DETERMINANTS OF THE OUTCOME OF SEXUAL OFFENSES' FORENSIC INVESTIGATIONS IN BUTERE SUB- COUNTY, KAKAMEGA COUNTY KENYA.

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT FOR THE DEGREE OF MASTERS OF SCIENCE IN FORENSIC SCIENCE OF KIRINYAGA UNIVERSITY.

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DECLARATION

This thesis is my original work and has not been submitted for academic work in any other institution.

Signed ..... **Date…**15.10.2023**……..**

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This thesis has been submitted for examination with our approval as the university supervisors.

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DEDICATION

I dedicate this thesis to my family for their support, prayers and encouragement they gave me during this study.

ABSTRACT

The criminal justice system has been faced with challenges to conclusively address the plight of victims and survivors of sexual assault offences. In Kenya, it is estimated that only 25% of total sexual offence cases presented before a court of law are successfully convicted. These challenges are faced from the apprehensions of the incidents to the collection and forensic analysis of the necessary evidence. The focus of this study was to investigate the determinants of the outcome of sexual offenses' forensic investigations in Butere Sub- County, Kakamega County, Kenya. The study was based on three specific objectives that include; to determine the influence of adherence to sexual assault standard investigative guidelines on the outcome of sexual assault offenses' forensic investigation in Butere sub-county, assessing the influence of availability of sexual offenses' analysis infrastructure on the outcome of sexual assault offenses' forensic investigation in Butere sub-county and to establish the influence of coordination between medical and legal sectors on the outcome of sexual assault offenses' forensic investigation in Butere sub-county. The study was anchored on structural functionalism theory and the theory of change. The significance of the study is to give insight into the successful investigation of sexual offenses and guide policy formulation regarding investigation of sexual offenses. sexual assault offenses. The study adopted a descriptive survey design to provide an explanation of the variables and an explanatory research design to explain causal links between variables. Stratified random sampling was used to pick police respondents from police stations and police posts from Butere Sub County and snowball and purposive sampling was used to pick survivors of sexual assault offences within Butere sub county and health workers from level 4 hospitals in Butere Sub County respectively. Data was collected using closed and open-ended questionnaires administered to police officers, interview guides administered to health workers and survivors of sexual assault offenses. Data was subjected to thorough editing and summarizing before actual analysis. Data was analyzed both qualitatively and quantitatively. Qualitative data was analysed thematically with the help of NVivo software. Quantitative data was analysed using Statistical Package for Social Sciences (SPSS) version 24 and results presented using tables. Data was analyzed through descriptive and inferential statistics. A regression model of determinants of outcome of sexual assault offense's forensic investigation was run against the dependent variable, successful investigation of sexual assault offenses. Based on the findings, the coefficient of correlation ($r = 0.798$) indicated that adherence to sexual assault forensic investigative guidelines, availability of sexual assault forensic investigating infrastructure and coordination between medical and legal sectors on forensic investigation of sexual assault offenses had significant positive relationship with successful investigation of sexual assault offences. The results showed that sexual assault forensic investigative guidelines are moderately adhered to in Butere Sub County (composite mean=2.87). The study found out that there is inadequate sexual assault investigating infrastructure in Butere Sub County (composite mean=2.70). The study also showed that there is poor coordination between the medical and legal sectors on matters of sexual assault forensic investigation in Butere Sub County (composite mean=2.48). The coefficient of determination ($R^2 = 0.637$), indicated that the selected predictors determined about 63.7% of the successful investigation of sexual assault offenses and the model was significant ($P = 0.001$). The study recommends interagency corporations on forensic investigation of sexual offenses, improvement of sexual assault analysis infrastructure, continuous training on forensic investigations and increased public education.

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OPERATIONAL DEFINITION OF KEY TERMS

Coordination: Organization of different sectors to enable them work together.

Determinants: Factor or a cause that makes something happen or affects the nature

Forensic Investigation: Forensic investigation refers to examination carried out with the understanding that potential legal action may be taken in the future.

Guidelines: A set of rules or principles that dictates how something is done.

Infrastructure: Facilities required for investigation of sexual offenses.

or outcome of something.

Outcome: A consequence from an action**.**

Prosecution: presenting evidence to the court in order to obtain a fair trial and a favourable ruling from the judge.

Sexual Offense: means any crime covered by Kenya's Sexual Offense Act of 2006.

Victim: Refers to living or deceased person as a result of sexual violence. It was be used interchangeably with the term survivor.

Violence: Refers to intentional use of physical power, authority force, perceived or actual against oneself or another leading to injury, physical, emotional or psychological.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACORD Association for Cooperative Operations Research and Development

DNA Deoxyribonucleic acid

DRC Democratic Republic of Congo

KDHS Kenya Demographic and Health Survey

MOH Ministry of Health

NACOSTI National Commission for Science, Technology and Innovation

NCRC National Crime Research Centre

NGEC National Gender and Equality Commission

NPS National Police Service

OB Occurrence Book

P3 Kenya Medical Report Form

PRC Post Assault Care

SANE Sexual Assault Nurse Examiner

SDG Sustainable Development Goal

SOA **S**exual offense Act

UNDAF United National Development Assistance Framework.

UNDAP United Nations Development Assistant Program

UNHCR United Nations High Commission for Refugees

UNODC United Nations Office on Drug and Crime

WHO World Health Organization

CHAPTER ONE: INTRODUCTION

1.1.Background Information

One of Kenya's most pressing public health and human rights issues today is sexual violence. Sexual violence deprives victims of their right to dignity whether it occurs in the course of an intimate relationship, during a conflict, or within the framework of the family or community. It can have both immediate and long-term effects on the victim's physical, mental, sexual, and reproductive health. Sexual offenses are included in the broad category of gender-based violence, which is an umbrella that covers a spectrum of violence involving a gendered element such as domestic violence, human trafficking, harmful traditional practices as well as physical and emotional abuse (Constitution of Kenya, 2010). For this study, the working definition of a sexual offense is the penetration of the genital organs of another person with any portion of another person's body or an object that has been handled by another person, unless the penetration is done for legitimate, expert, sanitary, or medical reasons (Sexual Offense Act, 2006). Rape, sexual slavery, forced pregnancy, defilement, sexual harassment, sexual assault, incest, and human trafficking are just a few examples of the many different types of sexual violence. The severity and context of sexual violence also vary. For instance, rape can occur between intimate partners inside a family or between coworkers or superiors at the workplace (Haris, 2011). Rape and sexual assault offenses cut across all social classes throughout the world with varying incidences. According to World Health Organization (WHO) (2019) findings show that the percentage of intimate partner sexual violence reported by women aged 15-49 was 6.2% in Japan, the least and 58.6% in Ethiopia being the highest, while between 0.3 and 12% of women reported being compelled to engage in sexual activity or perform sexual acts with someone other than a romantic partner. Before the age of 18, 33.2% of Swaziland's youth reported experiencing sexual violence.

In a separate study of primary school girls in Malawi's Machinga area reported different forms of sexual harassment and abuse at school, including rape (2.3%), coerced or unwanted sex (1.3%), sexual comments (7.8%), and sexual touch (13.5%) (WHO, 2019). According to (WHO) (2021), on violence against women, 30% of women worldwide have been subjected to intimate or non-intimate sexual violence.

Further, East Africa and Kenya particularly are not spared from this menace. On July 6th, 2020 President Kenyatta not only called for Kenya's National Crime Research Centre (NCRC) to investigate the rising number of sexual and gender-based violations but also called for the immediate prosecution of suspected perpetrators (Bhalla, 2020). According to Kenya's demographic and health survey (KDHS) (2019), statistics show that one (1) in every five (5) women in Kenya between the ages of 15 and 49 experienced various types of sexual violence. Before the age of 18, 32% of Kenyan women and 18% of men experience sexual violence (KDHS 2019). According to Kenya National Police Service Annual Report (2020), offences against morality which include rape, defilement, incest, bestiality, indecent assault, abduction, and bigamy accounted for a significant percentage of 13%of all crimes reported in Kenya in the year 2020 with an increase in cases of defilement by 1,204 (19.5%) from the previous year of 2019. The Kenya national police service report (2020), ranks Kakamega county number 11 in offenses against morality with 240 cases reported in the year 2020. According to Kenya's National Crime Research Centre (NCRC) (2019), 15.6% of females and 16.7% of males who were interviewed reported experiencing any type of sexual violence reported the incident themselves or had someone else report it.

The current response mechanism in cases of sexual assault offence takes either of the following two forms: After reporting to a local police station, victims may be sent to a medical facility where

a manual form called post rape care (PRC) is available for documentation in triplicate. This documentation is then sent back to the police station for the start of investigations through the issuance of Kenya police medical report form, P3. Alternately, the victim may show up at the clinic, receive care and have a high vaginal swab taken before being transferred to the police station to start an inquiry (Shako & Kalsi, 2019).

Forensic examination refers examination carried out in anticipation of potential future legal proceedings requiring an expert's opinion. It is evident from the literature that forensic investigation and prosecution of sexual assault offenses is complex and challenging all over the world. For instance, research done in Michigan on 400 Sexual assault Kit (SAK) estimated the percentage of kits that would go through advanced forensic stages of processing revealed that roughly 54% of kits would be tested for biological evidence and just 34% of kits would contain biological material unrelated to the victim (Pierce & Zang, 2011). The forensic investigation and prosecution of sexual offences have remained a challenge hindering the complete closure of sexual assault cases in a court of law. In Kenya, the likelihood of a successful conviction is thought to be about 25% of cases that are brought before a court (Shako & Kalsi, 2019). For a successful conviction, evidence of sexual assault presented before the jury should be sufficiently ranging from historical and circumstantial facts. Of significant importance is DNA evidence that can be obtained during a forensic examination.

Effective investigation of sexual assault offences is a prerequisite to the successful prosecution of any judicial proceeding. It takes about 4 to 5 years approximately to conclude sexual-related cases in Kenya and this delayed justice is as well as denied (Shako & Kalsi, 2019). Among the challenges that result in low conviction rates include but are not limited to timing, where DNA evidence may degrade only after 72 hours, legal requirements regarding the collection of medical-legal evidence,

stigmatization of the victim, and lack of collaboration between government agencies such as gender departments and health facilities. Based on the above facts and findings, there is a need to investigate the determinants of the outcome of sexual assault offense's forensic investigation which can be used as a standard to guide forensic investigators as well as the victims in the process of seeking justice. This research sought to investigate the determinants of the outcome of sexual offences investigation in Butere sub county, Kakamega County.

1.2. Statement of the Problem

Forensic investigation of sexual offences should lead to speedy prosecution and conviction of offenders. In a larger portion of the contemporary world, including Kenya, the task of investigating sexual assault offense is largely in the domain of security agencies. In an efficient system, justice is seen to be the fast case resolution, conviction of perpetrators, presentation of enough evidence, presence of witnesses, proper handling and processing of evidence, and presence of supporting institutions.

Despite Kenya having many laws and policies prohibiting sexual offences, there is still a sharp increase in sexual violence cases and the emergence of new forms of sexual violence which had not been addressed by the sexual offences act. Some of the strategies put in place to ensure sexual violence cases are prosecuted effectively in the courts of law include the creation of gender desks within police stations to look at sexual crimes against women and children. There has only been a handful of known convictions under the Kenyan statute, which has an extraordinarily low prosecution record. More than 50% of reported sexual crimes against women are thrown out due to lack of enough evidence thus affecting prosecution. It is estimated that only 25% of sexual cases brought before Kenyan courts result in successful convictions. This unfortunate consequence is

attributable to the inability of law enforcement officials and medical professionals to quickly and effectively acquire evidence from victims.

Several other studies have been done in relation to sexual offenses however, little is known about important determinants of successful investigation of sexual offences forensic investigation. It is for the aforementioned reasons and findings that the researcher aimed to investigate the determinants of the outcome of sexual offense's forensic investigation in the Butere sub-county located in Kakamega County which is ranked number 11 with offences against morality.

1.3.Objectives of the Study

1.3.1. General Objective

The general objective of this study was to investigate the determinants of outcome of sexual offenses' forensic investigation in Butere sub county, Kakamega County

1.3.2. Specific Objectives

The specific objectives of the study were as follows;

1. To determine the influence of adherence to sexual assault standard investigative guidelines on the outcome of sexual assault offenses' forensic investigation in Butere sub-county.
2. To assess the influence of availability of sexual offenses' analysis infrastructure on the outcome of sexual assault offenses' forensic investigation in Butere sub-county.
3. To establish the influence of coordination between medical and legal sectors on the outcome of sexual assault offenses' forensic investigation in Butere sub-county.

1.4. Research Questions

The study aims to answer the following questions:

i. What is the influence of adherence to sexual assault standard investigative guidelines on the outcome of sexual assault offenses' forensic investigation in Butere sub-county?
ii. What is the influence of availability of sexual offenses' analysis infrastructure on the outcome of sexual assault offenses' forensic investigation in Butere sub-county?
iii. What is the influence of coordination between medical and legal sectors on the outcome of sexual assault offenses' forensic investigation in Butere sub-county?

