

Availability of security equipment and their effectiveness in enhancing security in higher learning institutions in Nairobi City County, Kenya

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ABSTRACT

Security is a prerequisite for the development of societies. Several security measures have been proposed for execution in higher institutions of learning to mitigate heightened insecurity incidents. Despite these measures, higher institutions of learning continue to report insecurity incidents. This paper presents an analysis of the available security equipment and their efficacy in enhancing security in higher learning institutions. The study was anchored in both securitization and competence theories. A mixed-method approach, which incorporates both qualitative and quantitative approaches, was utilized. The study adopted a descriptive research design. The target population was the student leaders from both the Kenya College of Accountancy University and the Multimedia University of Kenya and the staff in the security departments of both universities' registrars. The study targeted a total of 120 respondents, including 32 security managers, 81 security officers, 2 registrars, and 5 student leaders from both institutions. Simple and purposive sampling techniques were used to generate the sample size of 120 respondents. The study examined primary data, which was collected using questionnaires and key informant guides. Quantitative data was analyzed using SPSS version 26 to give frequency distribution, means, and percentages, and findings were presented using tables, graphs, and charts. Qualitative data were analyzed using thematic narrations, with findings presented using narrations and descriptions. The study findings reveal that incidents of insecurities have increased across institutions of higher learning in Kenya. In response, these institutions have beefed up security, although challenges persist, hindering the effective implementation of the needed security measures. The study established that both MKU and KCA Universities had implemented security equipment to some degree, although most of them are outdated or not properly maintained. The study recommends that universities should increase their investment in physical security, in buying and maintaining security equipment, and should adopt more visibility security measures as a way of improving the security situation.

Keywords: Enhanced Security, Higher Learning Institutions, Security, Security Equipment

I. INTRODUCTION

Since time immemorial, man has been utilizing security facilities and equipment to protect against attacks. For instance, the primitive man deployed stones and clubs to defend himself whenever he was invaded by wild animals or fellow humans (Etor et al., 2020). There exists a plethora of facilities that are utilized to secure homes and organizations on daily basis. In light of this, institutions of higher learning need adequate protection from terrorists, vandals, kidnappers and other crime-prone situations that are springing up in the society. The provision of adequate security facilities in universities is the sole responsibility the administrator through the chief security officer and the whole security department. The aim is to ensure that the universities' premises are adequately protected at all times.

As pointed out by Etor et al. (2020), higher institutions of higher learning encompass a conglomeration of community from various parts of the world; it is a theatre where individuals resort to in quest for knowledge. It is not only a factory of knowledge but also the dispenser of knowledge. The position of university in a society pulls many people to the institutions for various reasons. For instance, some create and acquire knowledge while others are there to provide goods and services to the entire community. Such setting makes these institutions vulnerable to security challenges.

Security can be conceptualized as a stable, relatively predictable environment in which an individual or a group may pursue its goals without disruption, harm, danger and without fear of disturbance or injury (Adejoju, 2016). Alemika (2019) defines security as the absence of threats to; sovereign powers and territorial integrity of a nation; the capability of a nation's government; safety of person and properties of citizens and freedom of citizens from oppressive rule, economic exploitation, discrimination and exclusion, environmental degradation and all other forms of structural and criminal violence. Thus, as contemplated by Shobowale (2019), in the university setting, security systems connote the protection of tangible and intangible assets of the institution from all forms of potential dangers. The author further points that Tangible assets refers to physical structures, the books in the libraries, the electronic gadgets in the departments, all the stake holders and the players, the regular and occasional visitors to the university and lives of both

students and personnel of the university. Intangible assets on the other hand include intellectual property, research data, classified information, integrity, and peace of mind, order and above all, the image of the university system.

