EVIDENCE-BASED MASTER OF SCIENCE IN FORENSIC NURSING CURRICULUM: A MODEL FOR KENYA

BY
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This project has been submitted for examination with our approval as the university supervisors

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DECLARATION

I, Mageto Gacheri Irene declare that this project report is my original work and has not been presented for an award of a degree in any other university.

Signature..... Date.....

DEDICATION

To my late brother Mwirigi. May you rest in eternal peace Mbiiri.

ACKNOWLEDGEMENT

I wish to thank God for bringing me this far. To my husband Peter, my children Teddy and Chrystal thank you for daily prayers and encouragement.

I also wish to acknowledge the help of Virginia Lynch, Dr. Nancy Cabelus, Dr. Grace Omoni and Dr. Justus Inyega in working and walking with me through development of this project. Without your help this project would not have been a success. Please keep up the helping spirit! I also thank Mr. Edwin Ogendi for offering assistance on statistical analysis and biostatistics consultations. I thank my colleague Ms Hannah Inyama for her constant appraisal, critique and encouragement. You always kept me on my toes!

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To you all, GOD BLESS YOU abundantly!

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LIST OF ACRONYMS AND ABBREVIATIONS

AAFS American Academy of Forensic Sciences

BScN Bachelor of Science in Nursing

ED Emergency Department

ER Emergency Room

FNE Forensic Nurse Examiner

GVRC Gender Violence and Recovery Center

IAFN International Association of Forensic Nursing

KECHN Kenya Enrolled Community Nurse

KRCHN Kenya Registered Community Health Nurse

KRN Kenya Registered Nurse

LCD Liquid Crystal Display

MScN Master of Science in Nursing

MSU Maximum Security Section

PEV Post election violence

SAFE Sexual Assault Forensic Examiner

TJC The Joint Commission

OPERATIONAL DEFINITION OF TERMS

Curriculum- A plan of study providing goals and guidelines for forensic nursing programme.

Evidence-based curriculum - A curriculum that is informed by the research findings.

Forensic evidence – Scientific information that is collected for possible use in a legal proceeding.

Forensic nursing –Nursing care for victims, suspects and perpetrators of crime and families of both.

Forensic science – The application of sciences into the legal system.

Intentional injury – An injury that occurs as the result of a willful act meant to cause harm

Health care- Medical services available to the public.

Medico Legal – Applications of the legal system as part of the medical process

Model curriculum – A framework for instructional methods and evaluation criteria. It is meant to assist educational institutions with implementation of uniform standards by providing educators an example from which to teach.

Sexual assault – Any type of sexual activity that one does not agree to e.g. inappropriate

touching; vaginal or anal penetration; sexual intercourse that one says no to; rape; attempted rape; child molestation.

Trauma- Physical, psychological, sexual, injury, harm or damage.

Unintentional injury – An injury that is unplanned; occurs in a short period and harmful outcome is not sought

Violence – Roughness and force that often causes physical injury or damage.

ABSTRACT

Forensic nursing is an essential specialty of nursing because it extends traditional nursing care to include the historically disregarded medical-legal aspects of potential or actual client problems. Forensic nursing has not been adopted in Kenya formally despite the fact that nurses in Kenya work in settings that require this knowledge. The Nursing Council of Kenya (NCK) appreciates the need for training of nurses in this vital subject in view of the vast need occasioned by increasing crime rates in Kenya. The NCK however lacks a defined curriculum to train the experts. The purpose of this study conducted in three phases, was to fill the aforementioned gaps. In the first step, training needs assessment was undertaken utilizing the descriptive, cross-sectional study design. Self-administered questionnaires were utilized to collect data among 116 randomly sampled nurses practicing in forensic settings in three urban hospitals. In addition a focused group discussion was conducted involving ten nurse educators who were purposively selected from both private and public universities. A key informant interview was conducted in order to obtain detailed information with regards to forensic nursing practice in Kenya. The second phase involved development of an evidence-based curriculum for a master's training programme in forensic nursing sciences. The third phase entailed expert review of the curriculum in forensic nursing sciences. Quantitative data was analyzed using the SPSS statistical package version 20.0. Univariate analysis was conducted and the results presented using mean, standard deviations, frequency distributions and proportions. Bivariate analysis was done using Pearson's Chi-square test to determine relationships between categorical variables and *P* values of 0.05 or less were considered to have a significant association. Qualitative data analysis involved clustering together related types of narrative information then analyzed using thematic analysis. Overall, a significant majority 90.5% of the nurses had no training on forensic nursing sciences. The perceived training needs for forensic nursing practice in Kenya include: advanced health assessment, 3.4%, evidence collection and documentation, 40.5%, forensic psychiatry, 12.9%, gender violence 5.2%, legal implications on forensic nursing 13.8% , theory and practice in forensic nursing, 24.1% . Majority of the nurses, 98.3%, had a positive attitude towards forensic nursing because they reported that forensic nursing is an integral component in the practice of nursing care in Kenya. It is envisaged that the findings of this study will inform the government of Kenya via the Nursing Council of Kenya on the necessity for establishing expert training in forensic nursing in Kenya. The study findings will also contribute to the body of knowledge on the science of forensic nursing. Finally, the findings of the needs assessment have informed the formulation of an evidence-based curriculum for forensic nursing in Kenya.

CHAPTER ONE

1.0 Introduction

This chapter introduces the background of the study. It highlights the origin and current trends of forensic nursing globally. It also elucidates the principles that inform the practice in countries that have forensic nursing systems in place. The scope of forensic nursing practice is presented in this chapter and this includes the statement of the problem which seeks to highlight the increased incidents of violence in Kenya. This situation is compounded by the knowledge gap where nurses are tasked with the responsibility of caring for the victims of violence without any formal training. This chapter sets out the research questions and objectives which guided the study.

The term "forensics" is derived from the Latin word *forensis*, which defines a public debate in the market plaza, i.e. Forum (Lynch, 1990). Today, the field of forensic science has become more sophisticated and complex. Forensic principles have become intertwined with other professions including that of healthcare. These professions include forensic engineering, forensic medicine, forensic pathology, clinical forensic practice, and the most recent addition, forensic nursing science (Lynch, 2006).

Even though forensic nursing is currently referred to as a new specialty of nursing, nurses have practiced forensic nursing tasks for years without formal recognition as a nursing domain with specialized study. In fact, referring to the history of nursing it is clear that the nursing profession started as a forensic practice. Florence Nightingale, initiated the profession by caring for casualties of war without consideration of the victims or the offenders (Clements and Sekula, 2005). This can be considered similar to current day post-trauma care units.