1.5. Significance of the Study

Kothari (2008), states that the purpose of a research study is to address numerous operational and planning issues that can arise in any business or sector. It also serves as the foundation for developing policies and procedures. The outcome of the study can be utilized by the national and county governments in policy implementation meant to address investigation of sexual assault cases. The research is also important to police investigators responsible for investigating sexual offenses since it provides insights on ensuring successful investigation of sexual assault cases such as high-quality evidence and speedy trials. This promotes achievement of sustainable development goal (SDG) number 16 which focuses on promoting peace, justice and strong institutions (Shako & Kalsi, 2019).

The research is also important to members of the society by giving education on the on determinants of outcome of sexual assault offenses investigation. This will enable those who may fall victims of sexual assault offenses to take appropriate actions that may help in the prosecution of their case.

1.6. Scope of the Study

The national police service report (2020), ranks Kakamega county number 11 with offences against morality with 240 cases reported in the year 2020. This study was done in the Butere sub-county one of the 12 sub-counties in Kakamega County which is located in the southern region of the county. The sub-county has an approximate population of **139780** and an approximate area in sq. km of **210.6** Marama North, Marama West, Marama Central, Marama South, and Marenyo-Shianda are its five wards. The sub-county is inhabited by seventeen sub-tribes, Marama being the major sub-tribe. Butere Sub County has 17 public health facilities that are functional. They comprise of two level four hospitals, twelve health centres, and three dispensaries. The study involved police investigating officers, health workers, and survivors of sexual offense in the sub-county.

This study was confined to three key determinants of outcomes of sexual offenses forensic investigation, adherence to the standard investigative guidelines, forensic analysis infrastructure and coordination between medical and legal sectors. The target population included police officers, survivors of sexual assault offences and health workers. The study used descriptive survey design employing both quantitative and qualitative data collection tools.

1.7. Limitation of the study

The study limitations were pegged on the factors that affect the study in a negative way. Sexual assault offense is a very sensitive and emotive field of study that does not easily lend itself to reliable, valid and systematic exploration. The study used a descriptive cross sectional survey design with both qualitative and quantitative data collection methods to collect data from respondents and informants in order to overcome the limitations of a single design. To surmount

the sensitivity challenge, the researcher took steps to initiate a favourable impression and rapport in order to earn trust of the target population. The researcher also assured respondents that information with strictly be used for academic purposes and kept confidential.

1.8. Assumptions of the Study

According to Leedy & Ormrod, (2019), assumptions guide the study arguments, evidence generation and guide conclusion. The research was based on the assumption that the participant's genuinely gave true information in regards to determinants of outcomes of sexual offences' forensic investigations in Butere sub- County.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This section examines literary works that have been published and unpublished which are relevant and in line with the study objectives and point out knowledge gaps. The main search engine was Google scholar and the key search words include sexual offense and forensic investigation. It presents empirical literature and theoretical and conceptual frameworks. The literature reviewed includes sexual offense standard investigative guidelines, sexual offense analysis infrastructure, and coordination between the medical and legal sectors in relation to sexual assault offenses. The theoretical framework reviewed includes structural-functional theory and theory of change and a conceptual framework is provided at the chapter's end.

2.2. Empirical Literature.

2.2.1. Sexual Offense Standard Investigative Guidelines.

Seelinger et. al (2011), describe the following as the general format which is followed in the prosecution of sexual assault cases. When a crime is reported, the matter is brought before the court system, where an investigation is conducted into the claimed facts to create a case that is ready for prosecution by formulating accusations in light of the available evidence. Thereafter the accused enters a plea as the matter moves forward to the trial phase, where the evidence and witnesses are examined and final judgment, sentencing, and appeal occurs. Davis (2017), posits that it is essential for police investigating officers and medical officers to discover and adhere to procedures, policies, and guidelines for the evidence to be admissible in court. At any given stage of sexual assault offence, there are laid out guidelines that must be followed for a successful outcome.

The national standards for the medical management of rape and sexual assault offenses are set forth by the ministry of public health and sanitation, and they aim to address the psychological, legal, and medical aspects of sexual assault offenses. These guidelines include obtaining informed written consent for medical and forensic examination from the survivor, introducing yourself to the survivor and reassuring them they are in a safe place now, and explaining the steps and procedures you are about to undertake such as urine analysis for epithelial cells and vaginal swab for spermatozoa analysis, conducting head to toe and genito-anal examination of the survivor, taking both medical and forensic specimen at the same time and recording the findings in the PRC form from the survivor (MOH, 2019).

Away from the medical examination done by health workers, police officers carry out other investigations that are interview-based which is the primary tool for soliciting information surrounding sexual violence. Due to the sensitivity of sexual crimes, it could be tough for victims to discuss their ordeal (Muia, 2014). The emotional and psychological impact of sexual assault can deter the victim from responding well and coherently to the asked questions and the investigators may not be trained in offering supportive counselling. According to Seelinger et. al (2011), this can be overcome in several ways including the use of standard investigation guidelines and training, providing psychological support to victims and investigators, gender diversification of investigating teams, and collecting evidence for the context of sexual violence. It is against this backdrop that a number of experts including Rebecca Milne and Ray Bull talk about investigative guidelines in the domain of memory and social psychology (Milne & Bull, 1999). According to Seelinger et. al (2011), the benefits of using a standardized protocol for interviewing victims of sexual violence are many including getting the information necessary to support prosecution thus reducing the number of interviews and offering a full interviewing experience to the victim and

witness. The united nations office of drugs and crime (UNODC) gives specific interviewing recommendations as the following: gender sensitivity and professionalism, the use of preliminary evaluation to investigate the requirements and abilities of the interviewees, selecting a secure interview site, selecting appropriately trained interpreters, ensuring confidentiality, conveying non-judgment to the victim and abstaining from judging, seeking clarification with open-minded questions, taking careful notes during the interview and concluding the interview by thanking the victim and explaining to him or her the next steps.

During the forensic investigation of sexual assault offences, the integrity of the chain of custody as well as the forensic evidence's integrity is mandatory (Seelinger *et al.,* 2011). The lack of a chain of custody system for evidence is a major element in the inappropriate management of forensic evidence (Shako & Kalsi, 2019). A study by Kelly et. al (2005), showed that police brutality and lack of compassion may prevent women from reporting crimes or even pursuing their cases. Another reason could be the fear of reverse penalty often referred to as boomerang, when victims of sexual assault are aware that, should they lose in court and no conviction result, they can still be held accountable for making false accusations, boomerang clauses can be demoralizing. (Harris, 2011). The mode and speed with which a case is reported will greatly influence the outcome of the investigation.

2.2.2. Sexual Offense Forensic analysis Infrastructure

Forensic evidence left after a sexual assault can only become of use if well collected in a timely manner and analysed as required. Improved capability at the point of first contact with the victim is the first step toward better forensic evidence collection, storage, and analysis. (Muia, 2014). This evidence includes hair, semen, blood traces, and saliva, which contain traces of the perpetrator's DNA. DNA evidence can be used to identify the offender, show whether force was

used, and prove that the offender was unable to give permission (Mont & White, 2013). In order to ensure that scientific evidence is useful, an examination kit called a Rape Examination kit is required. According to Harris, (2011) a standardized set of medical supplies known as a rape examination kit can gather any forensic evidence of an attack. The kit's samples should ideally be sent to a forensic testing facility (Harris, 2011). Actual evidence to be collected is contingent upon the capacity to analyse, preserve, and use it (WHO, 2019). The success of any organization heavily relies on the effectiveness of its personnel (Tengpongsthon, 2017). It is therefore required that the investigating officers together with medical personnel have the skills in relation to the collection, preservation, analysis, and presentation of forensic evidence. Evidence should be collected systematically, using established terminology and objective methods (WHO, 2019).

Seelinger et. al (2011), posit that DNA analysis for forensic purposes is an expensive process that needs a well-equipped lab, skilled workers, and ongoing upkeep. Additionally, international accreditation of the laboratory is necessary to provide quality control. A forensic laboratory's capacity for forensic analysis may be insufficient or unreliable if it is underfunded or does not have the appropriate tools, It can lead to the destruction of evidence, a backlog in the legal system, or even incorrect convictions (Mcvicker & Khanna, 2004) In circumstances where medical professionals are not familiar with the legal standards, the victim may experience worry, and confusion over the proper course of action, or even the evidence may not be admissible (Mcvicker & Khanna, 2004). Seelinger et. al (2011), explains a myriad of setbacks police officers undergo while performing a duty which includes lack of facilities where they can talk to victims or witnesses and observe confidentiality. The above literature shows that sexual assault analysis infrastructure will influence the outcome of a given sexual assault investigation.

2.2.3. Coordination between Medical and Legal Sector

In most of the modern world, the responsibility of investigating criminal cases including sexual assault cases rests largely on security agencies including police institutions which act as the primary agency. A criminal investigation is systematic involving the identification, collection, and analysis of evidence for presentation in a court of law so that justice can be rendered. Properly done criminal investigation helps build up a vital case and ultimately safeguards vital proof leading to the desired objective which is prosecution (Gilbert, 2012). For a successful investigation of sexual assault offences several entities or participants are involved including the victim, police officers, and medical officers.

Among the main participants in the investigation of sexual offenses is the victim. Ministry of Health (MOH) (2019), outlines that regardless of whether they have reported the incident to the police, the victim has the right to medical care in a public or private hospital or other medical institution. The government will also cover any costs associated with using a public hospital. When sexual assault occurs, the victim has several options at any given point, according to the Wangukanga Foundation (2017), which include, not reporting the assault and not seeking medical attention, reporting the sexual assault within 72 hours and completing the Sexual Assault Evidence Kit process, receiving medical care without first reporting the assault to the police, receiving medical care without completing the Sexual Assault Evidence Kit process and reporting the assault later, completing the Sexual Assault Evidence Kit process and having it stored for up to six months, or submitting a third-party report to the police. It is quite clear that the options taken by the victim will tremendously affect the outcome of the investigation of sexual assault offence because of the different roles of the police and medical personnel and also their level of coordination at any given time.

The role of police officers according to the criminal procedure code contains guidelines for executing arrest warrants, obtaining evidence from victims and the government chemist, providing it to the prosecution, testifying in court, ensuring the survivor's and family's safety, apprehending the suspect, and giving the survivor a P3 form (NGEC, 2020). Once the survivor reports sexual violence to the police, a statement is recorded in the Occurrence Book (OB) which is available at every police station. The victim is also given a p3 (Police Medical Examination form), an authoritative record filled by a specialist examining the victim based on clinical notes found on PRC 1 form (MOH, 2019).

Medical professionals have a responsibility to treat and care for the survivors psychologically, gather and present evidence in court, and connect survivors with the police and other community initiatives (NGEC, 2020). In case of rape, a PRC is filled that is utilized as clinical notes to direct the completion of the P3 form.

Muia (2014) explains that since victims of sexual assault are more likely to seek medical attention than police or legal assistance after the attack in areas where there is a lack of confidence in the law enforcement or judiciary, strengthening the link may increase the number of sexual violence cases that are ultimately filed in court. According to WHO guidelines for medical legal assistance for domestic violence victims, an integrated model is preferred, that is the health and medico-legal services are provided by the same medical professional, in the same spot, at the same time (WHO, 2021).

The model of providing a one-stop shop, that is medical and legal service under the same roof has been practiced and proved to be effective in several jurisdictions such as South Africa. The Thuthuzela Care Centers in South Africa provide access to legal assistance for victims who seek help in hospitals after sexual assault violence. Another integrated model is “|H|eal Africa”, found

in the Democratic Republic of Congo (DRC), which provides in-hospital legal services (Seelinger et.al 2011) Another approach to linking medical and legal services is by specifically training those who are employed by the current medical systems. One such arrangement is the Sexual Assault Nurse Examiner (SANE) which is found in Canada, the United States, and a few in Kenya. These systems facilitate the proper collection of evidence that is required for prosecution (Haris, 2011).

2.3. Theoretical Framework

Theoretical fram**e**work refers to a set of constructs and variables that surface to explain a given variable. (Imenda, 2014). Theoretical framework aids the researcher in recognizing the issue from a broad perspective and not from a narrow and biased approach therefore improving objectivity (Kombo and Tromp, 2010). In this study, structural functionalism theory is used to explain how institution playing different parts towards the same goal should co-ordinate while theory of change explains stepping stone that lead to long term aim and the relationship between program activities and results that take place at each stage. To effectively investigate the outcome of sexual assault offenses, community members must have a shared comprehension of the two.

2.3.1. Structural Functional Theory

Structural functionalism theory explains that society is made up of interconnected elements that must function as a whole in order to meet the biological and social demands of its members. This theory was first described by philosopher and biologist Herbert Spencer in 1820 who found parallels between society and the human body and explained that, just as body organs cooperate to keep the body operating, the various parts of society should cooperate to maintain society functioning (Gangwar, 2021. Parts of society refer to social institutions including government,

healthcare, economy, etc (Ombwori, 2009). This theory was further utilized by another early sociologist, Emile Durkheim in 1893 in explaining how society evolve and endure over time. The stability of society is maintained by a complex system of linked and interdependent pieces (Gangwar, 2021). As explained in the structural-functional theory, various components of society need to work together and each component has a specific role to play to maintain the stable functioning of the society.