Security equipment is designed to mitigate the risks of loss in an organization and is considered the end result after assessing the risk. Safety in higher learning institutions can be ensured by instituting detection programs such as background checks at the entry points, surveillance through CCTV cameras, background checks, intelligence services, safety audits and unauthorized entry at entry points. Dorfman (2013) in Mutegi (2017) contend that these mitigation measures make the environment safer by restricting security risk incidents. Risk reduction programs, including the installation of security equipment are designed to minimize the potential of risks should they occur. Peshawar (2014) in Mutegi (2017) noted that university institutions are soft symbolic targets of terrorism attacks since terrorists are able to get publicity, attract notoriety and propagate fear.

As contemplated by Ratti (2010), the rate of violent crimes in college campuses, especially campus shootings, is increasing across the globe. Recently, national attention has focused on incidents of shootings/mass murders on college and university campuses. The ever-increasing crime levels in higher learning institutions have affected academic life (Baker & Boland, 2011). Numerous acts of targeted gun violence in college and university campuses throughout the United States have resulted in significant injuries and deaths, as well as millions of dollars in civil service expenses (Drysdale et al., 2010).

Globally, research on violence has been encouraged by a myriad of factors. For instance, in North America, research has been prompted by an increased number of shootings, while in the Middle East, increased insecurity in institutions has been the main motivation for research (O'Malley, 2011). According to Sursock (2015), the increased cases of violence in universities across the globe hamper the fundamental goals that are enshrined in learning institutions by weakening the freedoms available to students and other staff in general. As a result, safeguarding the freedom that has been the cornerstone of universities should be the concern of everybody (Sursock, 2015).

At the continent level, following the attacks by Boko Haram in Nigerian universities and the Alshabab in Kenyan universities, there have been increased calls by the Association of African Universities (AAU) for universities to strengthen their security systems according to University World News 2007-2018, 2017. These attacks resulted in destruction of universities, injuries to students and loss of lives in both countries (Kombo, 2016). Apart from attacks in universities by terrorists, higher education has also suffered due to cases of insecurity and armed conflict, as witnessed in South Sudan where some universities are located in rebel areas. This has impacted negatively on learning due to the incessant conflicts in such areas.

In the East African county of Uganda, insecurity has been cited as being among the major challenges affecting higher education. Areas located around universities have witnessed a rise in off-campus and in-campus insecurity incidents. This has resulted in many cases of students being killed or injured. Researchers have advocated for strengthening of university security departments through improving physical security within their premises (Asiku et al., 2012).

According to Mutegi (2017), Kenya remains profoundly rated in crime. Among the most prevalence crimes, especially in Nairobi include but not limited to car hijacking, violent homes and workplace invasions. However, Mutegi (2017) notes that Kenya has deployed several security mechanisms including employment of security personnel, instituting laws and programs to address insecurity incidents. Despite the implementation of security risk mitigation programs, security in Kenya remains inefficient and susceptible to tragic mistakes.

According to K'Odipo (2017), in Kenya since 2012, the Islamic group, Al Shabaab has carried out attacks in Kenya aimed at destabilizing the country. In their purported revenge against the presence of Kenyan troops in Somalia, the education sector has not been spared. They have attacked and killed teachers and students, and have destroyed schools, among many other heinous crimes. As a consequence, the normal life of citizens has been affected. One of the most recent attacks led to the deaths of one hundred and forty-two students at Garissa University College leading to its closure for one year.

According to Adeyemo (2019), education and security can influence each other positively or negatively depending on the contexts. Education enables individuals, groups, countries and the human race to explore, appreciate, understand and develop their environments for the satisfaction of their needs. It empowers individuals and liberates citizens from ignorance, prejudice, bias, superstition, and manipulation by people who claim to have superior knowledge. Because of the importance of education to the society, the need to address insecurity as a factor that impedes the realization of an educated society ought to be addressed. Moreover, several studies concerning security in higher institutions have been conducted. Among them include Kombo (2016) investigated the prevalence of cybercrime activities against Kenyan learning institutions. However, the study addressed only cybercrime security. Odhiambo et al. (2015) analyzed learning institutions' vulnerability to terrorism using a case study of Garissa University College. Ogunbunmi and Olaoye (2024) study was confined to security challenges impacting higher institutions of learning in Nigeria. However, despite the existence of these empirical studies, academic gaps, especially regarding the application of security equipment and their efficacy in enhancing security in higher institutions of learning still exist. Therefore, the

current study seeks to bridge this research gap by analyzing the effects of enhanced security equipment on security in learning institutions in Kenya.