The term *forensic nursing* was officially coined in 1986 when Virginia A. Lynch designed the first masters' degree in nursing with a clinical specialty in forensic nursing; this was presented and

accepted by the University of Texas at Arlington (Lynch, 2007). The American Academy of Forensic Sciences, the oldest and most prestigious forensic organization worldwide, formally recognized forensic nursing as a scientific discipline accepting the forensic nurse as eligible for membership in 1991. In 1992, approximately seventy, nurses gathered in Minneapolis, Minnesota for what was known as the first National Convention for Sexual Assault Nurses.

It was recognized that forensic nursing practice is more inclusive than a focus on sexual assault patients but included domestic violence, child abuse, and other aspects of criminal or liability related trauma. The International Association of Forensic Nurses was established (IAFN, 2002) in order to ensure that the practice of nurses who specialize in the application of forensic science to patient care and this conceptual framework reaches beyond the border of the United States of America, As the IAFN evolved, an application for specialty recognition by the American Nurses Association (ANA) was submitted. After meeting the criteria required by the ANA Congress of Nursing Practice, forensic nursing was awarded recognition as formal specialty of nursing in 1996 and has continued to spread to various developed and developing countries globally such as Italy, India, South Africa among others (IAFN, 2002).

Forensic nursing is defined as the practice of nursing globally when health and legal systems intersect (ANA & IAFN, 2009). Forensic nurses investigate real and potential causes of morbidity and mortality in a variety of settings. Responsibilities range from collecting evidence from suspects, perpetrators and victims of violent crime, to testifying in court as a fact or expert witness (ANA & IAFN, 2009). Therefore forensic nurses serve as a bridge between the criminal justice system and the healthcare system.

In its short history, many subspecialties have developed within the science of forensic nursing. All nursing roles in these subspecialties are investigative in nature and require specific knowledge of

aspects of the law and expert witness skills. A forensic nurse should be skillful in making observations, documentation and preservation of evidence, which can help solve a criminal or civil case. Cabelus (2012) concurs and further explains that the frontline of forensic nursing is considered to be the emergency department (ED) because it serves as the portal through which many forensic cases first enter a healthcare facility. To adequately address forensic patient issues, nurses need exposure to forensic education.

1.1 Statement of the Problem

Incidents of both interpersonal and group violence are increasingly being reported in Kenya. The incidences of mass violence that succeeded the disputed 2007 national election results, the recent grenade assaults, terrorist attacks and the domestic abuse pandemic occurring in most communities have taken the Kenyan public by surprise. The task of identifying the perpetrators of the mass rapes and other forms of human violence is overwhelming without specialized training. Violence leads to increase in disease burden in the community since most often the outcome of violence is physical and psychological consequences. Forensic nurses provide care to victims, the accused and perpetrators of crime (Lynch & Duval, 2011). Kenya lacks forensic nurses to provide direct services to individual patients, medical-legal agencies, as well as providing expert court testimony in areas dealing with trauma and/or questioned death. The Nursing Council of Kenya (NCK) appreciates the need for training of nurses in this vital subject in view of the vast need occasioned by increasing violence in Kenya. In June 2011, the Nursing Council of Kenya directed all universities to include forensic nursing content in their nursing curricula. There is need to develop a curriculum that will direct instruction of nurse educators countrywide in general principles of forensic science so they are prepared to teach and develop curricula for training other health providers on other scopes of forensic science.

1.2 Justification of study

The need for preparing nurses in the forensic aspects of nursing care has become essential as the number of reported incidents of criminal violence increases in Kenya. The Joint Commission (JC) in 1997 firmly established the requirement to educate nurses in the fundamentals of forensic nursing in the U.S. when they, published its revised standards for patient assessment. The guidelines require that all staff members be educated to identify victims of abuse, violence and neglect, and be able to collect and safeguard physical evidence associated with unknown or potential criminal acts.

A training needs assessment identified gaps that informed the development of an evidence based curriculum for masters in forensic nursing. An evidence-based curriculum will ensure that the nurses will be part of a new and emerging specialty and provide a standard of practice. While nurses at all practice levels are involved in the process of assessing victimization and proper collection, documentation, and preservation of evidence, this curriculum targets the lecturers. The curriculum is targeting those who prefer to specialize in this emerging specialty and who will be developing curricula and teach the subject.

1.3 Significance of the study

The findings of this study highlighted the necessity for establishing expert training in forensic nursing in Kenya. The study findings also contributed to the body of knowledge of forensic nursing science. The evidence-based curriculum for forensic nursing in Kenya will ensure that nurses are trained in forensic nursing science at the masters level. Training nurse educators in forensic nursing at the master's level will be the first step of allowing a larger number of nurses to be trained countrywide, which is in line with the Commission of University Education of Kenya regulations that recommend a Master's degree as a minimum requirement for teaching at the undergraduate

level. This study also introduces the concepts and benefits of forensic nursing education and hopefully brings Kenya within the global progression of forensic nursing science.

Introduction of forensic nursing science in the nursing education curricula in Kenyan Universities has benefits such as cost effectiveness, improved psychological outcomes and less further healthcare needs thus improve legal outcomes. This has been observed in countries such as USA and Canada (Campbell *et .al.,* 2005). This will improve nursing care and help to resolve victims' legal issues that would otherwise remain unanswered in the absence of this expertise.

At the national level, this study raises awareness to the potential of forensic nursing as a means of addressing the linked issues of timely evidence collection and extended waiting time for victims to receive medical-legal services.

1.4 Broad Objective

To develop a model curriculum for Master of Science in forensic nursing practice in Kenya.

1.4.1 Specific Objectives

The following specific objectives guided the study:

1. To determine nurses' awareness of forensic nursing principles in Kenya.
2. To establish nurses' preparedness to practice in forensic settings based on their current training
3. To identify nurses perceived training needs for forensic nursing practice in Kenya
4. To develop an evidence-based model curriculum for Master of Science in Forensic Nursing

1.4.2 Research Questions

1. To what extent are Kenyan nurses aware of forensic nursing principles?
2. To what extent are nurses in Kenya prepared to practice in forensic settings?
3. What training do practising nurses'in Kenya require to enable them practise in forensic settings?
4. What evidence based model curriculum is suitable for Master of Science in Forensic Nursing in Kenya?