As explained in the structural-functional theory, various components of society need to work together and each component has a specific role to play to maintain the stable functioning of the society. According to this study, the social components that need to work closely are the legal sector including the forensic investigating officers, magistrates, and judges, and the medical sector including medical practitioners trained in sexual assault examination to be able to ensure the successful outcome of forensic investigation of sexual assault offenses.

The structural-functional theory has however the limitation of the inability to adequately explain social change.

2.3.2. Theory of Change

Huey Chen, Peter Rossi, Michael Quinn Patton, and Carol Weiss are only a few of the researchers that have contributed to the theory's development. A theory of change uses a casual study of the available data to explain how a certain action is anticipated to result in a specified development change. According to Weiss (2011), a theory of change is a term used to express a set of presumptions that explain both the mini-steps leading to the long-term goal, and the relationship between the program's objectives and the consequences that occur at each stage along the way. (Weiss, 2011).

According to United Nations Development Assistant Program (UNDAF), a theory of change should be created with consultation, promote ongoing learning and improvement from the conception of the program to its conclusion, and be founded on solid evidence throughout.

According to LoBiondo-Wood & Haber (2006), the theory of change is aimed at ending sexual crimes against women by proving the basis of eradicating violence. It provides multiple pathways for addressing violence. This study used theory of change to explain how the mini-steps of the standard forensic investigative procedure when followed leads to the successful investigation of sexual assault offenses.

2.4. Conceptual Framework

The phrase "conceptual framework" refers to a diagram that shows the many types of study variables and their associations (Kothari, 2008) explains that conceptual framework denotes a common set of ideas put together and bearing a common relationship. The goal of the study is to assess how closely the dependent and independent variables are related in determining the outcome of sexual offences forensic investigation as illustrated in figure 2.1.

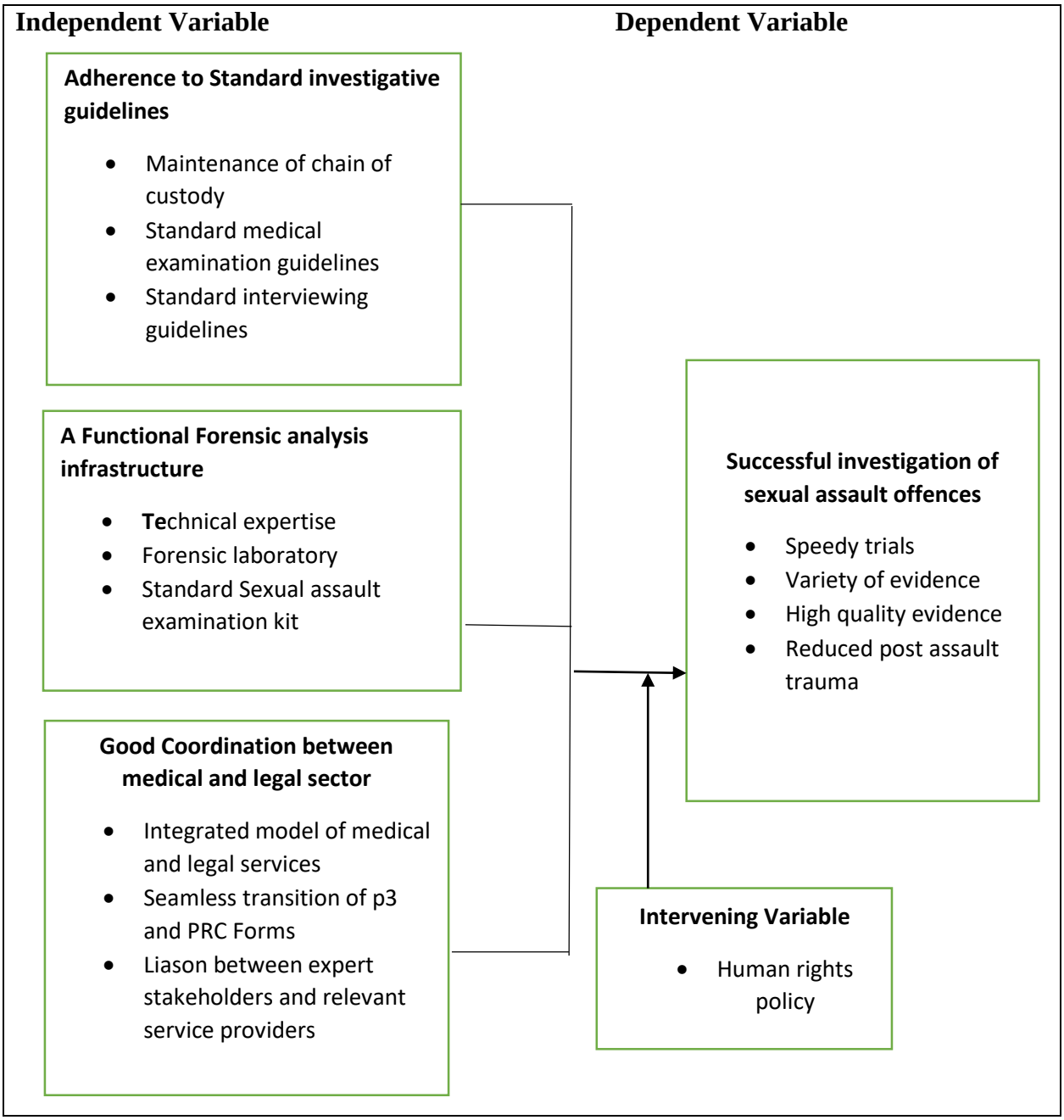

Figure 2.1 A Conceptual framework

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

This chapter provides a summary of research methods: research design, target population, sample size, sampling procedure, data collection instruments and techniques, data analysis and data interpretation methods that was used in the study. Ethical considerations and data management procedures was covered.

3.2. Research design

Research designs are methods and strategies that aid in a researcher's decision-making process as they relate to dealing with presumptions and creating practical answers to the research topic (Huyler & McGill, 2019). Research design provides appropriate framework for the study (Mishra & Alok, 2017). Referring to (Gupta & Gupta, 2022), the study used a descriptive survey design which made it possible to gather, analyse, and combine quantitative data with qualitative themes, improving knowledge of the research subject. Descriptive survey design focuses on providing an explanation of the variables in their natural phenomena regarding the population in order to provide information on the, what, when, where, and how of the characteristics of a person or group. (Mugenda & Mugenda, 2012).

In order to generate casual links between the study variables, explanatory research design was also adopted. According to Mishra & Alok, (2017), the goal of an explanatory research design is to emphasize the why side of the subject being studied while generating incidental connections between variables.

3.3. Population

Population refers to the entire group of individuals, subjects, or events in which the researcher is interested and who share certain characteristics (Mishra & Alok, 2017). The target population for the study comprised members of police service, both junior and senior commanders, within the jurisdiction of Butere sub-county, health workers from Butere sub-county level four hospital and survivors of sexual assault within Butere sub-county.

3.4. Sample size and sampling technique

In this study, the sample size and sampling technique was determined as outlined below.

3.4.1. Sample size

Sample refers representation of individuals, teams, elements, things, or sets that are taken from a target population and have particular traits that can be generalized to the target population (Nassaji, 201). Therefore, for the purpose of this study, Yamane, (1967) formulae was used to calculate the sample size for police officers.

$n=N/ (1+Ne^2)$

n = minimal sample size

N = Population

e = Precision set at 95% (5% = 0.05)

Hence; n =87/1+ (87*0.0025)

n= 71.4

n= 71 participants.

3.4.2. Sampling technique

Sampling technique is a method of selecting objects or items of homogeneous characteristics from a larger population (Huyler & McGill, 2019). This study adopted stratified random sampling to select respondents from five police stations, three police posts and four patrol bases functional in Butere sub-county. In stratified random sampling, a researcher first divides the population into sub-populations based on supplementary information (Kothari, 2013). Butere sub-county police records show there are a total 87 police officers in Butere sub-county are as follows, Butere police station 36, Lunza police station 5, Marenyo police station 5, Shiraa police station 5, Shiatsala police station 5, Ibokolo police post 4, Ebustinji police post 5, Mahondo police post 5, Manyala patrol base 5, Imanga patrol base 4, Masaba patrol base 3, Emureko patro base 5. Using proportional random sampling the number of elements in each stratum was selected in proportion to total population. Proportionate sample was arrived at by dividing the sample size by the population at respective police station as shown in table 3.1. The researcher will then sample within each stratum using simple random sampling. The study used purposive sampling to select health workers from Butere sub-county level four hospital, being the only level four hospital within the sub-county. Purposive sampling is where the researcher deliberately chooses a sample that is more likely to provide information that answers the research questions (Creswell & Creswell, 2017). Snowball sampling was used to select survivors of sexual assault offenses. This type of sampling is based on referral where a primary data source nominates other data sources (Creswell & Creswell, 2017). Police officers were used to give referrals to 5 survivors of sexual assault offenses.

Table 3:1 Stratified samples of police officers from different stations

Police station/post/patrol base	police population	stratified sample
Butere	36	30
Lunza	5	4
Marenyo	5	4
Shiraa	5	4
Shiatsala	5	4
Ibokolo	4	3
Ebutunyi	5	4
Mahondo	5	4
Manyala	5	4
Imanga	4	3
Masaba	3	3
Emureko	5	4
TOTAL	**87**	**71**

3.5 Data collection instruments and procedure

Data gathering tools utilized in the study are known as research instruments (Bell *et al.*, 2018). The study utilized a data collection instrument that is consistent with research objectives and which seeks to give accurate and systematic data. For the study, both qualitative and quantitative data was gathered. Data collection began after approval from relevant authorities. Quantitative data was collected using questionnaires made up of both closed- and open-ended questions. The order of questions was predetermined. Qualitative data was collected through key informant interview schedule. Police investigating officers were the first ones to be given questionnaires and thereafter gave referrals to survivors of sexual offenses. Health care providers and Survivors of sexual offenses had an interview scheduled at their convenient location.

3.6. Pilot testing of research instruments

The researcher integrated a pilot study prior to conducting a final study from respondents in Kirinyaga central Sub County, Kirinyaga County. This aimed at identifying weaknesses in the organization and administration of the research instrument and correcting them before undertaking the main study. According to Croucher & Cronn-Mills (2018), pilot experiments are important in assessing the respondents' understanding of the concepts the researcher is studying. This was accomplished by selecting a limited number of respondents with the same characteristics as the population from which a full study was undertaken. A total of 10 questionnaires were administered to police officers from Kirinyaga central Sub County. The outcome pilot test was useful to the researcher identifying inconsistencies and challenging questions and consequently amending the research instrument.

3.7. Validity of research findings

Validity is the degree to which a scientific test of study actually measures what is stated (Zikmund *et al.*, 2013). Universally accepted sampling methodology was used and also the researcher ensured that the research variables chosen had the greatest influence on the study's dependent variable in order to attain construct and content validity. Uncertainties were eliminated from data collection instruments by using appropriate words and concepts enhancing clarity and suitability.

3.8. Reliability of research instruments

The term "reliability of the study" refers to the consistency with which the research tools provide reliable results. (Mugenda & Mugenda, 2012). Reliability of an instrument is considered in terms of consistency, stability and precision. The researcher pretested the instruments to ensure reliability by conducting a pilot study in a small sample to establish the accuracy and suitability before the final study. After that, any necessary revisions ware made prior to conducting the final survey. The respondents for the pilot study were drawn from Kirinyaga central sub-county in Kirinyaga County in Kenya. Using Cronbach’s alpha correlation coefficient reliability was tested. The test's main reason was to measure the internal consistency of the study components in the survey questionnaire. The respondents for the pilot study were drawn from Kirinyaga central sub-county in Kirinyaga County in Kenya. Using Cronbach’s alpha correlation coefficient reliability was tested. The test's main reason was to measure the internal consistency of the study components in the survey questionnaire.

Table 3:2 Cronbach's Test

Reliability Statistics		
Variable	**Number of items**	**Cronbach's Alpha Value**
Adherence to standard sexual assault forensic investigative guidelines	5	0.821
Availability of sexual assault offense investigative infrastructure	5	0.725
Coordination between medical and legal sectors on sexual assault offense investigation	5	0.813
Successful investigation of sexual assault offenses	5	0.770
Average Alpha	4	0.860

The alpha value for adherence to sexual assault standard investigative guidelines was 0.821, availability of sexual assault offense investigative infrastructure was 0.725, coordination between medical and legal sectors was 0.813 and successful investigation of sexual assault offenses was 0.770. All alpha values were found to be more than 0.7 hence credible enough by offering high internal consistency for both dependent and independent variable.