1.1 Statement of the Problem

According to a report by the Standard Digital on 14th April 2017, several security measures were recommended for implementation in universities with the aim of preventing terrorism incidents. They included establishment of campus police posts, reinforced perimeter walls, mandatory surveillance cameras and increased student subsidies. All universities and colleges were also required to develop software to monitor social media and manage terrorism and radicalization in learning institutions. Despite the implementation of security measures, cases of insecurity continue to be reported in the universities. Similarly, studies by researchers such as Kombo (2016), Odhiambo et al. (2015) among others have attempted to investigate the incidents relating to insecurities in higher institutions of learning. Generally, these studies did not focus on enhanced security equipment and its effect on security in learning institutions making the current study ripe for empirical investigation.

1.2 Research Objective

The main objective of the study was to analyze security equipment available and their effectiveness in enhancing security in selected higher learning institutions in Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Review

The study was underpinned by both securitization and competence theories;

2.1.1 Securitization Theory

The Securitization Theory was proposed by the Copenhagen School (CS) of International Relations (IR) who stated that security issues are socially constructed through a discourse. This is one of the theories with significant application to security studies as it is concerned with real threats to institutions or individual (Balzacq, 2005). Unlike other security theories, securitization gives prominent role to the audience, and with the audience tasked with accepting or rejecting security measures (Stritzel, 2014). A successful securitization consists of three steps: identifying existential threats, undertaking emergency action and effecting shared process to address the threats (Buzan et al., 1998). The proponents of the Securitization Theory believe that security outcomes are selected and legitimized based on the security values and threat perceptions that are dependent on social environment. For this reason, the study of the securitization processes helps in understanding the contributions of security equipment on security in institutions of higher learning.

2.1.2 Competence Theory

The Competency Theory was developed by Kruger and Dunning in 1999. The two described a mismatch between the actual and perceived skills of people who are highly competent at a task or subject area and those who are highly incompetent at it. The authors posit that, low-skilled (incompetent) people lack knowledge to effectively contribute to the realization of their goals or institutional goals. For effective enhancement of security, Lubbe (2010) indicates that the security officers must gain competence in such areas as their general appearance, vigilance, integrity, following instructions, interpersonal relationships, language proficiency, teamwork, specialist knowledge and personal motivation. Within the context of the current study, the theory can be deployed to provide understanding on the competence of security staff in higher learning institution. In addition, competency theory is used to inform what skills the security personnel should possess in order to enhance security in higher learning institutions.

2.2 Empirical Review

Williams et al. (2016) conducted a study to explore physical security enhancement in higher institution in Malaysia. They established that the most important security equipment given attention by higher institutions are CCTV, access control and perimeter protection in building and open spaces. The study suggested the need to improve on the current/existing security in higher learning institution. Owusu et al. (2016) carried out a study on perceptions of students about safety and security issues in University of Cape Coast in Ghana (UCC). The study findings showed that most students believe that physical security equipment was lacking in the university. According to the students, building more halls of residence, use of CCTV, improving the lighting system on campus, intensifying security presence on campus, as well as controlling the number of people that enter the campus was a sure way of reducing insecurity incidents in universities.