1.5 Summary

The introductory chapter has provided an explanation of the background of forensic nursing in addition to describing the statement of the problem, justification and significance of the study. A review of literature as guided by study objectives is presented next.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter presents a review of relevant literature as guided by the study objectives. In regard to nurses training needs, the chapter highlights nurses awareness of the forensic nursing specialty, preparedness to practice in forensic nursing settings and knowledge gaps/training needs of nurses practicing in forensic setting. The chapter also presents a review of literature on curriculum development and evidence based curriculum. A literature review of the following databases was conducted: MEDLINE, EBSCO, CINAHL and PUBMED. However, a literature search on forensic nursing in Africa yielded no results about the specialty in Africa. Key words were utilized included: Kenya; forensic nursing; forensic nursing programmes; forensic nursing curricula; forensic nursing research; forensic nursing roles; forensic science.

Violence occurring in the home and the community and its resultant negative effects on public health is a critical concern to healthcare professionals (Freedberg, 2008). Consequences of the violence are witnessed by healthcare professionals as they render care to the injured in emergency departments (ED), operating theatres, and gynecological wards daily. As Michel (2008) notes, nurses are usually the first healthcare professionals to see patients, speak with their family members, handle personal property and collect laboratory specimens. Such actions can be extremely important to the different categories of forensic patients who are treated in the various healthcare settings worldwide.

2.2 Nurses' preparedness to practice in forensic settings

Brennan (2006) explains that historically, schools of nursing had been less than responsive to the health needs of inmate populations in the education of nurses. Nurses who worked in the prisons and forensic psychiatric settings learnt on the job from each other and from other disciplines. Moreover, Bowering-Lossock (2006) highlights this as an issue that needs to be addressed urgently in countries where there is no formal forensic education due to the complexities of the field. Nursing practice must overcome many unique challenges that hinder the work of a forensic nurse who lacks this specialized knowledge.

There are strong educational, legal and professional opportunities for nurses interested in expanding their level of forensic knowledge and scope of practice in the United States of America and Canada. Virginia A. Lynch, a forensic clinical nurse specialist (FCNS), is recognized as the founder of forensic nursing science as a formal discipline in the USA and consequently throughout the world. As Gorea (2009) explains, Lynch's life ambition was to establish the conceptual model for forensic and nursing science as one solution to ameliorate the weaknesses resulting in miscarriage of justice. She has been rightfully acclaimed as the moving force in forensic nursing science in developed and developing countries. Lynch first introduced forensic nursing in East Africa at the WHO International Congress on Sexual Abuse of the African Child in 2007 in Nairobi, Kenya. Some of the regions where Lynch has initiated the principles of forensic nursing practice include the United Kingdom, Central America, Australia, Italy, Turkey, Sweden, Singapore, Thailand, Japan, Zimbabwe and South Africa.

In the USA, the American Nurses Association recognized forensic nursing as a specialty in 1995. However even before this formal recognition, the advent of forensic nursing was already in motion since 1986 as Virginia Lynch proposed graduate studies in the field. The University of Texas soon

developed a master's degree for already qualified nurses (Pearce, 2009). Forensic nurses are involved in investigating the underlying causes of injury or death in many settings. Their responsibilities include conducting forensic assessments; examination and photo documentation; recognition, recovery and preservation of evidence from suspects and/or victims, testifying in court as a fact or expert witness, and serving as a bridge between healthcare and legal systems.

Subspecialties recognized within the field of forensic nursing include the following:-forensic clinical nurse specialist and forensic nurse practitioners, forensic nurse investigator, nurse coroner or death investigator, sexual assault nurse examiner, legal nurse consultant, forensic gerontology specialist, forensic psychiatric nurse, correctional nurse specialist, forensic nurse educator/researcher, forensic paediatric nurse and nurse attorney.

Five primary routes of obtaining training in forensic nursing in the USA identified by Burgess, Bergers and Boersema (2004) include: Continuing education courses which supplement nursing degree programs and are used for professional advancement and continuing education requirements. Certification programs which have specific content, entrance requirements and offer a written examination. With these programs, clinical internships may be required. Undergraduate nursing education where a minor or concentration in forensics program is available in some university undergraduate nursing programs. Formal graduate studies which build on the foundation of the baccalaureate degree. Post-Doctoral Education or Fellowship which enhances the specific content and skills acquired in the terminal nursing degree programs (Woodtli & Breslin, 2002).

Cabelus, (2012) notes that Kenya lacks a standardized forensic nursing training framework. The factors contributing this are the lack of a core curriculum, lagging development of forensic nursing-centric programs, lack of standardization of coursework, lack of clearly defined career paths and

friction between groups of nurses pushing for different levels of credentials with which to practice forensic nursing.

Several studies cited in the Institute of Medicine (IOM, 2002) report are in agreement that to better shape a curriculum for health care providers, educators should be aware of certain professional issues. Sugg and Inui, (1992) revealed that many healthcare providers feel they lack sufficient time to adequately assist forensic patients such as victims of abuse. They further added that most primary care providers perceive caring for forensic patients as an "extra" social responsibility. Reid and Glasser, (1997) also reported that health care providers have expressed concern regarding their inadequate preparation, uncertainty on how to proceed if maltreatment is disclosed, and frustration with the inability to ensure positive outcomes for victims. Lynch (2011) advises that the forensic nurse should not only be a part of the trauma team involved in life saving measures, but rather they should perform specific tasks such as photo-documentation; recovery, preservation, and security of evidence related to the forensic patient in coordinating the healthcare team efforts. The forensic nurse examiner role is associated with that of the clinical forensic physician in conjunction with the emergency physician and trauma team who attend to critical medical procedures.

2.3 Nurses' awareness of Forensic Nursing

There is no documented history of the true beginnings of forensic nursing in Kenya in published literature. Today, forensic nursing across Kenya primarily focuses on working with patients who require mental health services, or are in some way connected to the criminal justice system. Usually, this refers to individuals who have been accused or convicted of a criminal offence. In Kenyan health care settings 'forensic' is generally used to denote those who work with mentally disordered offenders in secure psychiatric units such as Mathari psychiatric hospital's maximum security section (Syengo, 2013).

Even though the integrated model for forensic nursing has been utilized and proved successful worldwide, it has not been utilized in Kenya because of lack of forensic educational opportunities. Without exposure to the role expansion and corresponding educational opportunities, Kenyan nurses cannot move forward towards any of the subspecialties of forensic nursing (Mutinda 2014).