3.9. Data analysis and presentation

Data analysis is the act of gathering, modelling, and changing data with the intention of highlighting relevant information, posing scenarios, and assisting in decision-making, so translating raw data into understandable designs (Kothari, 2004). In this study, it was anticipated that the research will generate large volume of data both qualitative and quantitative. Data was subjected to thorough editing and summarizing before actual analysis. Qualitative data was analysed thematically. The interview transcript was imported in text into Nvivo software to aid in the data analysis process of classification and coding the data into major themes. The research questions and interview guide helped to obtain the coding frame. This classified data into notable identifiers highlighting the appropriate section of collected data to identify recurring patterns for theme identification. According to Stuckey (2015), In process of pattern identification, the codes identified are interlinked amongst the participants' data to build on the dominant themes and for conclusion to be made. Therefore, the identified codes were clustered together to illustrate the dominant themes that relate to determinants of outcome of sexual assault forensic investigation in Butere sub county. These identified themes assisted in the interpretation of findings for readers to understand how the research objectives were achieved

Quantitative data was coded and then entered to statistical package for social sciences software for next steps. Exploration of data was then made using descriptive statistics. Analysis included exploring relationship between variables and how they affect each other using inferential analysis. A correlational analysis was done to determine whether there was any relationship between the independent and the dependent variables. Multicollinearity test was performed to test the assumption of multiple regression. This made use of the variance inflation factors and the tolerance levels. A test for normality was also conducted using the Kolmogorov- Smirnov test to determine whether the data set was normally distributed.

Regression analysis was done on each individual independent variable to determine its unique contribution to successful investigation of sexual assault offences. The F-test was used to determine the fitness of the model. In addition, the nature and amount of the association between the independent and the dependent variables was determined by correlational analysis utilizing Karl Pearson's correlation coefficient. A coefficient of determination (R^2) was also used to measure the predictors' ability to explain the dependent variable

The linear multiple regression was used to measure the combined effect of the three independent variables on the dependent variable.

The multiple regression model used is as shown below:

$Y= \beta_0+ \beta_1X_1+\beta_2X_2+ \beta_3X_3+e$, where,

Y= Successful investigation of sexual assault offenses

β_0 = constant (coefficient of intercept)

X_1 = Adherence to standard sexual assault investigative guidelines

X_2 = Availability of sexual assault investigation infrastructure

X_3 = Coordination between medical and legal sectors

e= Error Term

The variables that were not involved in the model but could have had a substantial effect on successful investigation of sexual assault offenses' forensic investigation were given a numeric error term (e). In order to facilitate analysis and proper interpretation of the study findings, the research findings were presented in form of tables.

3.10. Ethical considerations

The purpose of ethics is to ensure no one is hurt or suffers any negative repercussions as a result of the research activities that are being undertaken (Barrow *et al.,* 2021). Sexual harassment remains to be a sensitive matter in the society hence appropriate steps were taken to guarantee privacy, anonymity and confidentiality of all respondents and all individuals who gave information in relation to this study. The Kirinyaga University provided an introductory letter outlining the purpose and parameters of the study and asking authorization to carry it out. For the legal and ethical aspects of the study, an ethical review was sought from Mount Kenya University ethics review committee. Participation in this study was on voluntary basis requiring the participant to sign a consent form prior to undertaking the study. For minors and mentally unstable interviewees, consent was sought from parents and or legal guardians. Confidentiality of all information was highly maintained and the information was used solemnly for academic research. Prior to undertaking the study on survivors of sexual assault offenses, the participants were briefed by a trained counsellor, who was be accessible to offer psychological support throughout the study. Other necessary support services were be offered to the sexual assault survivors whenever need raised. After the study was complete all data was kept in custody of the school in the library. The non-significant raw data was destroyed accordingly.

CHAPTER 4: RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

The chapter outlines research findings and discussions regarding the research objectives of the study. The primary purpose of this research was to investigate the determinants of the outcome of sexual assault offenses forensic investigation in Butere sub-county, Kakamega County. The following specific objectives guided the study: to determine the extent of adherence to sexual assault offenses standard investigative guidelines by forensic investigators in Butere Sub- County, to assess the availability of sexual assault offense forensic analysis infrastructure in Butere sub-county and to establish the level of coordination between the medical and legal sectors on sexual offense forensic investigation in Butere sub-county. Data was collected from police officers, health workers and victims/ survivors of sexual offenses whose jurisdiction falls within Butere Sub County.

4.2 Response Rate

A total of seventy-one (71) questionnaires were distributed to police officers during the data collection phase. Out of these, sixty-one (61) were returned. The returned questionnaires represented 85.9% of the total questionnaires distributed to primary respondents. However, two questionnaires were discarded due to incompleteness and other inconsistencies. Therefore 59 questionnaires, 83.1%, merited inclusion in the study. According to Mugenda and Mugenda

(2012), a response rate of 50% is adequate for the study, 60% is good, and 70% is very good; therefore, a response rate of 83.0% was considered to be very good for this study.

Regarding qualitative data, all the key informants from health workers and victims of sexual assault offenses were available for interviews.

Table 4:1: Response Rate

Response	Frequency	Percent
Returned	59	83.1%
Unreturned	10	14.1%
Spoilt	2	2.8%
Total	**71**	**100%**

4.3 Demographic Characteristics of Respondents

Gender, age, level of education, years of service and current rank as police officer were found to be relevant demographic factors in so far as the successful investigation of sexual assault offenses is concerned. Table 4.2 shows the distribution of respondents in various demographic characteristics.

Table 4:2: Demographic Characteristics of Respondents

Gender	**Frequency**	**Percentage**
Female	9	15.3
Male	50	84.7
Total	**59**	**100**
	Level of Education	
O-Level	4	6.8
KCSE	48	81.4
Diploma	4	6.8
Bachelor's Degree	3	5.1
Total	**59**	**100**
Years in Service		
Below 10 Years	18	30.5
10-20Years	28	47.4
21- 30 Years	12	20.3
Above 31 Years	2	3.4
Total	**59**	**100**
	Rank in Service	
Constables	22	37.3
Corporals	17	28.8
Sergeants	15	25.4
Inspector	5	8.5
Total	**59**	**100**

4.3.1 Gender of the Respondents

The study sought to find out the gender of each respondent with an assumption that gender variation influences the findings. More than two-thirds of respondents, 84.7% representing 50 police officers, were male, while 15.3% representing 9 police officers, were female meaning more male police officers were involved compared to their female counterparts, as shown in table 4.2 above.

4.3.2 Level of Education of the Respondents

The researcher inquired about the respondents' education level, which was classified as O- level, KCSE, Certificate, Diploma, Degree, Masters, PhD, and others. Education is considered an important indicator of knowledge, skills and ability to execute responsibilities effectively. The level of education was therefore very critical in this study since sexual investigation requires high skills and critical thinking to effectively resolve a sexual assault crime. Master's and PhD levels of education did not have any respondents. Majority of respondents had KCSE as their highest level of education, 50 respondents representing 84.7% followed by diploma holders, 6 respondents representing 10.2%, and finally, degree holders, 3 respondents representing 5.1%, as shown in table 4.2.

4.3.3 Period of service of the Respondents.

The study enquired about the period of service of respondents. This demonstrates the level of exposure they have to their job. Level of exposure translates to experience thus an important aspect in the execution of one's duties. Respondents were asked to state their years of service, and the results categorized into four; below 10 years, 18 respondents representing 30.5%, 10-20 years were

28 respondents representing 47.4%; 21-30years were 12 respondents representing 20.3%, over 31 years were 2 respondents, representing 3.4% as shown in table 4.2 above.

4.3.4 Rank in Service

The study enquired about the rank of the respondents in the service. This paints a clear picture of the hierarchical structure of police officers in an investigative framework. Rank is a key aspect since the juniors are obliged to respond to the seniors. The ranks were constable, corporal, sergeant, senior sergeant, inspector, chief inspector, superintendent, and senor superintendent. Table 4.2 above shows the distribution of police ranks as follows: 37.3% constable (22), 28.8% corporals (17), 25.4% sergeant (15), while 25.4% were inspector (5) 8.5%.

4.4 Descriptive Statistics

Various questions were asked with specific, measurable variables. A Likert scale ranging from 1 – 5 was used on the questions where 1 represented strongly disagree, 2 represented disagree, 3 represented neutral, 4 represented agree, while 5 represented strongly agree. According to the scale, a mean value of between 4.5 and 5 represents strongly agree, 3.5 – 4.49 represents agree, 2.5 – 3.49 represents neutral, 1.5 – 2.49 represents disagree, and a value below 1.5 represents strongly disagree.

4.4.1 Adherence to Sexual Assault Offense Standard Investigative Guidelines

The first objective sought to determine the adherence to sexual assault offense standard investigative guidelines. The respondents were asked to indicate their level of agreement with the given statements. A Likert scale ranging from 1 – 5 was used on the questions where 1 represented strongly disagree, 2 represented disagree, 3 represented neutral, 4 represented agree, while 5

represented strongly agree. According to the scale, a mean value of between 4.5 and 5 represents strongly agree, 3.5 – 4.49 represents agree, 2.5 – 3.49 represents neutral, 1.5 – 2.49 represents disagree, and a value below 1.5 represents strongly disagree.

In the analysis, the researcher classified the composite mean into three; a mean value of between 3.67 and 5 represents strong adherence, 2.34 –3.66 represents moderate adherence, and 1.0-2.33 represents no/slight adherence.

Table 4.3 shows the agreement level of respondents on adherence to sexual assault offense standard investigative guidelines in Butere sub-county, Kakamega County, Kenya. The findings are shown in percentages, mean, and standard deviation.

Table 4:3: Descriptive Statistics adherence to sexual assault standard investigative guidelines

Statement	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly agree %	Mean	Std. Dev
Biological evidence was collected within 72hours	16.9	28.8	27.1	16.9	10.2	2.75	0.22
Head to toe examination of the victim was done within 72 hours of reporting the case	18.6	22.0	32.2	23.7	3.4	2.71	1.13
Forensic Evidence collection takes place alongside medical examination	8.5	40.7	25.4	16.9	8.5	2.43	1.03
Integrity of chain of custody of sexual assault evidence is maintained	5.1	22.0	40.7	27.1	5.1	3.05	0.95
Presence of functional gender desks that provide services to sexual assault victims	18.6	18.6	13.6	32.2	16.9	3.10	1.39
Composite mean						2.874	

According to the findings, as illustrated in table 4.6, respondents agreed on the presence of functional gender desks that provide services to sexual assault victims, shown by a mean of 3.10 and a standard deviation of 1.39. From the study, the chain of custody of sexual assault evidence was maintained as shown by a mean of 3.05 and a standard deviation of 0.95. Respondents were neutral that biological evidence was collected within 72 hours, as showed by a mean of 2.75 and a

standard deviation of 0.22. Additionally, the respondents were neutral on head-to-toe examination of the victim being done within 72 hours of reporting the cases shown by a mean of 2.71 and a standard deviation of 1.13. Lastly, the respondents disagreed with the statement that evidence collection is done alongside medical examination, as shown by a mean of 2.43 and a standard deviation of 1.03.

A composite mean of 2.874 shows a moderate adherence to sexual assault standard investigative guidelines of sexual assault offenses in Butere sub-county.

Qualitative data was collected via interviews, transcribed and translated accordingly by the help of an expert linguist. The major themes explored include, evidence collection, victim examination, chain of custody maintenance and gender desks. The participants were coded as follows; Victims/Survivors were coded as Participant 1-Participant 5, and Health workers were coded participant A-Participant Z. The data obtained was analysed thematically. From interviews, the study revealed gaps in the adherence to sexual assault standard investigative guidelines.

On the issue of biological evidence collection and examination, Participant 1 explained that,

> *"I was taken to hospital after 5days for biological evidence collection after I was told by my uncle and I examined by the doctors."*

Hence, suggesting that the collection of forensic evidence was done way after 72 hours.

Participant C also stated that:

> "*Majority of sexual assault victims present themselves several days after the assault and it becomes very difficult to obtain any useful biological and trace evidence that can link a suspect."*

Participant E reiterated that;

> *"In some cases, victim of sexual assault offenses try to hide the ordeal, may be out of fear, only for it to be discovered later, sometimes, more than 72 hours when the biological evidence is of very little use"*

Regarding forensic evidence collection and medical examination, 4 out of 5 victims had the procedure done separately, on different days and by different people. Participant 2 highlighted that;

> *"After sexual assault I was taken to the nearest dispensary (Masaba), where medical examination was done and the following day, I was taken to Butere sub county Hospital for evidence collection".*

Additionally, on the issue of functional gender desks providing special services to sexual assault victims, Participant 3 highlighted that,

> *"The police officer at the gender desk did not give me any way forward on what to do next after taking statement as a result a medical checkup was done after 5 days after being told by my uncle to visit hospital."*

Participant 4 noted that,

I was received by the officers at the gender desk who were nice to me even though they were of the opposite gender.