A study conducted by Wanjau et al. (2012) documented benefits that are associated with effective surveillance as a collective measure of security. The authors noted that the installation of CCTV serves as both as psychological and

physical deterrence and serves as one of the most effective deterrent measures posed by either internal or external offenders. The findings are reinforced by Taylor (2010) who contemplates that the ubiquity of CCTV cameras reinforces public confidence about their safety even in the absence of security guards. Muraya et al., (2020) stated that digital technology has the potential to enhance security and safety in institutions. This was supported by Mwiti (2023) who assessed information security threats faced by universities in Kenya. The study found out that integration of digital technology can contribute to reduction in insecurity incidents in. In addition, it established that private universities' security mechanisms/controls were stronger compared to those of public universities. Golwal and Kalbande (2013) investigated the effectiveness security measures put in place to control vandalism in Engineering College Libraries in the USA. The findings revealed that the use of biometric system and CCTV are the most effective security systems in university libraries. L'evenque et al. (2015) sought to analyze security incidents in York University. The findings indicated that insecurity incidents were associated with certain locations, with insecurity incidents generally high in the centre of the campus and most students expressing that they had witness at least one form of insecurity incident over the past one year. The study suggested the need for improved security management in the campus.

A study by Njoroge (2021) examined the common security threats confronting the assets in utility in Kenyan universities. The study deployed descriptive survey method and was embedded in Operationally Critical Threats, Assets and Vulnerability Evaluation (OCTAVE) framework. The findings reveal that most of the Kenyan public universities' assets were exposed to various security threats with viruses, spam, hacking attempts phishing, denial of service attacks, ransomware, spoofing attacks and brute force attacks were among the prevalent security threats. The author recommended the need for implementation of urgent necessary mitigations to address these threats. In as much as the study was cognizance of the security threats faced by public universities, it failed to illuminate how mitigation measures can address such threats.

Muraya et al. (2020), assessed the security measures put in place in selected university campuses in Nairobi in response to terror-related threats. It was anchored in rational choice theory. The study purposively and randomly sampled a total of six universities and nine governmental departments. The responses by the study participants' reveal that the existing security measures were not adequate enough to counter any security threat given a plethora of risks and vulnerabilities. This study was confined to security measures installed by the universities but failed to expound their adequacy in addressing security incidents.

A study by Mwiti (2023) was confined to how security awareness can enhance students' safety in Kenyan universities. The findings pointed out to the observance of the principle of personal security as a utility to mitigate potential vulnerability of university students in Kenya to security threats. Also, the study mainly identified poor observance of the principles of personal security as a predisposing factor to insecurity. However, the study illuminated on potential insecurities in higher institutions of learning but focused largely on physical security safety of individuals.

Cognizance of a plethora of security challenges facing institutions of higher learning in Kenya, a study conducted by Okibo and Ochiche (2014), their study endeavored in understanding the major challenges confronting information systems security management in higher institutions and establishing the extent of the utility of information systems management. The findings reveal that system vulnerability, computer crime and abuse, environmental security and financial security were the major security challenges affecting institutions of higher learning. The study established that higher institutions had adopted several mitigating measures to ameliorate their information security, however, laxity in adopting quality performing systems, sabotage, inadequacy of better policies coupled with inadequate training were major obstacles that hinder the safety of information systems in higher learning institutions.

In Nigeria, Ogunbunmi and Olaoye (2024) examined the impact of insecurity in Nigeria's higher institutions of learning. The findings revealed that the main reasons for insecurity in Nigeria's higher institutions were kidnapping and abductions, student violence and protests, counterattacks between cultist groups, social evils and off-campus residents and heightened levies and herdsmen killing students and staff. The study also depicted that insecurity incidents had a massive impact on students' academic performance and psychological well-being. However, this study was limited to impact of insecurity and fell short of illuminating on how such impacts could be mitigated.

In Ghana, Amoatema et al. (2017) examined students' perceptions of campus safety with reference to College of Technology Education of University Education, Winneba, Ghana. The findings revealed that majority of the study participants' were concerned about their safety on campus. The results evident that places which were poorly lit, isolated and not well travelled, especially after dark were found to be unsafe. Also, the study participants, especially students felt safer on campus during the day compared to after dark, especially the female students. Additionally, the study found that bushy areas, lack of CCTVs, absence of police patrols and emergency phones to call security were the major factors attributed to students' perceptions on insecurity in campus.

