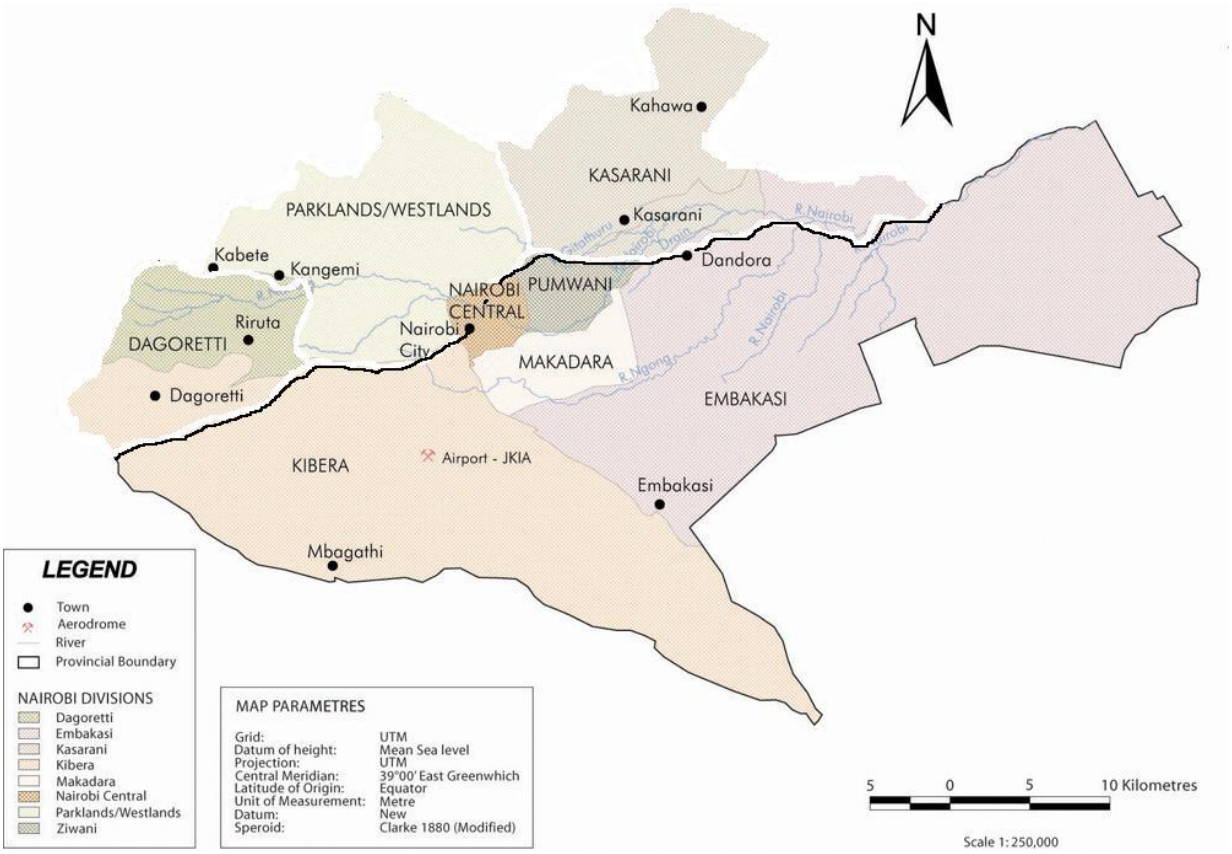
……
……

5. What are the effects of multi-agency co-ordination on preparedness and response to security threats in JKIA?

……

……

Appendix 4: Map of the Study Area



Source: https://kikuyunationalism.files.wordpress.com/2008/10/nairobiadministrative-map11.jpg

Appendix 5: ISIS vision 2020 map of creation of an Islamic Caliphate



Depicted in black**, the ISIS visionary Map of Islamic Caliphates** or countries it wants to dominate by 2020, **Source:** Burman, J. (2016). *www.express.co.uk*

Appendix 6: University Introductory Letter/ Authority to conduct research

AFRICA NAZARENE
UNIVERSITY

11th June 2020

RE: TO WHOM IT MAY CONCERN

David Mutua Mutwiwa (16S03EMGP010) is a bonafide student at Africa Nazarene University. He has finished his course work and has defended his thesis proposal entitled: - ***"Evaluation of the Influence of Security Drills on Counter Terrorism Preparedness at Jomo Kenyatta International Airport, Nairobi, Kenya".***

Any assistance accorded to him to facilitate data collection and finish his thesis is highly welcomed.

Rodney Reed, PhD.
DVC Academic & Student Affairs.

Appendix 7: Research License-NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 333675

Date of Issue: 23/June/2020

RESEARCH LICENSE



This is to Certify that Mr.. David Mutua Mutwiwa of Africa Nazarene University, has been licensed to conduct research in Nairobi on the topic: EVALUATION OF THE INFLUENCE OF SECURITY DRILLS ON COUNTER TERRORISM PREPAREDNESS AT JOMO KENYATTA INTERNATIONAL AIRPORT, NAIROBI, KENYA for the period ending : 23/June/2021.

License No: NACOSTI/P/20/5393

333675

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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Appendix 8: Authority to Conduct Research at JKIA



Kenya Airports Authority

Jomo Kenyatta International Airport
P.O. Box 19087 (00501) Nairobi, Kenya
Tel: +254 - 020 - 6611000 / 822111
Fax: +254 - 020 - 822930
Cell: +254 - 722 205 061 - 8
Email: jkia@kaa.go.ke
www.kaa.go.ke

KAA/JKIA/10/16/8

8th July, 2020

All Section Heads/HODs

Airport Manager -JKIA

RE. REQUEST TO CARRY OUT A STUDY IN KENYA AIRPORTS AUTHORITY-JKIA

Reference is made to your letter dated 29th June, 2020 on the above subject matter.

Your request to be allowed to carry out this study on "**Evaluation of the Influence of Security Drills on Counter Terrorism Preparedness at Jomo Kenyatta International Airport, Nairobi Kenya**" in this organization is granted. However, JKIA is a restricted area and thus you will be required to carry your original Identification card and letter from your institution indicating that you are undertaking this research.

In this regard, your study should commence once you receive this communication from us. Please note, this study should be for academic purposes only.

We hope you will collect as much information as possible to enable you complete your studies successfully

Yours Sincerely

BEATRICE ATULIA
FOR AIRPORT MANAGER-JKIA