Participant 5 also reiterated that;

> *"I was interviewed in a place enclosed by curtains. I did not want to speak to the male police officer but later my mother encouraged me do so.*"

Lastly, on the maintenance of chain of custody, Participant c had the following sentiments;

> *"I have not experienced cases where chain of custody has failed to be maintained."*

Participant D echoed the sentiments by stating that;

> *"On many occasions, there are no issues with maintain chain of custody. The problem is that sometimes these forms are not available at police stations and are brought later."*

The study also found that it was very rare for medical examination to be done alongside forensic evidence collection. Majority of victim interviewed, 4 out of 5 victims had undergone separate invasive procedures for medical examination and forensic evidence collection, with the latter being done several days after the sexual assault.

Adherence to standard investigative guidelines has a great impact on the type and amount of evidence obtained by an expert (Muia 2014). In any sexual assault case, time is of great importance. The findings revealed that there was delay in collection of biological evidence after a sexual assault has occurred. Additionally, the study established that head-to-toe examination of victims was done way after 72 hours have elapsed. This is brought about by late reporting of the assault by the victim who, out of fear, keeps to themselves until someone else reports on their behalf. Other victims lacked knowledge concerning the legal system procedures and did not know where to go. These findings concur with the findings of Seelinger et al., (2011), who posit that most rape cases are committed by people well known to the victim making the victim fear to come out and report fearing discrimination from other family members. On the statement regarding functional gender desk at police stations or posts, the study established that even though gender desks were present, they were understaffed. Secondly, the desks did not have a separate room to enable investigation in a sensitive and sympathetic manner; however, such rooms were improvised

to enable victims of sexual assault to speak about their ordeal with less difficulty. On the same note, majority of female victims explained that they were uncomfortable speaking about their ordeal to male investigators who were assigned to their case. This can be attributed to the few women officers in the region. These findings echo the findings of Ndungu (2016), on the effectiveness of police desks which found that police gender desks were not conducive without victims' privacy and infrastructure quite wanting. The study of the chain of custody of evidence was critical to ensure evidence was not altered. The study established that chain of custody of evidence was well maintained, with the only challenge being occasioned lack of chain of custody forms at police stations/posts. These findings differ from the findings of Shako & Kalsi (2019) that a major contributory factor in improper management of forensic evidence is lack of chain of custody. From those interviewed, they concurred with the findings of Verma (2010) which states that hurdles exist in the quest for justice by women due to inconsistencies in police officers when handling cases of women violence against women, as some fail to order an inquiry, others fail to take in first information report while others impose moral guardianship on survivors.

4.4.2 Availability of Sexual Assault Forensic analysis Infrastructure

The second objective was to assess the availability of sexual assault forensic analysis infrastructure. The respondents were asked to indicate their level of agreement with the statements provided. A Likert scale ranging from 1 – 5 was used on the questions where 1 represented strongly disagree, 2 represented disagree, 3 represented neutral, 4 represented agree, while 5 represented strongly agree. According to the scale, a mean value of between 4.5 and 5 represents strongly agree, 3.5 – 4.49 represents agree, 2.5 – 3.49 represents neutral, 1.5 – 2.49 represents disagree, and a value below 1.5 represents strongly disagree.

In the analysis, the researcher classified the composite mean into three; a mean value of between 3.67 and 5 represents adequate availability of infrastructure, 2.34 –3.66 represents inadequate availability of infrastructure, and 1.0-2.33 Absence of infrastructure.

Table 4.4 shows the agreement level of respondents on the availability of sexual assault forensic analysis infrastructure in Butere sub-county, Kakamega County, Kenya. The findings are shown in percentages, mean, and standard deviation.

Table 4:4: Descriptive Statistics on Availability of Sexual Assault Offense Investigative Infrastructure

Statement	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly agree %	Mean	Std. Dev.
There is adequate standardized sexual assault evidence collection kit	3.4	20.3	30.5	33.9	11.9	3.51	1.03
Availability of freezers for storage of biological specimen	11.9	16.9	28.8	27.1	15.3	3.17	0.15
Periodical training and retraining on investigation of sexual assault cases (basic or advanced).	16.9	33.9	16.9	18.6	13.6	2.78	0.78
Availability of fully functional DNA laboratory	25.4	13.6	44.1	13.6	3.4	2.56	0.18
Availability of separate, conducive interviewing space for sexual assault related cases.	21.6	42.4	15.3	15.3	5.6	1.49	0.91
Composite mean						2.70	

According to the findings**,** respondents agreed that there are adequate standardized sexual assault evidence collection kits, as shown by a mean of 3.51 and a standard deviation of 1.03. The findings showed that availability of freezers for storage of biological specimen was not adequate, as seen by a mean of 3.17 and standard deviation of 0.15. The respondents were neutral on periodical training and retraining on investigation of sexual assault cases being done constantly, shown at a

mean of 2.78 and standard deviation of 0.72. Moreover, the respondents were also neutral on the availability of a fully functional DNA laboratory at a mean of 2.56 and a standard deviation of 0.18.

However, the respondents strongly disagreed on the availability of separate, conducive interviewing space for sexual assault-related cases at a mean of 1.49 and a standard deviation of 0.91.

The composite mean was found at 2.70, generally showing inadequate availability of sexual assault investigating infrastructure in Butere Sub County.

Qualitative data was collected via interviews and transcribed. Where necessary, translation of the data was done with the help of an expert in linguistics. The major themes explored include; an operational forensic laboratory, Sexual assault evidence collection kit and storage devices, manpower and conducive interviewing rooms. The participants were coded as follows; victims/survivors were coded as participant 1-participant 5, and health workers were coded as Participant A-Participant Z.

While explaining the importance of infrastructure, participant A said that;

> *"DNA is only valuable if the biological samples are well collected without contamination and there after analysed so as the suspect can be tied to the victim."*

Participant A added that;

> *"The forensic laboratory that serves Butere Sub County is located in Kisumu County, many kilometres away. Since that single laboratory serves western and rift valley regions, cases take a long time to be analysed*."

This was echoed by Participant B while commenting on the issue of a forensic laboratory by stating that;

> *"Sometimes the officials at the government chemist Kisumu claim lack of reagents for the delayed analyses. Since it is the only laboratory in the region, we have to wait."*

Regarding separate conducive interviewing rooms, Participant 4 highlighted that;

> *"I wasn't placed in a separate room during interviewing however I was enclosed by a curtain away from other people*."

Another remarkable comment came from participant E who stated that

> *"We have never experienced lack of storage facilities for the evidence collected during forensic examinations."*

This was echoed by remarks from participant D who said that;

> *"It is rare for us to lack evidence collection tools."*

Regarding technical knowhow/manpower, participant A stated that;

> *"Even though he had received training on sexual assault offense evidence collection, refresher training did not come by frequently."*

Referring to the knowledge concerning forensic evidence collection, participant 1 noted that;

> *"I did not know anything to do with evidence collection that can be used in a court of law."*

The main themes analysed revealed that without infrastructure, investigation of sexual offences would be futile. This echoes the results found by Muia (2014), that evidence from forensic examination is the most important report to be presented before a court of law to support deliver

of justice. Ability to prove or disapprove of sexual assault lies heavily on the availability of infrastructure.

According to the study, police officers were provided tools for collecting, preserving and storing of evidence differing with the arguments of Ruo (2020). The sexual examination kit assists in proving a sexual assault case because it contains brown bags for collecting samples, urine bottles, and seal lock bags, among others. On the other hand, the study established that even though at least basic training was given on sexual assault offenses it took a long period of time before another training was given which concurs with the findings of Shako& Kalsi (2019). All evidence that needed analysis in Butere Sub County was taken to a forensic laboratory in Kisumu County. This echo the findings of Muia (2014) that showed that laboratory equipment for DNA testing require very high level of maintained and are mostly not available in local hospitals. Furthermore, it was established that results may take a long time to be processed with the government chemist officials citing a lack of reagents and the backlog of cases. This can be attributed to the vast region that the single laboratory is servicing, the whole of Western, Nyanza and Rift Valley region.

4.4.3 Coordination between Medical and Legal Sectors on Sexual Assault Investigation.

The third objective of the study was to describe the coordination between medical and legal sectors on sexual assault investigations. A Likert scale ranging from 1 – 5 was used on the questions where 1 represented strongly disagree, 2 represented disagree, 3 represented neutral, 4 represented agree, and 5 represented strongly agree. According to the scale, a mean value of between 4.5 and 5 represents strongly agree, 3.5 – 4.49 represents agree, 2.5 – 3.49 represents neutral, 1.5 – 2.49 represents disagree, and a value below 1.5 represents strongly disagree.

In the analysis, the researcher classified the composite mean into two; a mean value of between 2.50 and 5.0 represents good coordination between the medical and legal sectors, 1.0 –2.49 represents poor coordination between the medical and legal sectors.

Table 4.5 below shows the agreement level of respondents on coordination between medical and legal sectors on sexual assault investigation in Butere sub-county, Kakamega County, Kenya. The findings are shown in percentages, mean, and standard deviation.

Table 4:5: Descriptive Statistics on Coordination between the medical and legal sectors

Statement	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly agree %	Mean	Std. Dev.
There is a 'one-stop shop' for medical and legal services	45.6	44.4	1.7	5.6	2.8	1.76	0.94
There is an established liaison between expert stakeholders and relevant service providers	13.6	25.4	30.5	16.9	13.6	2.81	0.20
There is seamless transition of p3 and PRC forms	6.8	25.4	16.9	6.7	3.3	1.90	1.00
There is cooperation from government pathologist during gathering and preservation of accurate scientific results in medical investigations.	27.1	32.2	16.9	18.6	5.1	2.32	1.05
The permissible legal requirements of sexual assault evidence is known by both medical professionals and police investigating officers	5.0	10.0	4.4	47.2	33.3	3.61	1.11
Composite mean						**2.48**	

The findings reveal that the permissible legal requirements of sexual assault evidence are known by both medical professionals and police investigating officers, as shown by a mean of 3.61 and a

standard deviation of 1.11. The respondents were neutral and the statement that there is an established liaison between expert stakeholders and relevant service providers, as demonstrated by a mean of 2.81 and a standard deviation of 0.20. The respondents disagreed on cooperation from government pathologists during gathering and preservation of accurate scientific results in medical investigations as shown by a mean of 2.32 and standard deviation of 1.05. Moreover, the respondents disagreed that there is a seamless transition of p3 and PRC forms, as demonstrated by a mean of 1.90 and a standard deviation of 1.00. Respondents also disagreed regarding a 'one-stop shop' for medical and legal services, respondents disagreed, as shown by a mean of 1.76 and a standard deviation of 0.94.

A composite mean of 2.48 shows that the coordination between medical and legal sectors on matters concerning sexual assault investigation is poor in Butere sub county, Kakamega County.

Qualitative data was collected via interviews and transcribed. Data was translated where necessary by an expert in linguistics. The major themes explored include 'one stop shop' for sexual assault services, the transition of p3 and PRC forms and cooperation by different stakeholders; health workers and investigating officers; the participants were coded as follows; Victims/Survivors were coded as participant 1-participant 5, Health workers were coded as participant A-Participant Z.

Regarding the 'one stop shop' for sexual assault services, Participant 3 explained that;

> *"After the sexual assault incident, I was first taken to the hospital for medical attention. Two days later I reported to the police station after being told to do so by the doctor. The two services are independent."*

Participant 4 stated that;

"There was no connection between the hospital and the police station where I reported my case. We were given different options of the hospitals that we can go to for medical and evidence examination."

Participant 1 noted that;

"I reported to police station after seeking medical attention. I was thereafter given a PRC and P3 form and directed to a different health facility evidence examination."

Additionally, Participant 5 stated that

"When we reported the sexual assault incident to the police station that night, they that took my statement and did not give us any direction on where to go next and we therefore went back home."

Participant 4 stated that;

"One police officer ridiculed me because I went to the hospital first before reporting the matter to the police station yet I was not aware of any procedures that should be taken."

Participant A highlighted that;

"We do not have a system whereby sexual assault victims can be directly linked to law enforcement agencies when they report to the health facility first."

Participant E reiterated that;

"The lack of at least a multiagency team that work hand in hand in solving sexual assault cases leads to loss of crucial forensic evidence. This undermines cases in court of law."

On the issue of P3 and PRC forms transitioning from one sector to the other, Participant B explained that;

> *"I can describe the transition of the forms to be moderately seamless except for occasioned inconsistencies and sometimes the lack of the physical forms."*

Regarding cooperation from different stakeholders, Participant A explained that

> *"The results we get from a forensic examination depends on many factors including the state of the victim. Some victims take shower fearing before for the fear of bad odor which greatly undermines our effort."*

Participant E explained that;

> *"There is a great need to vigorously educate the public the on the steps to be taken after an incident of sexual assault so as to improve the quality of evidence collected."*

In explaining the importance of having police investigating officers who are aware of forensic evidence and its admissibility, participant B explained that;

> *"It is disheartening to get victims who reported their ordeal to police station but are brought to the hospital the following day. Police officers should have insisted on the victim forensic examination as soon as possible*."