Similarly, a study conducted by Ekpoh et al. (2020) investigated security challenges in universities and implications for safe environment. The study sampled 325 respondents from a target population of 650 in two randomly selected universities. The findings reveal that cult-related activities, kidnapping, drug abuse, illegal possession of firearms by students, students' restiveness, sexual assault, staling and burglary were major prevalent security challenges.

Also, the findings demonstrated that inadequate security personnel, insufficient patrol vehicles, poor lighting of university environments, non-availability of modern security facilities, poor funding of security departments, porous campus environments, lack of security awareness educations were major factors militating against effective security checks in universities. However, the study failed to illuminate how security equipment can be utilized to enhance security in higher institutions of learning.

III. METHODOLOGY

3.1 Research Design

The study adopted a cross-sectional mixed method research design. The design was selected because of its strength in collecting data for establishing relationships as well as providing data to help explore security issues in universities. This was helpful in triangulation of data sources through questionnaire and key informant interview guides. Triangulation of research instruments allowed the researcher to gain more insights on the security situation in universities and reasons behind the difference in availability of security equipment and competence in the universities.

3.2 Study Area

The study was conducted in the purposively selected higher institutions of learning in Nairobi City County. It was selected because it hosts many universities. It is also one of the cities where insecurity is high due to high urbanization.

3.3 Target Population

The target population of the study was the security staff and student leaders at the Kenya College of Accountancy (KCA) University and the Multimedia University of Kenya. The selection of these two universities is justified by the large population of students who would be highly affected by insecurity incidents. This population was found vital on matters related to student's safety in universities. The table below shows a summary of the target population;

Table 1

Summary of the Study Population

Position	MMU	KCA	Overall
Security Managers	22	10	32
Security officers	41	40	81
Student Leaders	3	2	5
University's registrar	1	1	2
Total	67	53	120

3.4 Sampling and Sample Size

Sampling technique permits the researcher to scientifically derive a small group from the total targeted population. Sampling is a procedure of choosing a sub-group from a target population so as to partake a study (Asenahabi, 2019). The study utilized both purposive and simple random sampling techniques. Purposive sampling is used when the researcher picks the sample thought to be suitable for the designed study. Purposive sample was chosen so as to save time in undertaking research and target respondents in key positions. On the other hand, simple random sampling ensured that the target population had equal chances of selection. Both security officers and security managers were purposively sampled while simple random sampling was deployed to sample student leaders.

3.5 Data Collection Tools and Procedure

The study used both primary and secondary data. Primary data was obtained by use of questionnaires and key informant interviews while secondary data was obtained from journals, textbooks, Internet and reports. The questionnaire was self-administered to the security staff in universities. A key informant interview guide was used to supplement the data collected through questionnaire and to gain more insights on the research objectives from key informants and student leaders in the universities. It was used to collect data from the registrars and the students' leaders.

The study collected data from security staff at the two universities. Primary data was gathered through the use of self-administered questionnaire, where the respondent completes it without the intervention of the researcher. This technique was used since the targeted population is literate and well versed on security matters in the university. The researcher used a combination of methods: drop and pick method and self-administered method where the questionnaire are left with the respondents and collected later after they have filled them to allow for better response rates.

The researcher sought for permission from the university administration, allowing the researcher to collect data from security staff. From the security department the researcher then sourced for the security officers to participate in the study. The researcher sought for permission from the university, after the granting of permission, the researcher contacted the student leadership from both universities. The study used face to face interview with the prospective student leaders including the chairman, secretary and treasurer to collect data.

3.6 Data Analysis

The collected data was cleaned, sorted, coded and fed into Software Package for Social Scientists (SPSS) Version 26, editing, coding, entering and cleaning of the data was done. Editing was performed through checking of the questionnaire to find out any errors within the data and then removing them. Coding was conducted through development of a codebook that was then used to develop a template for data entry before analysis. After data entry, data was double checked with the questionnaires to check on any possible errors. Descriptive analysis was performed through frequency, means and percentages. In addition, inferential statistics was also carried out through logit analysis and moderation analysis. Qualitative data was analyzed through content analysis and presented in a verbatim format.