In the past, nursing education across Kenya followed the British tradition of apprenticeship style and this meant that frequent role development occurred before educational preparation. However in the recent past, this form of nursing education has been replaced by diploma and degree based education. This transition has led to a break in the tradition in which nurses were often seen as helpers of doctors and caretakers at the patient's bedside.

Kenyan nurses now have an opportunity to develop the discipline of nursing towards an advanced and scientific discipline. This in turn means that Kenyan nurse educators should be prepared to meet this need for advanced knowledge. Development of new curricula specifically the MScN in forensic nursing will address the paucity of knowledge and absence of educational opportunities for nurses within forensic care settings such as the emergency rooms, psychiatric units and correctional areas (Mutinda, 2014). This will in turn be beneficial to the patients, the healthcare professionals and the legal system.

Kenyan nursing leardership needs to consider the broader aspect of forensic nursing because research has indicated that forensic nursing education can be beneficial for improving forensic patient care (Kent-Wilkinson, 2011). Therefore to improve the education of nurses and thereby improving the care provided to all categories of forensic patients, a new approach is required. A core curriculum for graduate forensic nursing education in Kenya needs to be developed and made available to all universities providing education for nurse academicians. Once nurse educators who

wish to specialize in this field are equipped with the necessary information, they will train nurses who will in turn provide improved holistic care to patients.

Nurses in Kenya require a solid forensic education especially at the graduate level. It is a vital link in the development of clinical acumen required for responding to the forensic circumstances encountered in their daily practice (Lynch, 2011). Historically, the existence of a significant gap between the health and justice systems was created by the absence of forensic knowledge in traditional nursing education in Kenya. Consequently, the failure to recognize forensic situations such as the Post- Election Violence (PEV) in 2007/2008 often results in failure to detect and the loss and destruction of evidence with unsuccessful prosecution of the perpetrators. These negative outcomes deny justice for victims.

The 2009 forensic nursing (SAFE) pilot project in Kenyatta National Hospital clearly demonstrated that there were benefits of developing advanced roles for nurses working in forensic settings. These benefits included better response times, improved evidence collection and continuity of care. Cabelus (2012) explains that the recognition of forensic patients and the collection of evidence could mean the difference between obtaining justice or its miscarriage. This means that nurses in all health institutions in Kenya must be educated in the proper recognition, interpretation, collection, documentation and photo documentation of not only the ramification of violence but also the associated forensic evidence.

In South Africa, nurses were unaware of forensic nursing until the early 1990s when sporadic training was offered to nurses to manage and care for victims of violence and to collect forensic evidence throughout the country (Duma, 2015). In Canada, nurses were aware of forensic nursing as early as the 1970s. As (Early, 2014) explains, as early as1975 a physician Dr. John Bub was hiring registered nurses to investigate deaths in Calgary and Alberta Canada. In the United States of

America, it took many years for violence to reach a high level in the health care providers awareness. The efforts of the health care community to stem the tide of violence in America gained momentum in 1985, (Burgess, Berger., & Boersma, 2004). However, nurses' awareness to forensic nursing specialty was raised in 1986 when Virginia Lynch developed her Forensic Nursing model (Early, 2014).

2.4 Nurses perceived education and training needs

Keating (2011) asserts that when contemplating a new education program or revising an existing curriculum, a needs assessment is indicated. She further explains that the two purposes for conducting a training needs assessments (TNA) are i) to validate the currency, relevance and continued need for an existing program and ii) to establish the feasibility for a new nursing program including the demand for it, available resources, academic soundness and financial liability.

Green. L.,& Kreutner, M. (2005) suggested that to ensure the success of a proposed change, it is necessary during the planning stage to undertake a training needs analysis and plan training programmes to meet the identified needs. The benefits of performing training a TNA include improvement in staff knowledge, skills and attitudes (Brennan, 2006). Brennan (2006) further explains that a training needs assessment is an essential component when planning a training programme because it ensures that the content is appropriate, needs based, and not duplicated. This method is vital because such programmes equip staff with the appropriate skills and evidence based knowledge to perform their roles more effectively and efficiently to the highest standards.

According to Keating (2011), educators must ensure nurses' continuing education matches the clinical areas in which they work. She further adds that reviews should be carried out in order to address the range of skill required to be competent practitioners in environments where patients are

highly dependent and sometimes aggressive and violent. Furthermore it is agreeable that training needs assessment should be an ongoing feature of professional development.

It is critical for Kenyan nurses to maintain awareness of the constant changes occurring in nursing research as this drives nursing evidence based practice and improve outcomes for victims. All these changes have vast implications on how Kenyan nurses are educated in preparation for their roles as nurse specialists and practitioners (Lynch, 2012).

The researcher therefore carried out an education and training needs assessment for all cadres of nurses practicing in selected forensic care settings in Kenya to provide an avenue for an environment where personal development and learning can take place. This in turn will lead to improved quality of care for all service users. This can only be achieved through evaluation of this population's educational and training needs and addressing these needs by developing educational programmes designed to provide the specific skills required to work in the clinical, community and secured environments.

2.5 Development of Evidence-based curriculum in nursing

According to the American Nurses Association an evidence-based curriculum is a concept or strategy that is derived from or informed by objective evidence – most commonly educational research or metrics of school, teacher, and student performance (ANA, 2013). Development of an evidence-based curriculum in nursing is therefore a scholarly and creative process intended to produce an evidence-informed, context-relevant, unified curriculum (Jones & Bartlett, 2015). The American Nurses Association recommends the use of both qualitative and quantitative data to diagnose student-learning needs which in turn guides the academic programming (ANA, 2013).

Abbott (2014), explains that evidence-based curricula represent the gold standard along a continuum of what research supports as effective. He further states that evidence-based curricula lead to evidence-based teaching which ensures practices that utilize best available, evidence from worldwide research and literature. In nursing, this is important because it links curricula to health care needs.

Kern *et.al.,* (2009) outlines the steps of curriculum development as:

Step 1: Problem identification/General Needs Assessment

This involves the identification and analysis of a health care need or other problem that is to be addressed by the curriculum. A clear definition of the problem helps to focus a curriculum's goals and objectives which in turn helps to focus the curriculum's educational and evaluation strategies. Conclusions from this step may or may not apply to a particular group of learners so the next step is to perform an explicit assessment of the specific needs of the targeted learners.

Step 2: Needs assessment of targeted learners

This is a process by which the curriculum developers identify the differences between the ideal and actual characteristics of the targeted learner group and their environment.

In this step, the curriculum developer considers whether an educational intervention directed at this group will contribute to solving the health care problem and what information is most needed. Desired information about learners may include, previous and already planned training; existing proficiencies, current performance; perceived deficiencies and need; clinical experiences.