The major themes emanating from the interviews generally indicated a gap between the medical and legal sectors when dealing with sexual assault forensic investigations. Majority of victims, 90% explained their frustrations when pursuing justice as they tried to move from one sector to another. Traumatization of the victims was also evident and increased wastage of resources concurring with findings of Shako & Kalsi (2019). Majority of victims, 90% explained their

frustrations when pursuing justice as they tried to move from one sector to another. Traumatization of the victims was also evident and increased wastage of resources concurring with findings of Shako & Kalsi (2019).

The study established that victims prioritized seeking medical care rather than reporting to police immediately after the attack. The findings concur with the findings of Wambui (2018), who posits that victims felt that police office were not helpful or they will ask for money hence they sought health services instead. The study also found that Butere Sub County lacked an integrated model where medical and legal services being were under one roof or even a multiagency assault management team who act on sexual assault offenses. This model would ensure that no evidence is lost whatsoever. The model has been fronted by several researchers and adopted by several countries. According to Seelinger et. al (2011), posits that such integrated models come in a variety of forms and they enhance speedier, more sensitive and effective prosecutions. South Africa adopted the model known as *Thuthuzela* care centres in health facilities that offer direct access to legal services. On the issue of P3 and PRC forms, the study established that there were some inconsistences in filing of the PRC forms which concurs with the findings of Muia (2014). Interviews from doctors revealed that PRC forms did not carry the same evidence weight as p3 form despite the fact that they are unique forms for sexual assault cases. Properly filled PRC and P3 Forms gives information on the physical and psychological state of victims of sexual assault hence aiding in the investigation of the crime. Interviews from victims revealed that some victims were ridiculed by police officer for reporting the incident to a health facility first before reporting it to police stations and other victims who reported the incident to a police station was not referred

to a medical facility. This leads to loss of crucial forensic evidence that would aid successful investigation of sexual assault.

4.4.4 Descriptive Statistics on Successful Investigation of Sexual Assault Offenses

The dependent variable of the study was successful investigation of sexual assault offenses. In order to measure the success rate of sexual assault investigation in Butere sub county, a Likert-scale ranging from 1 – 5 was used on the questions where 1 represented strongly disagree, 2 represented disagree, 3 represented neutral, 4 represented agree while 5 represented strongly agree. On the scale, a mean score between 4.5 and 5 indicates strong agreement, 3.5 to 4.49 indicates agreement, 2.5 to 3.49 indicates neutrality, 1.5 to 2.49 indicates disagreement, and a number below 1.5 indicates significant disagreement. In the analysis, the researcher classified the composite mean into three; a mean value of between 3.67 and 5 represents very successful sexual assault investigation, 2.34 –3.66 represents moderate success in the investigation of sexual assault offences, 1.0-2.33 represents unsuccessful investigation of sexual assault offenses. the researcher classified the composite mean into three; a mean value of between 3.67 and 5 represents very successful sexual assault investigation, 2.34 –3.66 represents moderate success in the investigation of sexual assault offences, 1.0-2.33 represents unsuccessful investigation of sexual assault offenses

Table 4.6 below shows the agreement level of respondents on coordination between medical and legal sectors on sexual assault investigation in Butere sub-county, Kakamega County, Kenya. The findings are shown in terms of percentages, mean, and standard deviation.

Table 4:6: Descriptive Statistics on Successful Investigation of Sexual Assault Offenses

Statement	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly agree %	Mean	Std. Dev.
Majority of sexual assault cases are resolved within one year	34.4	50.0	8.9	4.4	2.2	1.90	0.90
Evidence obtained from sexual assault cases are of high quality	32.2	47.8	7.8	9.4	2.8	2.03	1.02
Variety of evidence to process sexual assault cases are obtained	8.9	5.6	41.1	33.3	11.1	3.61	1.14
Victims of sexual assault offenses have reduced post assault trauma	6.6	43.3	10.0	35.6	4.4	2.91	1.06
Composite mean						2.61	

Findings reveal that respondents agreed that variety of evidence is usually obtained to process sexual assault cases shown by a mean of 3.61 and standard deviation of 1.14. The respondents were neutral on the statement that victims of sexual assault offenses have reduced post assault trauma given by a mean of 2.91 and standard deviation of 1.06. However, the respondents disagreed that evidence obtained from sexual assault cases are of high quality, mean 2.03 and standard deviation of 1.02. Regarding sexual assault cases being solved within one year, the respondents disagreed as given by a mean of 1.90 and standard deviation of 0.90.

A composite mean of 2.61 shows that there is moderate success rate in the investigation of sexual assault offenses. Regarding sexual assault cases being solved within one year, the respondents disagreed as given by a mean of 1.90 and standard deviation of 0.90.

4.5 Inferential Statistics

4.6 Correlation analysis

The study employed Pearson moment correlation to evaluate the relationship between study variables, and the results are displayed in table 4.10 below. A statistical tool known as correlation measures the connection between two variables. Cohen (2014) claims that correlation aims to both explain the properties of the variables and their capacity for prediction. The variables' correlation (r) between each other was examined using Karl Pearson coefficients. The correlation indices are between -1 and +1. Zero indicates there is no relationship between the variables. Zero denotes no linear correlation between the variables, whereas a coefficient of -1 denotes a negative relationship and a coefficient of +1 denotes a positive relationship.

The correlation indices are between -1 and +1. Zero indicates there is no relationship between the variables. Zero denotes no linear correlation between the variables, whereas a coefficient of -1 denotes a negative relationship and a coefficient of +1 denotes a positive relationship. Zero indicates there is no relationship between the variables. Zero denotes no linear correlation between the variables, whereas a coefficient of -1 denotes a negative relationship and a coefficient of +1 denotes a positive relationship

Table 4:7: Correlational Analysis

Correlations

		Successful forensic investigation of sexual assault investigation	Adherence to sexual assault forensic investigating guidelines	Availability of sexual assault analysis infrastructure	Coordination between the medical and legal sectors
Successful forensic investigation of sexual assault investigation	Pearson Correlation	1	.730**	.701**	.533**
	Sig. (2-tailed)		.002	.000	.004
	N	59	59	59	59
Adherence to sexual assault forensic investigating guidelines	Pearson Correlation	.730**	1	.376**	.319**
	Sig. (2-tailed)	.002		.001	.009
	N	59	59	59	59
Availability of sexual assault analysis infrastructure	Pearson Correlation	.701**	.376**	1	.215**
	Sig. (2-tailed)	.000	.001		.007
	N	59	59	59	59
Coordination between the medical and legal sectors	Pearson Correlation	.533**	.319**	.215**	1
	Sig. (2-tailed)	.004	.009	.007	
	N	59	59	59	59

**. Correlation is significant at the 0.05 level (2-tailed).

According to the results, there is a positive correlation between adherence to sexual assault standard investigative guidelines and successful investigation of sexual assault offenses in Butere Sub County established by a correlation factor of 0.730. This positive relationship was found to be statistically significant as the p-value was 0.002 which was less than 0.05. There was a positive correlation between availability of sexual assault forensic analysis infrastructure and successful

investigation of sexual assault offenses in Butere Sub County established by a correlation factor of 0.701. This positive relationship was found to be statistically significant as the p-value was 0.000 which was less than 0.05. There was a positive correlation between coordination between medical and legal sectors on sexual assault forensic investigation and successful investigation of sexual assault offenses in Butere Sub County established by a correlation factor of 0.533. Because the p-value for this positive link was 0.004, or less than 0.05, it was determined to be statistically significant. Because the p-value for this positive link was 0.004, or less than 0.05, it was determined to be statistically significant.

4.7 Diagnostic Tests

The study incorporated two diagnostic tests before the regression model could be fitted to minimize the risk of a bogus regression model being fitted.

4.7.1 Multicollinearity Test

Ho (2006) defined multicollinearity as a situation where the independent and predictor variables have a high degree of correlation. Because independent variables should be independent, this association is problematic. Avoiding redundant information in the regression model, which may easily result in unstable regression coefficient estimations, was the significance of this diagnostic test. This test was done using the tolerance limits and the Variance inflation factor.

Table 4:8: Multicollinearity Test

Model Results	Tolerance Limits	Collinearity Statistics VIF
Adherence to standard investigative procedures	0.934	7.391
Availability of sexual assault investigating infrastructure	0.442	3.421
Coordination between the medical and legal sectors on sexual assault investigation	0.659	0.884

Ho (2006) stated that the predictor variables are not considered collinear if none of their VIF is larger than 10 and none of their tolerance limits is smaller than 0.1. According to the findings, all the VIF were below 10 and the tolerance limits were above 0.1. This implied that there was no multicollinearity between the independent variables and thus it was appropriate to use.

4.7.2 Test for Normality

According to Kwak & Park (2019), normality testing is carried out to ascertain whether or not data are regularly distributed. To check for normalcy, a one-sample Kolmogorov-Smirnov test with a significance level of 0.05 was utilized.

Table 4:9: Normality Test

One- Sample Kolmogorov-Smirnov Test

	Pretest	**Post-test**
Kolmogorov-Smirnov Z	1.200	1.608
Asymp. Sig. (2-tailed)	.144	.024

Based on the findings, the significance value from pre-test was 1.2 and 1.608 for the post test. Since both values from the pretest and post-test were larger than 0.05, this meant that the data was in normal distribution.

4.8. Regression Analysis

To provide more insight on linear relationship that existed between the individual independent variables and the dependent variable, regression analysis was done. This was to evaluate the unique contribution of the predictor variables on successful investigation of sexual assault offenses.

4.8.1 Regression Findings on adherence to standard sexual assault investigative guidelines

The first objective was to investigate adherence to sexual assault offense standard investigative guidelines in Butere sub county, Kakamega County.

Table 4:10: Regression Analysis on adherence to sexual assault offenses standard investigative guidelines

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.730[a]	.532	.524	.35878

The coefficient of correlation (R = 0.730) revealed that there existed a strong positive relationship between the adherence to sexual assault standard investigative guidelines and successful investigation of sexual assault offenses. The coefficient of determination (R^2 = .532) revealed that adherence to sexual assault standard investigative guidelines determined about 53.2% of the successful investigation of sexual assault investigation in Butere sub county, Kakamega county. Therefore, 46.8% could be determined by other factors other than adherence to sexual assault standard investigative guidelines.

Table 4:11: ANOVA Analysis for adherence to standard sexual assault investigative guidelines

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	30.735	1	7.684	75.049	.000[b]
	Residual	25.391	57	.102		
	Total	56.126	58			

a. Dependent Variable: Successful investigation of sexual assault offenses

b. Predictors: (Constant), adherence to sexual assault standard investigative guidelines.

The F- test revealed that (F= 1, 57 = 75.049) and P = 0.000 meaning that the model was significant at 95% confidence level as indicated in Table 4.14.

4.8.2 Regression Findings on Availability of sexual assault investigating infrastructure

The second objective was to establish the availability of sexual assault offense investigating infrastructure.

Table 4:12: Regression Analysis for availability of sexual assault offense investigating infrastructure.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.701[a]	.491	.499	1.11515

The coefficient of correlation (r = 0.701) revealed that there existed a positive relationship between availability of sexual assault offense investigating infrastructure and successful investigation of sexual assault offenses. The coefficient of determination (R^2 = .491) revealed that availability of sexual assault offense investigating infrastructure determined about 49.1% of the successful investigation of sexual assault offenses in Butere sub county, Kakamega County. This shows that 50.9% of successful investigation could be determined by other factors other than availability of sexual assault investigating infrastructure.

Table 4:13: ANOVA Analysis for availability of sexual assault offence investigating infrastructure.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20.692	1	38.628	25.693	.003[b]
	Residual	172.448	57	4.464		
	Total	193.14	58			

a. Dependent Variable: Successful investigation of sexual assault offenses

b. Predictors: (Constant), Availability of sexual assault offense investigating infrastructure

The F- test revealed that (F= 1, 57 = 25.693) and P = 0.003 showing that the model was significance at 95% confidence level as indicated in Table 4.16.

4.8.3 Regression Findings on coordination between medical and legal sectors

The third objective was to describe the coordination between medical and legal sectors in Butere Sub County, Kakamega County.

Table 4:14: Regression Analysis for coordination between medical and legal sectors

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.533[a]	.284	.246	1.07122

The coefficient of correlation (r = 0.533) revealed that there is positive relationship between coordination between medical and legal sectors and successful investigation of sexual assault offenses. The coefficient of determination (R^2 =.284) revealed that coordination between medical and legal sectors explained about 28.4% of successful investigation of sexual assault offenses in

Butere Sub County. This shows that 71.6% could be explained by other factors other than coordination between medical and legal sectors.

Table 4:15: ANOVA Analysis for coordination between medical and legal sectors

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	30.182	1	52.183	67.942	.000[b]
	Residual	110.003	57	2.108		
	Total	140.185	58			

a. Dependent Variable: Successful investigation of sexual assault offences

b. Predictors: (Constant), coordination between medical and legal sectors

The F- test revealed that (F= 1, 57 = 67.942) and P = 0.000 showing that the model was significance at 95% confidence level as indicated in Table 4.23.