3.7 Ethical Considerations

The researcher sought permission from national commission of science and technology (NACOSTI) before conducting the study to reinforce the legality of the research. The researcher strictly adhered to the principle of informed consent was observed during data collection, the respondents were made aware of the purpose and nature of the study. Participation in the study was voluntary; the researcher sought the consent of the respondents before, and the researcher endeavored to maintain their confidentiality. The respondents were fully informed beforehand that the research was for educational purposes only. The researcher acknowledged and referenced the research to avoid plagiarism which is a serious academic offence.

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Availability of Security Equipment and their Effectiveness in Enhancing Security in Higher Learning Institutions

The study sought to establish security programme employed by higher institutions of learning. The findings are shown in Table 2.

Table 2

Security Programmes Adopted by Higher Institutions of Learning to Address Insecurity Incidents

Programme	N	Yes		Fairly employed		No	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Metal Detectors	84	57	67.9%	22	26.2%	5	6.0%
CCTV Camera Programme	84	64	76.2%	16	19.6%	4	4.8%
Safety Audits	84	54	64.3%	24	28.6%	6	7.1%
Unauthorized Entry	84	78		4		2	
Construction of Perimeter Wall	84	82	97.6%	1	1.2%	1	1.2%
Panic Buttons	84	51	64.3%	23	27.4%	10	11.9%
Safety Education and Training	84	65	77.4%	16	19.0%	3	3.6%
Safety Committee	84	67	79.7%	15	17.9%	2	2.4%
Rescue and Evacuation Plan	84	79	94.0%	4	4.8%	1	1.2%
Intelligence Services	84	55	65.5%	27	32.1%	2	2.4%

As revealed by the findings in Table 2, both MMU and KCA universities had implemented several security programmes with programmes such as construction of perimeter walls, rescue and evacuation plans, CCTV Camera programme, metal detectors, safety education and training were the most implemented. From the findings, a significant percentage of the respondents revealed that certain programmes had been fairly employed and they included metal detectors, unauthorized entry, and panic button and intelligence services. These findings suggest varying employment of these programmes across these institutions. These findings align with those of Richards (2013) in Mutegi (2017) who contemplates that to ensure a safer and secure higher learning institution, implementation of implementation of emergency, detection and education and training programmes ought to be employed at similar levels to cater for the serious problems and challenges of security risk incidents. The author further points out that the frequency and severity of security risk incidents is greatly increased where there is lax in any of the security risk programmes. Security risk control programmes must be executed at all levels to guarantee the protection of safety of all individuals and property

in a university. Imperatively, higher learning institutions ought to consider implementing all security risk control programmes to guarantee safety in universities. From these results it can be deduced that detection, emergency and training programmes employed in universities vary and are not implemented at similar levels hence it can be said that there is lax in implementation of some of the security risk control programmes hence safety of university community and property is not guaranteed (Mutegi, 2017).

4.1.2 Strategies deployed by higher institutions to manage insecurity incidents.

The study sought to establish the strategies deployed by higher institutions to manage incidents of insecurity, using a 5-point scale where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Table 3

Statement on the Strategies Deployed by Higher Institutions to Manage Insecurity Incidents

Statement	N	Mean	SD
CCTV Cameras have been installed in strategic places	84	4.20	0.800
The university employs intelligence services	84	3.31	1.690
There are sufficient panic buttons for alert in case of security incident	84	2.92	1.110
The university has a safety committee that conducts risk assessments, education, guidelines and announcements	84	2.94	1.530
University has a written safety and security manual	84	4.01	0.990
Proper lighting of university environment	84	3.56	1.224
Provision of sufficient surveillance vehicle	84	2.98	1.118
The university has improved the welfare package of security personnel	84	2.96	1.115
The university has an emergency alert system	84	3.01	1.590
Conducts screening and background checks on all students, staff and visitors	84	4.02	0.795
Total		3.391	1.196