Step 3: Goals and Objectives

Once the needs of learners have been clarified, the curriculum is targeted to address these needs by setting goals and objectives. Important functions of goals and objectives include, directing the choice of curricula content and assignment of relative priorities; suggest what learning methods will be effective; enabling evaluation of learners and curriculum; suggesting what evaluation methods are appropriate and communicating to others what the curriculum addresses and hopes to achieve.

Step 4: Educational Strategies

Once the goals and objectives are determined, the next step is to develop educational strategies. Content encompasses specific material to be included in the curriculum and methods deals with ways in which content is presented. Generally the content of the curriculum flows from its specific measurable objectives.

The following are guidelines for choice of educational Methods

• Maintain congruence between objectives and methods; select methods appropriate for cognitive, affective and psychomotor objectives

• Use multiple educational methods; to meet different learning styles and motivations,

maintain learner interest and reinforcement of learning (to deepen learning and promote retention)

• Choose educational methods that are feasible in terms of resources

Step 5: Implementation

Involves identification of resources needed e.g;

• Personnel: faculty, secretarial /administrative support, patients

• Time: faculty, support staff, learners

• Facilities: space, equipment, clinical sites

• Funding/costs: direct financial costs, hidden or opportunity costs

Obtaining support:

• Internal – from administrative authority

• Outside – government, professional societies, donors for funding, political support, curricular or faculty development resources

Plan to introduce the curriculum:

• Pilot

• Phase-in

• Full implementation

Step 6: Evaluation and Feedback

This step provides information to guide individuals and the curriculum in cycles of improvement Evaluation results can be used to; seek support for curriculum; assess individual achievement; satisfy external requirements; serve as a basis for presentations and publications.

2.6 Theoretical framework

2.6.1 Lynch's Integrated Practice Model

Lynch's model is a conceptual frame work that depicts the interrelated fields of expertise of forensic science. It outlines the relationship between role behaviors with societal consequences of health and human behavior.

Figure 2.1: Lynch's Integrated Practice Model for Forensic Nursing Science: Virginia A. Lynch 1990 (used with permission, 2012)

2.6.2 Description of the Integrated Practice Model

Lynch's model is a conceptual frame work that depicts the interrelated fields of expertise of forensic science. It outlines the relationships between role behaviors with societal consequences of health and human behavior.

The model focuses on the necessity for society to respond to problems that develop among the related fields of nursing, forensic science, and the criminal justice system. These systems of roles are not fixed, precisely defined entities. They have a flexibility that permits open, evolving systems. This theoretical framework allows for the adaptability needed to achieve a dynamic balance in the role of the forensic nurse examiner and other forensic nursing roles. The effectiveness of the

forensic nurse is based, in part, on her or his ability to interact with other scientific, legal, medical, and social professionals, as well as victims, suspects, perpetrators, families, and communities. This is applicable in the Kenyan concept because as mentioned earlier crime and its consequences are a global concern.

The following is a description of Lynch's (2012) model and how it has been utilized to guide this study describes her model of integrated practice as follows:

The three principal components embracing the outer triangle constitute the theoretical basis of forensic nursing. The interlocking circles indicate interconnected, interagency coordination, cooperation, and communication essential to public health, safety, and social justice.

- A knowledge base of interrelated disciplines (fields of expertise)—nursing science, forensic science, and the law—use sociological, criminological, and nursing theory to connect role behaviors with the societal consequences of health and human behavior.

- The societal impact components are human behavior (broadly based sociological and psychological notions), social sanctions (legal and institutional sanctions and processes), and crime and violence (both recognized and hidden). Social, cultural, and political factors bring together role expectations within a system of roles.

- A system of roles relates to the victim, the suspected offender or the perpetrator of criminal acts, the significant others of both, forensic nursing science, and the healthcare institution (both its individual and institutional roles). Education, both practical (experiential) and theoretical, brings role behavior and role clarification together.

Lynch's model is the foundation of forensic nursing. The researcher drew from it while developing the model curriculum that was customized to the unique culture, laws and nursing practice in

Kenya. It served as a guide for choice courses that would address the educational needs of a forensic nurse.

2.7 Conceptual frame work

The following is a diagram of the conceptual framework that guided the study. It depicts the inter relationship between the study variables