4.9 Multiple Regression Analysis

The general objective of the study was to investigate the determinants of outcome of sexual assault offenses forensic investigation in Butere sub county, Kakamega County. To achieve this objective, a multiple regression was run to determine whether the selected determinants were collectively significant predictors of successful investigation of sexual assault offenses. The regression model used was as follows:

$Y= \beta_0+ \beta_1X_1+\beta_2X_2+ \beta_3X_3+e$, where,

Y= Successful investigation of sexual assault offenses

β_0 = constant (coefficient of intercept)

X_1 = Adherence to sexual assault offense investigation guidelines

X_2 = Availability of sexual offense investigating infrastructure

X_3 = Coordination between medical and legal sector

e= Error Term

Table 4:16: Multiple Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.798[a]	.637	.627	.40610

The coefficient of correlation (r = 0.798) indicated that the selected variables had a significant positive relationship with the dependent variable. The coefficient of determination (R^2 = 0.637), indicated that the determinants of outcome of sexual assault offenses explained about 63.7% of the successful investigation of sexual assault offenses. This shows that 36.3% could be explained by other factors.

Table 4:17 ANOVA Analysis for Multiple Regression

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	82.719	3	68.697	62.700	.001[b]
	Residual	392.373	56	1.902		
	Total	475.092	58			

a. Dependent Variable: Successful investigation of sexual assault offenses

b. Predictors: (Constant), adherence to sexual assault offense investigative guidelines, availability of sexual assault offense investigating infrastructure, coordination between medical and legal sectors.

Predictors: (Constant), adherence to sexual assault offense investigative guidelines, availability of sexual assault offense investigating infrastructure, coordination between medical and legal sectors.

The multiple regression was tested for significance using the F-test statistics at a significance level of 5%. The F- test results revealed that the model was significant F (3, 56 = 62.700, P = 0.001). This implied that all the selected determinants of sexual assault offenses collectively influenced the successful investigation of sexual assault offenses.

Table 4:18: Coefficients of Multiple Regression

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.210	.325		2.330	.070
	Adherence to sexual assault offense standard investing guidelines	.256	.076	.363	1.677	.001
	Availability of sexual assault investigating infrastructure	.425	.176	.455	4.507	.005
	Coordination between medical and legal sectors.	.334	.047	.476	3.583	.002

The results revealed that adherence to sexual assault offense standard investing guidelines was significant (t = 1.677, P = 0.001), Availability of sexual assault investigating infrastructure was significant (t = 4.507, P = 0.005) and Coordination between medical and legal sectors was significant at (t = 3.583, P = 0.002).

The multiple regression derived from the findings is as follows

$Y = 0.210 + 0.256X_1 + 0.425X_2 + 0.334X_3 + 0.325$

Based on these findings, it was deduced that a unit increase in adherence in standard investigative guidelines (X_1), would lead to escalation of successful investigation of sexual assault offenses by 0.256 units. A unit increase in availability of sexual assault forensic investing infrastructure (X_2), would lead to escalation of successful investigation of sexual assault offenses by 0.425 units and a unit increase in coordination between medical and legal sector (X_3), would lead to escalation of successful investigation of sexual assault offenses by 0.334 units. At 5 % level of significance and 95 % level of confidence all variables were significant $P<0.05$.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

The chapter concludes the project report. The chapter outlines summary of the findings, conclusion and recommendations of the study whose main objective was to investigate the determinants of outcome of sexual assault offenses' forensic investigation in Butere sub county, Kakamega County. Areas of further study are discussed at the end of the chapter.

5.2. Summary of the findings

5.2.1 Adherence to sexual assault offense standard investigative guidelines

The study established that sexual assault standard investigative guidelines are moderately adhered to, composite mean of 2.87. Adherence to sexual assault offense standard investigative procedures determines the successful investigation of sexual assault offense (r= 0.730, p= 0.002). Biological evidence is seldom collected within 72 hours (mean=2.75). Head to toe examination of sexual assault victim is not always done within 72 hours (mean=2.71). Forensic evidence collection and medical examination of the victim is not done at the concurrently (mean= 2.43). The chain of custody of sexual assault evidence within Butere Sub County is maintained (mean= 3.05). Police stations within Butere Sub County have gender desks to specifically deal with sexual assault offenses (mean= 3.10).

5.2.2 Availability of sexual assault forensic investigating infrastructure

The study established that sexual assault investigating infrastructure are inadequate in Butere Sub County, composite mean of 2.70. Availability of sexual assault offense forensic analysis infrastructure influences the successful investigation of sexual assault offense (r= 0.701, p= 0.000).

There is adequate standardized sexual assault evidence collection kit (mean= 3.51). There are freezers for storage of biological specimens (mean= 3.17). A few basic trainings has been done on investigation of sexual assault cases (mean= 2.78). Kakamega County does not have a forensic lab and utilizes the one found in Kisumu County (mean=2.56). The respondents disagreed that police stations/ posts have separate conducive environment for interviewing sexual assault victims (mean= 1.49). The study found out that due to lack of a forensic laboratory within the county, samples have to be transported to Kisumu County where they take a long period before they can be analysed.

5.2.3. Coordination between medical and legal sectors on sexual assault forensic investigation.

The study established that there is poor coordination between the medical and legal sectors concerning sexual assault investigation in Butere Sub County, a composite mean of 2.48. The coordination determines the successful investigation of sexual assault offense ($r= 0.533$, $p= 0.004$). There is no any integrated model offering a one stop shop services for medical and legal sectors (mean= 1.76). There is an established liaison between expert stakeholders and relevant service providers in regards to sexual assault victims within Butere sub county (2.81). The transition of p3 and PRC forms between relevant stakeholders is not very seamless (mean= 1.90). There is moderate cooperation from government pathologists during gathering and preservation of accurate scientific results in medical examination (mean= 2.32). The permissible legal requirements of sexual assault evidence is known by both medical professionals and police investigating officers (mean= 3.61).

5.3. Conclusion

5.3.1. Adherence to sexual assault offense standard investigative procedures

The study concludes that there is moderate adherence to sexual assault standard investigative procedures. Adherence to sexual assault standard investigative guidelines significantly determines successful investigation of sexual assault offenses.

5.3.2. Availability of sexual assault forensic investing infrastructure

The study concludes that Sexual assault forensic investigating infrastructures are inadequate. Availability of sexual assault forensic analysis infrastructure significantly determines the successful investigation of sexual assault offenses.

5.3.3. Coordination between medical and legal sectors on sexual assault forensic investigation.

The study concludes that there is poor coordination between medical and legal sector on sexual assault investigation in Butere Sub County. The coordination significantly determines successful investigation of sexual assault offenses.

5.4. Recommendations

The study arrived at the following suggestions based on the aforementioned findings and conclusions.

I. Training- Adequate periodical training should be given law enforcement agencies and health workers on standard investigative procedures and handling sexual assault evidence so as to build airtight cases.

II. Interagency corporation- The government should start and encourage agency collaboration which will lead to provision of medical, legal and psychological support services for sexual assault victims under one roof. This will help investigators gather maximum forensic evidence and will reduce trauma on the victim. This will also lead to reduced cost from travelling expenses.

III. Constructing an operation, fully equipped forensic laboratory within Kakamega County where it is easily accessible and faster processing of cases due to reduced congestion. An increased forensic analysis capacity leads to successful investigation of sexual assault offenses.

IV. Public awareness and education – Programs that reduce stigma related to sexual assault crimes and embolden victims of sexual assault offenses should be furthered. A victim who is aware of conserving of sexual assault evidence is an asset to successful investigation of sexual assault offenses.

V. Gender diversification of sexual assault investigation team. In order to avoid gender dynamic during investigation, the study recommends inclusion of female officers, who are currently very few, to the investigating team.

This research is a milestone in the field of sexual crime investigation. The study suggests additional research be done on determinants of outcome of sexual offenses' forensic investigation in other Sub Counties. Further study is also proposed to establish elements influencing police investigations of sexual assault offenses in Butere Sub County, Kakamega County, Keny

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APPENDICES

Appendix I: Introduction Letter

Anjela Alwora

Kirinyaga University

Department of Health Sciences

Cell Phone – 0721659560

I'm pursuing a Master of Science in Forensic Science at Kirinyaga University. I started a field research project as required by the curriculum with the goal of DETERMINING THE OUTCOME OF SEXUAL OFFENSES' FORENSIC INVESTIGATIONS IN BUTERE SUB- COUNTY, KAKAMEGA COUNTY KENYA. Please take note that you have been chosen to take part in this study because you might know something that will significantly improve the results. All responses will be kept strictly All responses will be kept strictly confidential and will only be used for the indicated purposes. It is expected that the study findings will not only inform the investigating officers and the public but also propose strategies and policies that can be implemented by the national and county government county government to address the investigation of sexual offenses. All responses will be kept strictly confidential and will only be used for the indicated purposes. It is expected that the study findings will not only inform the investigating officers and the public but also propose strategies and policies that can be implemented by the national and county government to address the investigation of sexual offenses. The study's findings will be made freely available upon request. Please feel free to contact me on my cell phone. You can also contact me via my email address aalwora@kyu.ac.ke

Yours Sincerely

Anjela Alwora

Thank you

Appendix II: Consent Form

INFORMED CONSENT FORM

DETERMINANTS OF THE OUTCOME OF SEXUAL OFFENSES' FORENSIC INVESTIGATIONS IN BUTERE SUB- COUNTY, KAKAMEGA COUNTY KENYA.

Name of Principal Investigator(s): Anjela Alwora

Supervisors: Dr. Butto Amarch (Kirinyaga University), Dr. Immaculate Marwa (Kirinyaga University).

Name of Organization: Kirinyaga University

Name of Sponsor: None

Informed Consent Form for: Medical officers, police officers and survivors of sexual assault offenses

Two sections make up this informed consent form:

- Informational sheet (to notify you of the study's details)
- Certificate of Consent (you will need to sign this if you decide to participate)

A duplicate of the completed Informed Consent Form will be supplied to you.

Informational sheet (to notify you of the study's details)

- Certificate of Consent (you will need to sign this if you decide to participate)

A duplicate of the completed Informed Consent Form will be supplied to you.

Part I: Information Sheet

Introduction:

It is requested that you participate in a research project. You are being given this information to learn more about the study. Please carefully read this form. You will have the opportunity to ask questions. You will receive a copy of this permission form for your records if you choose to participate in the study.

Participation in this research project is optional. You are free to decline participating in the study. You are also allowed to leave this study whenever you want. If you decide to stop after data collection, you can ask that the information you provided be deleted under supervision so that it is not utilized in the research project. If additional details concerning the dangers or advantages of this research emerge, you will be informed. After that, you can decide if you wish to continue studying.

The study's goal:

The study's goal is to investigate the determinants of outcome of sexual assault forensic' investigation in Butere Sub County.

Why was I selected to take part in this study?

You were chosen to participate in this study because you may have information that will aid in achieving the objective of determining the outcome of sexual assault forensic investigation in Butere Sub County.

You were chosen to participate in this study because you may have information that will aid in achieving the objective of determining the outcome of sexual assault forensic investigation in Butere Sub County.

What is the duration of the study?

The duration of the study is four weeks. The study will require at least 20 minutes session per participant. If need be, the participant may be recalled within the research period to provide clarification.

What is expected of me during the study?

We are requesting your assistance to investigate the determinants of outcome of sexual offenses' forensic investigation in Butere Sub County. You will be asked general demographic questions followed by specific research questions. Police officers will be asked to fill in prepared questionnaires while medical officers and survivors of sexual assault offenses will be asked open ended questions that are based on their opinion on matters regarding forensic investigation of sexual assault offenses matters regarding forensic investigation of sexual assault offenses

What dangers or adverse effects might I anticipate from participating in the study?

Most likely, there won't be any dangers connected to the study.

Are there any advantages to participating in the study?

Participation in the study has no immediate, direct advantages for the participant. However, the

information will be useful to ensure successful investigation of sexual assault offenses in Butere Sub County in the long run.

If I have inquiries concerning the study, who do I contact?

Any inquiries regarding the study should be sent to Anjela Alwora, email- angelaalwora@gmail.com or send a call or text to 0721659560

Contact the Institutional Review Ethics Committee (IREC) at (053) 33471 Ext. 3008 if you have any questions regarding your rights as a research participant. IREC is a team of individuals who examine studies for safety and to uphold the rights of research participants.

The Institutional Review Ethics Committee (IREC) at (053) 33471 Ext. 3008 if you have any questions regarding your rights as a research participant. IREC is a team of individuals who examine studies for safety and to uphold the rights of research participants.

Do you promise to keep the details I provide confidential?