As demonstrated in Table 3, a cut-off mean of above 2.50 from all the items indicates that both KCA and MMU have deployed various strategies in managing emerging security problems. From the findings, it is evident that strategies including the provision of surveillance vehicle, employment of intelligence services, establishment of emergency alert system, proper lighting of the university environment are widely acceptable strategies for managing potential security threats in higher learning institutions. Additionally, an average mean of 3.391 reveals and acceptance that the individual items were deployed as strategies for managing insecurity problems at different magnitudes which are embedded in the mean of each item. The implication is that the higher the mean, the higher the contributing factor of the item. For instance, conducting screening and background checks on students, staffs and visitors; installation of CCTV cameras in strategic places, provision of lighting on the university premises had the highest mean and could be widely considered as popular strategies in managing insecurity-related incidents. These findings align with Ekpoh et al. (2020) whose study investigated security challenges in higher learning institutions. The study pointed out that security related challenges across higher institution of learning could be addressed by addressing strategies not limited to installation of CCTV cameras, advancing technology, employing intelligence services among others.

Table 4

Statement on the Challenges Facing Security Strategies on Higher Learning Institutions

Statement	N	Mean	SD
The right number of security equipment is not made available to security personnel.	84	3.52	1.48
The security equipment used in the institution is outdated	84	2.81	2.19
Areas prone to insecurity lack appropriate security equipment.	84	2.49	2.51
The institution has not been fitted with the required security equipment	84	2.12	2.790
Available security equipment has not been properly maintained	84	4.04	0.960
Total		2.996	1.832

The findings indicate that security equipment is inadequate as demonstrated by a mean of 3.52. This reveals that the security infrastructures in both universities are still inadequate. On whether the security equipment utilized in the institution is outdated, the respondents were undecided as indicated by a mean of 2.81. The findings reveal the failure by both universities to invest in security equipment over the years. These findings concur with Mwiti (2023) whose study found that most universities in Kenya were yet to invest heavily in their security infrastructures.

The findings further reveal that the respondents disagreed with the statement that areas prone to insecurity lacked security equipment as indicated by a mean of 2.49. This suggests that both universities had put several security measures on areas that are highly vulnerable to insecurity. Similarly, a mean of 2.12 reveals a disagreement whether the

institutions had been fitted with necessary security equipment as enshrined in the security policies for all higher learning institutions. This suggests that both universities had managed at a varying degree of success to implement security policies as per the recommendation of university reports. Moreover, the findings reveal that majority of the respondents agreed that the available security equipment at both institutions had not been properly maintained as indicated by a mean of 4.04 which reveals that the maintenance of such equipment are not prioritized in the universities. These findings are consistent with L'èveque et al. (2015) whose findings revealed that most higher learning institutions do not properly maintain their security equipment.

The findings also align with those obtained from the conducted interviews. From the interviews, it emerged that various security technologies have been implemented within the universities. These included closed circuit television (CCTV) systems, intruder alarms and handled detectors. These findings are consistent with Lubbe (2010) who established CCTV and metal or handheld detectors as the most used security equipment in South African universities. An interview with a student leader from Multimedia University yielded that the university was yet to properly invest in security equipment. He stated the following;

“Insecurity is a growing concern within the university premises and its surrounding environment. It is expected that the university should scale-up safety measures and that means investing heavily in security equipment, however, the I strongly feel that the university has not done enough and that is why we continue to report many cases related to insecurity” (Key Informant Interview with a student leader, 15th April, 2019).

These assertions are consistent with Owusu et al. (2016) whose study was confined to students' perceptions about safety and security issues in University of Cape Coast in Ghana (UCC). The study findings showed that most students believe that physical security equipment was lacking in the university. According to the students, building more halls of residence, use of CCTV, improving the lighting system on campus, intensifying security presence on campus, as well as controlling the number of people that enter the campus was a sure way of reducing insecurity incidents in universities. However, an interview with the university registrar yields contrasting results. He revealed that the university had been working tirelessly to invest in the installation of security equipment despite the heavy financial constrained. He opined that;

“Universities have continued to invest heavily on the safety of the students despite the enormous challenges they confront including lack of funding...I think this is a serious problem that cuts across all the universities in Kenya. I think that for us to enhance effective security, there is an urgent need to make hard choices including sacrificing other services for the sake of students' safety” (Key Informant Interview with University Registrar, 20th April, 2019).