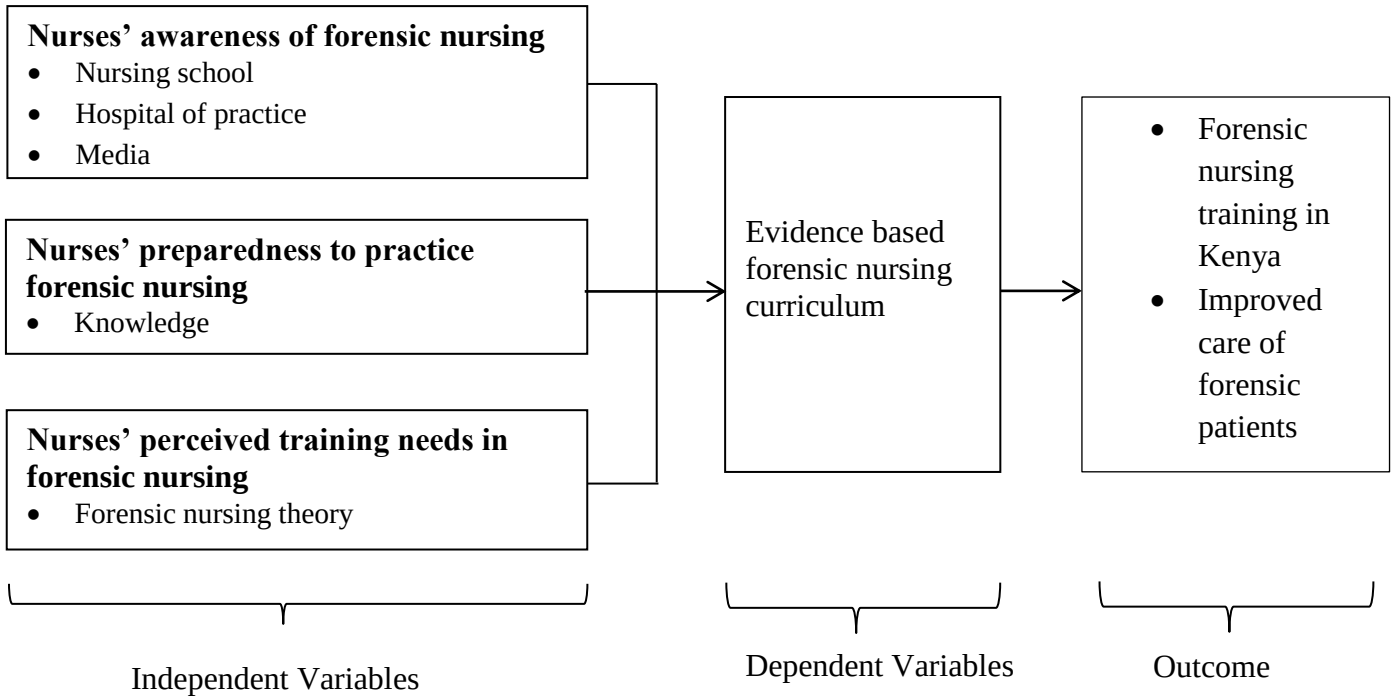

Figure 2.2: Conceptual Framework showing the inter relationship between the study variables

2.8 Study Assumptions

In this study, it was assumed that the nurses would give information purely based on what they have experienced while nursing patients whose diagnoses have legal implications at their hospital of service. Another assumption was that the nurse educators would share their perspectives on forensic nursing education. Additionally, it was assumed that the purposively selected key informant will

freely share his/her experience/knowledge about the status of forensic nursing in Kenya and would be willing to share information and insights with the researcher.

2.9 Summary

In summary the literature highlighted nurses' awareness of forensic nursing specialty, preparedness to practice in forensic nursing setting and training needs. It also presented the importance of development of evidence-based curriculum and the steps of curriculum development. The review of literature indicates that there are gaps in forensic nursing training in Kenya and other African countries as well. It also offers a foundation for development of an evidence based curriculum. Research methodology is presented in the next chapter.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1Introduction

This chapter highlights the research design and methods that were utilized in this study. The chapter begins by identifying the research design. The empirical model applied in the study is then outlined. A description of the study area follows. The study population and sampling procedures are discussed next. A detailed description of key variables is offered in the next section. Data collection instruments and procedures are then outlined. A discussion of the data analysis procedures employed in this study is then offered. The chapter ends by outlining the ethical considerations that were observed in this study and the study limitations.

3.2 Research design

A descriptive cross-sectional research design was used as the basis for carrying out the training needs assessment on the practicing nurses that formed the study population. Cross-sectional studies examine a broad perspective of a cross section of the population at a specific point in time (LoBiondo-Wood and Haber, 2006). Cross-sectional studies can explore relationships and correlations, or differences and comparisons or both. A cross-sectional study design is less time-consuming, less expensive, and thus more manageable for the researcher. The results of the needs assessments, an extensive review of literature and consultation with forensic experts informed the choice of objectives/goals of the curriculum. The goals and objectives of the curriculum directed the development of educational strategies; choice of content; assignment of priorities to the course structure; learning methods and evaluation of learners. The expert review of the curriculum was guided by the commission for university education's curriculum review tool. In all the phases both qualitative and quantitative data were gathered.

3.3 Study Area

The training needs assessment was carried out in the following study areas.

3.3.1 Mathari Teaching and Referral Hospital

This is a 700 bed capacity facility located along Thika Road in Nairobi about two Kilometers from the city centre. Of the 700 beds 350 are occupied by civil patients and the remaining 350 are occupied by patients under legal custody. Mathari Hospital was started in 1910 as a lunatic asylum but was renamed in 1924. During the First World War, the hospital admitted mainly African and very few Indian troops who fought the war on this continent for the British. Europeans were given temporary admission awaiting repatriation to their countries for further care. Care given to patients was mainly custodial in dark, gloomy and often damp atmosphere. Currently, it is the largest psychiatric hospital and the main psychiatric referral and teaching hospital in Kenya. Mathari Hospital offers clinical experience to trainees from various health disciplines including doctors (undergraduate and postgraduate), nurses (basic and post-basic enrolled and registered student nurses, undergraduate and postgraduate student nurses) and undergraduate psychology students. Mathari Hospital has fourteen wards and two hundred and twenty six nurses of different levels of professional qualifications. The Maximum Security Unit which caters for patients under legal custody is manned by forty three (43) nurses.

3.3.2 Kenyatta National Hospital

This is an 1800 bed capacity facility with six thousand members of staff of whom 1600 are nurses. It was established in 1901 as a Native Hospital, with a two-ward, 40 bed capacity at the junction of Government Road (the present Moi Avenue) and Kings Way (the present University Way). The

facility had a bed capacity of 423 for Africans and 41 for Asians and offered in-patient services only. The construction of a combined group hospital to cater for all races began in 1937 and was completed in 1947.

The hospital was renamed King George VI Hospital in 1952. The Ismail Rahimtullah Wing was constructed in 1953 exclusively for the Asian community. The Infectious Diseases Hospital (IDH) was opened in 1956 as part of King George VI Hospital. Following attainment of Kenya's independence in 1963, the King George VI Hospital was renamed Kenyatta National Hospital in honor of the first president of the Republic of Kenya, Mzee Jomo Kenyatta.

Increase in demand for health care services necessitated the introduction of training for medical personnel and midwives in the hospital in 1965. The University of Nairobi Medical School located at the hospital was established in 1967. In 1971, the construction of a ten-story Tower Block was started and completed in 1981. The Renal Unit started operation in 1984, while the Dental and the Orthopaedic Units were relocated from Kabete in 1985 and 1993 respectively.

Since its inception, the hospital operated as a department of the Ministry of Health until 1987 when its status was changed to a State Corporation through Legal Notice No.109 of 16th April 1987.

The hospital is the major training facility for health care personnel in various disciplines both at undergraduate and post-graduate levels. The institution works closely with University of Nairobi College of Health Sciences (CHS), Kenya Medical Training College (KMTC), Kenya Medical Research Institute (KEMRI), Government Chemist Department, National Radiation Protection Board, National Public Health Laboratories, National Aids and STDs Control Programme (NASCOP) and National Blood Transfusion Services (NBTS). It has also formed linkages with other institutions in providing various clinical services, research and outreach programs. Collaborations have been established with Operation Smile International, Operation Heal the Child,

Neurosurgical Mission of St. Louis USA, Plastic Surgical Project of Professor. Platt, Heart to Heart Foundation, Medical and Educational Aid to Kenya (MEAK), National AIDS Control Council, among others.