Your protected information will be kept private and confidential with all due care. Information that can be used to identify you and is currently being stored or collected is referred to as Protected Information. Such information must be used or shared ("disclosure") in accordance with national privacy laws. You are providing permission ("authorization") for the uses and disclosures of your personal information by signing the consent form for this study. By choosing to participate in this study, you signify that you consent to the research team's use and sharing of your Protected Information as outlined below..

Anjela Alwora and/or her research team may divulge the data that will be gathered as part of the

study.

Unless otherwise stated, this authorization to use or disclose your Personal Information is perpetual. We kindly request that you notify Anjela Alwora in writing of your decision to revoke your authorization if you choose to do so. angelaalwora@gmail.com is the postal address. After that, we won't continue to gather any information about you.

Part II: Consent of Subject:

I have read the research study description or had it read to me. My inquiries about the study have all been addressed by the researcher or her representative, who has also described it to me. I've been informed about the study's potential risks, discomforts, and side effects in addition to its potential advantages. I voluntarily agree to participate in this study.

……..	……	……
Participant's name	subject's signature/thumbprint	Date

…….	…….	…….
Name of person Obtaining Consent	Signature	Date

……	……..	……..
Investigator's name	Investigator's Signature	Date

For minors/ mentally unstable participants, the consent will be given by the parent or legal guardian as follows:

I/we the parent(s) and or legal guardian, have read the research study's description or had it read to me. My inquiries have all been addressed by the researcher or her representative, who has also explained the study to me. I/we have been informed about the study's potential dangers, discomforts, and side effects in addition to potential advantages. I /we, on behalf of the participant voluntarily take part in the study.

My inquiries have all been addressed by the researcher or her representative, who has also explained the study to me. I/we have been informed about the study's potential dangers, discomforts, and side effects in addition to potential advantages. I /we, on behalf of the participant voluntarily take part in the study.

..... …… ……..

Parent/guardian's name subject's signature/thumbprint Date

(In case the Subject is unable to write,

The witness will print.

……. …….. ……

Name of the party requesting consent Signature Date

…….. ……. …….

Investigator's Name Investigator's Signature Date

Appendix III: Questionnaire for Police officers

Instructions

1. This survey is separated into 4 sections. Section one, two, three and four.
2. Please mark your selections for each question.

Section One Demographic information

1. Gender Male ( ) Female ( )
2. Age-------
3. Most advanced level of educational.

   KCSE ( ) Certificate ( ) Diploma ( ) Degree ( ) Masters ( ) PhD. ( )
4. Present rank in the service

   Corporal ( ), Sergeant ( ) Senior Sergeant ( ) Inspector ( ) Chief Inspector ( )

   Other designation (please specify)……
5. Years of service in the current rank……

Section two: Adherence to sexual assault offense standard investigative procedures

	SD	D	N	A	SA
a) Biological evidence was collected within 72hours					
b) Head to toe examination of the victim was done within 72 hours of reporting the case.					
c) Forensic Evidence collection takes place alongside medical examination					
d) Integrity of chain of custody of sexual assault evidence is religiously maintained.					
e) Presence of functional gender desks that provide services to sexual assault victims					

Section three: Availability of sexual assault forensic analysis **infrastructure**

	SD	**D**	**N**	**A**	**SA**
a) There is adequate standardized sexual assault evidence collection kit					
b) Availability of freezers for storage of biological specimen					
c) Periodical training and retraining on investigation of sexual assault cases is constantly done					
d) Availability of fully functional DNA laboratory					
e) Availability of separate, conducive interviewing space for sexual assault related cases.					

Section four: Coordination between medical and legal sectors on sexual assault investigation.

	SD	**A**	**N**	**A**	**SA**
a) There is a 'one-stop shop' for medical and legal services					
b) Expert stakeholders and pertinent service providers have an established liaison.					
c) There is seamless transition of p3 and PRC forms					
d) There is cooperation from government pathologist during reliable data collection and storage for use in medical research.					
e) The permissible legal requirements of sexual assault evidence is known by both medical professionals and police investigating officers.					

Section five: Statements on the successful investigation of sexual assault offenses

	SD	D	N	A	SA
a) Majority of sexual assault cases are resolved within one year					
b) Evidence obtained from sexual assault cases are of high quality					
c) Variety of evidence to process sexual assault offense is usually obtained					
d) Victims of sexual assault offense have reduced post assault trauma					

Appendix IIV: Interview schedule for doctors.

1. How often do you receive training and retraining in dealing with sexual assault victims in relation to collection of forensically sound evidence?
2. Do you have an integrated model of provision of medical services and forensic evidence collection services?
3. What is the crucial analysis infrastructure required for a successful closure of sexual assault offenses? On a scale of 1-10, comment on their availability.
4. Do you give psychological support to sexual assault victims by ensuring adequate follow up?
5. How often do you receive training and retraining in dealing with sexual assault victims in relation to collection of forensically sound evidence?
6. Do you have an integrated model of provision of medical services and forensic evidence collection services?
7. What is the crucial analysis infrastructure required for a successful closure of sexual assault offenses? On a scale of 1-10, comment on their availability.
8. Do you give psychological support to sexual assault victims by ensuring adequate follow up?
9. In cases where the victim of sexual assault has first reported the case to a health facility, what role have you have you played in linking the victim with police, NGOs and social service.

Appendix V: Interview Schedule for survivors of sexual assault offenses.

1. Where did you report the sexual assault incident? Comment on the receptivity upon reporting the case.

2. After how long, after the sexual assault, was the biological evidence collected?

3. Did you give an informed consent after being told the benefits risks and alternatives in every step?

4. How many invasive examinations were done during collection of forensic evidence?

5. On a scale of 1-10, how was the psychological support accorded to you during the process of investigation.

6. Did the person who provided the medical care also conduct the forensic investigation?

7. What challenges have encountered from reporting of the sexual assault incident.

Appendix VI: Institution Letter

Kirinyaga University

Tel: +254 701562092, +254 728499650, +254 709742000/30
P.O. Box 143-10300 Kerugoya.

Email: info@kyu.ac.ke
Website: www.kyu.ac.ke

SCHOOL OF HEALTH SCIENCES

DATE: April 19, 2023

OUR REF: KyU/SHS/VOL.1/01

National Commission for Science Technology
and Innovation (NACOSTI) off Waiyaki
Way, Upper Kabete,
P. O. Box 30623, 00100
NAIROBI, KENYA

RE: RECOMMENDATION FOR ALWORA ANJELA (ID NO. 34471223)

The above named person is a second-year student pursuing MSc. Forensic Science at Kirinyaga University. Her thesis project is titled *"Determinants of outcome of sexual assault offenses' forensic investigation in Butere Sub-county, Kakamega County"*. Ms. Alwora has obtained ethical approval from the Ethical Review Board of Mt. Kenya University (No. 1756)

This is therefore to request your organization for give a Research License to collect data.

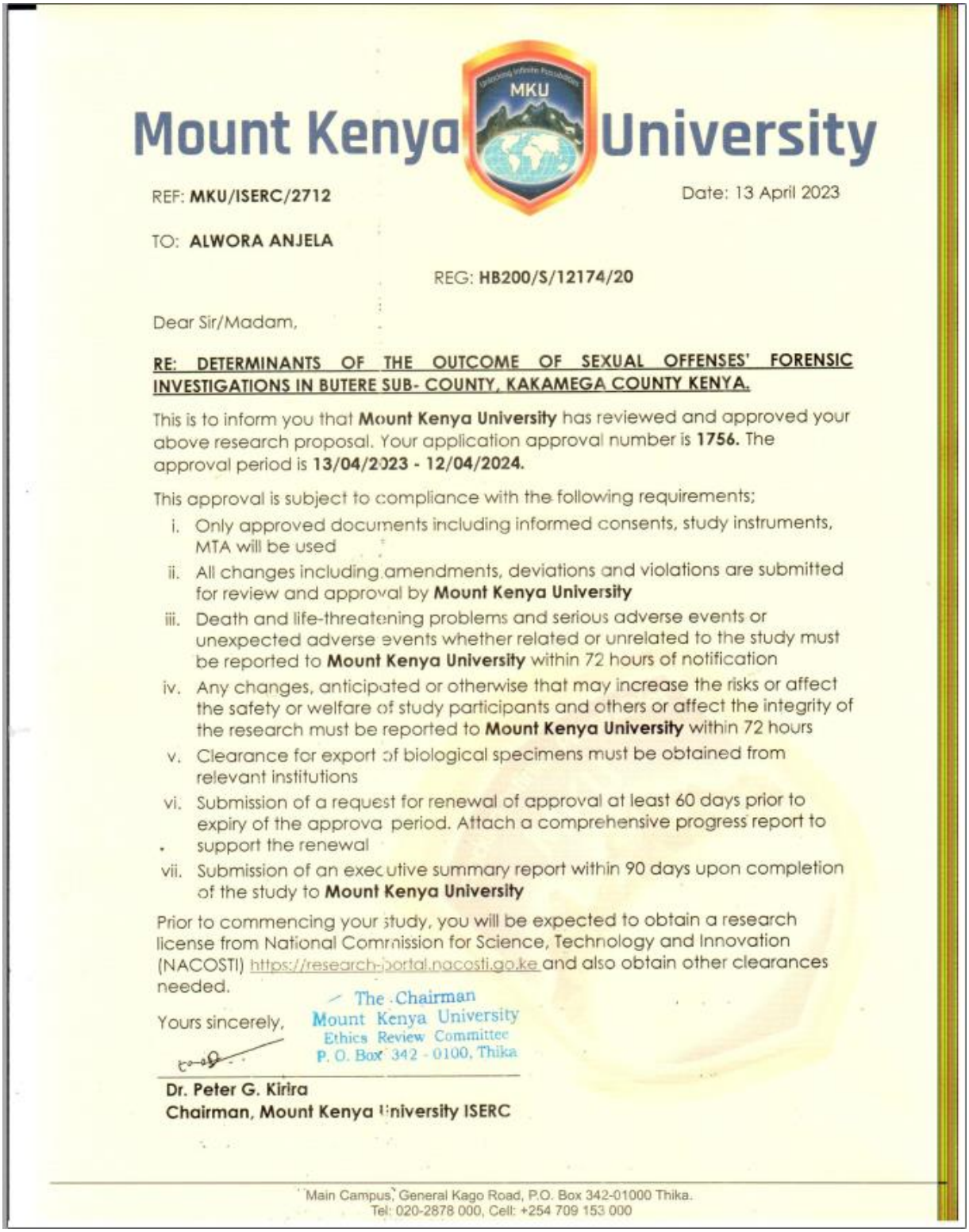
Thank you.

KIRINYAGA UNIVERSITY
SCHOOL OF HEALTH SCIENCES
19 APR 2023
P.O. BOX 143-10300, KERUGOYA
Sign'.....

Dr. David Nderu
COD, HEALTH SCIENCES

KyU is ISO 9001:2015 certified

Appendix VII: Approval by Ethics Review Committee Board



Mount Kenya University

REF: **MKU/ISERC/2712** Date: 13 April 2023

TO: **ALWORA ANJELA**

REG: **HB200/S/12174/20**

Dear Sir/Madam,

RE: DETERMINANTS OF THE OUTCOME OF SEXUAL OFFENSES' FORENSIC INVESTIGATIONS IN BUTERE SUB- COUNTY, KAKAMEGA COUNTY KENYA.

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **1756.** The approval period is **13/04/2023 - 12/04/2024.**

This approval is subject to compliance with the following requirements;

i. Only approved documents including informed consents, study instruments, MTA will be used
ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approva period. Attach a comprehensive progress report to support the renewal
vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

The Chairman
Mount Kenya University
Ethics Review Committee
P. O. Box 342 - 0100, Thika

Dr. Peter G. Kirira
Chairman, Mount Kenya University ISERC

Main Campus, General Kago Road, P.O. Box 342-01000 Thika.
Tel: 020-2878 000, Cell: +254 709 153 000

Appendix VIII: NACOSTI Research permit

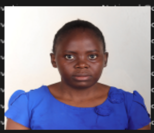
REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 255415

Date of Issue: 18/May/2023

RESEARCH LICENSE



This is to Certify that Miss.. Anjela Alwora of Kirinyaga University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kakamega on the topic: DETERMINANTS OF THE OUTCOME OF SEXUAL OFFENSES' FORENSIC INVESTIGATIONS IN BUTERE SUB-COUNTY, KAKAMEGA COUNTY, KENYA for the period ending : 18/May/2024.

License No: NACOSTI/P/23/25925

255415

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was the established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
   i. Endanger national security
   ii. Adversely affect the lives of Kenyans
   iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
   iv. Result in exploitation of intellectual property rights of communities in Kenya
   v. Adversely affect the environment
   vi. Adversely affect the rights of communities
   vii. Endanger public safety and national cohesion
   viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and Innovation(NACOSTI),
Off Waiyaki Way, Upper Kabete,
P. O. Box 30623 - 00100 Nairobi, KENYA
Telephone: 020 4007000, 0713788787, 0735404245
E-mail: dg@nacosti.go.ke
Website: www.nacosti.go.ke