The findings align with Mwiti (2023) whose study acknowledged that most universities in Kenya had mounted efforts to enhance physical and technological security of their respective universities' premises as well as ensuring the safety of their learners. However, the study reveals that such efforts have been derailed by several challenges including inadequate financing, mismanagement of university resources coupled with reported corruption related incidents in some universities. On the other hand, according to one of the security managers from KCA University, the management has implemented a number of physical security measures. Some of these include: perimeter wall, closed circuit television (CCTV) systems and metal detectors. This was reaffirmed in the following manner by one of the key informants;

In an era where insecurity has become a reality, massive invested in physical security measures is a necessity. Cognizance of this new reality, the university has invested in both metal and handheld detectors, as well as CCTV camera across the university to enhance the physical safety of both the students and the university workers (Key Informant Interview with a security manager, 22nd April, 2019).

These assertions align with a study conducted by Wanjau et al. (2012) who documented benefits that are associated with effective surveillance as a collective measure of security. The authors noted that the installation of CCTV serves as both as psychological and physical deterrence and serves as one of the most effective deterrent measures posed by either internal or external offenders. The findings are reinforced by Taylor (2010) who contemplates that the ubiquity of CCTV cameras reinforces public confidence about their safety even in the absence of security guards. It also emerged that KCA University, through its security department, has a policy to maintain the security equipment and to replace spoilt equipment periodically. However, further probe on this revealed that the implementation of this policy has been varied with the security equipment regularly maintained while replacing of old security equipment has not occurred as expected. A staff from the security department at KCA further informed about the following;

The university is currently implementing the biometric identification systems and automation of students' records as a way of addressing insecurity in the university and to conform to the 2016 directive of Ministry of Education to all universities in Kenya (Key Informant Interview with a Security Staff, 14th April, 2019).

The study findings align with Williams et al. (2016) whose findings indicated that digital technology has the potential to enhance security and safety in institutions. The findings are reinforced by Muraya et al. (2020) who assessed information security threats faced by universities in Kenya. The study found out that integration of digital technology can contribute to reduction in insecurity incidents in. In addition, it established that private universities' security mechanisms/controls were stronger compared to those of public universities. Although the security managers acknowledged that the university has been late in implementation, they indicated that university was on track in implementing the Ministry of Education directive. The view of the student leaders from KCA University was in agreement with that of the security managers. One of them agreed that the university had made significant investment in physical security equipment in line with the directive of Ministry of Education following the Garissa University terrorist attack. A comparison of findings from the key informants from both universities showed that the universities have made significant investment in physical security measures. In both universities, a number of similar security measures have been implemented, the only difference being the number of measures, with KCA University having implemented more measures than Multimedia University. Another difference between the two universities is the fact that KCA University has a maintenance and replacement policy for physical equipment while Multimedia University is yet to formulate such as policy.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study objective was to establish the effectiveness of available security equipment. The study concludes insecurity incidents have been on the rise across Kenyan universities. Such incidents jeopardize not only students and university workers' safety but also the safety of the institutions. In response, higher learning institutions have beefed up security to guarantee the safety of students, workers and the universities as a whole. With reference to MKU and KCA Universities, the study concludes that both have reported insecurity-related incidents at a varying degree and they have implemented security equipment to some degree, although most of them are outdated or, are not properly maintained.

5.2 Recommendations

The findings reveal that both universities had invested in improving their respective securities at a varying degree, however, they are yet to fully address the incidents of insecurities. Therefore, the study recommends that universities should increase their investment in physical security, in buying and maintaining security equipment, and should adopt more of visibility security measures as a way of improving security situation. In doing so, they should partners with relevant stakeholders including the government to ensure effective installation and maintenance of security equipment.

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