Kenyatta National Hospital offers specialized health care to patients from the great lakes region, southern and central Africa including Namibia. These services include cardiothoracic surgery, neurosurgery, orthopedic surgery, plastic and reconstructive surgery and burns management; radiotherapy, critical care services, new born services, and renal services (including kidney transplantation) violence recovery services. Training of medical personnel from these countries is also undertaken.

3.3.3 Nairobi Women's Hospital

This is a 222 bed capacity facility focused in women's and children's healthcare. The hospital was founded in 2001 and is the first of its kind in the East and Central Africa region. Even though it specializes in obstetrics and gynecology, the hospital is well equipped and staffed to handle all general medical and surgical conditions.

A non-profit organization, the Gender Violence Recovery Centre (GVRC), is based in the hospital. The Centre was established to provide medical management, HIV Post Exposure Prophylaxis and psychosocial treatment to survivors of rape and domestic violence.

Other treatments offered at the GVRC include prevention of pregnancy, prevention of sexually transmitted infections and administration of hepatitis B vaccine. The medical support given is the basic treatment for survivors of Gender Based Violence (GBV) that includes emotional, physical, sexual and psychological abuse. Since inception in March 2001, GVRC has treated over 19,000 survivors of gender based violence. The Centre currently receives an average of 250 survivors per

month with 35% being girls, 5% boys 57% women and 3% men. The Nairobi Women Hospital currently has a total capacity of 150 nurses with fifteen of them working in the GVRCs.

3.3.4. Nursing Council of Kenya

This is a statutory body of the Ministry of Health established under an Act of Parliament (The Nurses Act) Cap 257 of the Laws of Kenya. The Nursing Council of Kenya (NCK) is mandated to oversee several functions which include: Making provision for the training, registration, enrolment and licensing of nurses; regulating the conduct of nurses and ensuring their maximum participation in the health care of community and for connected purposes. Making provision for the training and instruction for persons seeking registration or enrolment under the Nurses Act; subject to approval by the Cabinet Secretary for Health. The registrar of the Nursing Council is charged with overseeing prescription and regulation of syllabi of instruction and courses of training for persons seeking registration or enrolment subject to approval by the Cabinet Secretary for Health.

3.4 Study population

The population of this study consisted of one hundred and eleven nurses working at Kenyatta National Hospital's accident and emergency department, fourty three nurses working in Mathari Hospital's maximum security section and fifteen nurses working in Nairobi Women's Gender Violence Recovery Centre. This makes a total of one hundred and sixty eight nurses working in the hospitals named above. Ten nursing lecturers from two public and two private universities at were also enrolled in the study. There were two lecturers from the University of Nairobi, two from Daystar University, Three from Kenyatta university and three from Kenya Methodist university. All the lecturers had a minimum qualification of a master's degree. The registrar of Nursing council was also recruited as the key informant from the Nursing Council of Kenya.

3.5 Sample Size Determination

Sample size was determined using Fischer's (1998) formula as detailed below:

$$n = \frac{Z^2pq}{d^2}$$

Where

n = the desired sample size (if the target population is greater than 10,000)

Z= the standard normal deviation at 95 % confidence level (=1.96)

P= the expected population correlation coefficient (population effect size)

(Since no documented studies had been done on these subjects, an estimated proportion of 50% will be used to determine the sample size)

q= 1- p

d= level of precision (set at 0.05)

Substituting these figures in the above formula:

$$n= \frac{(1.96)^2 (0.50) (0.50)}{0.05)^2}$$

= 384

Since the target population was less than 10,000, the sample size was adjusted using the following formula by Yamane (1967):

$$nf = n/1+(^{n} / _{N})$$

Where nf = the desired sample size when population is less than 10,000

n = the desired sample size when population is more than 10,000

N= the estimate of the population size

Hence nf = $\frac{384}{1+ (384/168)}$

= 3.3

Therefore nf = 384/3.3

= **116**

Therefore, 116 respondents were enrolled to fill in the questionnaires. A further ten nursing lecturers from both public and private universities were purposively selected to participate in the focused group discussion. Additionally one key informant from the Nursing Council of Kenya was interviewed. Therefore, a total of 127 participants were enrolled in the study.

3.6 Inclusion and Exclusion Criteria

3.6.1 Inclusion Criteria

Participants in this study fulfilled all of the following inclusion criteria

Willingness to give informed voluntary consent.

Registration and licensure by the Nursing Council of Kenya.

3.6.2 Exclusion Criteria

Potential participants found to possess any of the following characteristics were excluded from the study;

Student nurses.

Nurses not willing to give informed voluntary consent for the study.

3.7 Sampling Procedures

Multistage sampling technique as described by Polit and Beck, (2012) was utilized and this entailed use of different sampling strategies. This technique was desirable for this study because it allows the combination of probability and non-probability sampling. In the first stage the selected hospitals were purposively sampled because they are national referral hospitals in Kenya, which accommodate the largest numbers of forensic patients. Since they are national referral hospitals they receive more problematic and challenging medical and forensic cases from the County referral hospitals. Purposive sampling was chosen because it enables the researcher to choose a sample from a population that is likely to generate the information required for the study in relation to the study objectives.

In the next stage, the sample was stratified by hospital while the size of strata was determined by sampling proportionate to number of nurses working in the selected departments of the hospitals as shown in table 3.1 below.

Table 3.1. Sampled Nurses according to the Hospital of practice

Name of Hospital	**Proportion of respondents**	**Total**
Kenyatta National Hospital (ED)	$\frac{110}{168} \times 116$	76
Mathari Hospital (MSU)	$\frac{43}{168} \times 116$	30
Nairobi Womens Hospital (GVRC)	$\frac{15}{168} \times 116$	10
TOTAL		**116**

After determining the proportion of nurses to be sampled in each hospital, simple random sampling technique was utilized to select the participants to be interviewed for the training needs assessment. The simple random sampling technique was done without replacement since every nurse who met

the inclusion criteria had the same opportunity to be selected. In each hospital the researcher wrote **Yes** and **No** on small pieces of papers which were then folded placed in a basket and shaken properly so as to give the nurses an equal chance of picking a paper marked **Yes** or **No**. The papers marked **Yes** represented the number of the sample size for each study setting and the papers marked **No** represented the rest of the population who were not included in the sample size. All nurses on each working shift were requested to pick a paper randomly from the basket. Those who picked a paper marked **Yes** were included in the study while those who picked the paper marked **No** were excluded.

3.8 Data Collection Methods

3.8.1 Study tools

A self-administered semi-structured questionnaire was used to collect both quantitative and qualitative data from 116 respondent nurses. A semi structured questionnaire was deemed appropriate since the open ended questions allowed the sampled nurses to provide the required information with as many as illustrations and explanations as they wished (Polit and Beck, 2012). The questionnaire development was guided by the specific objectives of this study and each objective was informed by a research question. This questionnaire had clearly outlined instructions for the sampled nurses (Appendix 2). The questionnaire was written in English as all the sampled nurses were conversant with the English language since it is the language of instruction during training and the official language in Kenya. The questionnaire was structured into four sections. The first section sought to determine the demographic information of the respondent; the second section sought to establish the extent of awareness of the respondents to forensic nursing practice. The third section aimed at establishing the extent of Kenyan nurses preparedness to practice in a forensic setting based on current training; the fourth section sought to identify the perceived training needs for forensic nursing practice in Kenya.

3.8.2 Validity of the questionnaires

Ten percent (n=12) of the questionnaires were pre-tested at Kenyatta National Hospital's Gender Violence Center. The questionnaires were pretested at Kenyatta National Hospital's GVRC because it handles forensic patients just like the study areas. Questions that were ambiguous were rephrased after the pre-test to ensure that the tool measured what it was intended to measure. Cronbach's alpha was used to test the reliability of the questionnaire. Reliability coefficient of the study tool was 0.80. Reliability coefficient of above 0.70 is considered satisfactory (Cronbach 1990). With a reliability of 0.80, there is 0.36 error variance (random error) in the scores (0.80×0.80 = 0.64; 1.00 – 0.64 = 0.36). While reliability deals with how consistently the instrument measures the target attribute, validity is concerned with how consistently the instrument measures what it is supposed to measure (LoBiondo-Wood and Haber, 2006). Careful planning and the study design helped to ensure the validity of the study. Additionally, experts in forensic nursing helped in the validation of variables for this study.

A focus group guide was developed based on the study objectives to determine lecturers' awareness, preparedness in teaching forensic nursing and forensic nursing aspects to be included in the curriculum formulated by the researcher. The information generated from the discussion was recorded using a tape recorder for transcription and analysis purposes.

A key informant interview was conducted in order to obtain detailed information with regards to forensic nursing practice in Kenya. The key informant guide comprised open-ended questions which sought to explore the reasons that motivated the Nursing Council of Kenya to recommend the teaching of forensic nursing as one of the units to be incorporated in the BScN curriculum and the status of forensic nursing in Kenya. The responses were recorded by use of a tape recorder.

3.8.3 Training of Research Assistants

Four research assistants comprising one male and three females were recruited and trained on the use of the questionnaires. The research assistants were purposively selected since they were all BScN holders and therefore had data collection skills. They were also trained on how to check the filled self-administered questionnaires for completeness.

3.9 Data Collection Procedure

The study used a mixed research methodology combining a quantitative and a qualitative approach. Quantitative and qualitative data triangulation was done by collecting data from different participants in prescribed settings, from different stages in the activities of the setting and, when appropriate, from different sites of the setting. It also entailed the cross-checking of the consistency of specific and factual data items from various sources via multiple methods at different times.

Quantitative data comprises of information collected in a numeric form. This type of data is ideal for describing and examining relationships, and determining causality among variables. Quantitative research incorporates logistic, deductive reasoning as the researcher examines particulars to make generalizations about study phenomena (LoBiondo-Wood and Haber 2006). In this study, quantitative data was collected by use of a self-administered questionnaire. A self-administered questionnaire was chosen because it allowed for data to be collected from several subjects and in multiple study sites simultaneously. This helped in saving time, resources and thus capturing the essence of a cross-sectional study design.

Quantitative data was captured using closed-ended questions in which the respondents selected the responses that closely matched their answers from the predetermined options. These entailed a set of dichotomous questions which required respondents to make a choice between two response alternatives. Dichotomous questions are appropriate for gathering factual information. The

questionnaire also had multiple-choice questions which offered three or more alternatives. This allowed respondents to express a range of views. Rating questions were also included in the questionnaire. This allowed the respondents to evaluate the current nursing curriculum in regard to forensic nursing preparation. Similarly, the nurses' attitudes and beliefs towards forensic nursing practice were evaluated using the rating questions. The set of rating questions involved a bipolar likert scale with endpoints specifying opposite extremes where the respondents were required to indicate the degree to which they agreed or disagreed with the opinion expressed by the statement (Polit and Beck, 2012).

The researcher and research assistants distributed the copies of questionnaire for nurses. The respondents were asked to complete and return the questionnaire to the researcher or the research assistants. The questionnaire copies were serialized according to the hospitals to ensure respondent anonymity. The questionnaires administered at KNH were allocated serial numbers 1-76, those administered at Mathare Hospital 77-106 while those administered at Nairobi Women's Hospital were assigned serial number 107-116. The respondents were advised against writing any identification information such as their names on the questionnaires.

Qualitative data entails information collected in narrative (non-numeric) form, such as dialog from a transcript of an unstructured interview (LoBiondo-Wood and Haber 2006). Therefore, qualitative analysis involves organization and interpretation for the purpose of discovering important underlying themes, categories and patterns of relationships. In qualitative research findings are often organized according to major themes, processes, or categories identified in the data as guided by research questions. Qualitative data analysis occurs concurrently with data collection whereby the researcher attempts to gather data, manage a growing bulk of collected data until data saturation point. Data saturation occurs when themes and categories in the data become so repetitive and

redundant, such that no new information can be gleaned by further data collection. The meaning of the data is interpreted at this stage.

In this study qualitative data was obtained from the nurses using open ended questions in the questionnaire, focused group discussion with nursing lecturers and a key informant interview with the registrar of the Nursing Council of Kenya. The open ended questions allowed the nurses to respond in their own words in narrative fashion. Moreover, this allowed the respondents to elucidate all of the possible alternative responses to the items in the questionnaire.

One focused group discussion involving a homogenous group comprising ten purposively selected lecturers was conducted inside a boardroom at the researcher's workplace. The moderator started by explaining in detail the background of the study and the reason for their selection as part of the focus group. It was also mentioned that the discussion would be recorded using a tape recorder for transcription and analysis purposes. In order to maintain objectivity the moderator instructed the group to share their opinions freely about the topic at hand and also respect each other's opinion. This put the participants at ease and allowed them to answer questions in their own words. The lecturers were also informed that the discussion would take one hour. Finally, a verbal consent was obtained from each lecturer.

The researcher in a round table format moderated the focus group discussion that lasted one hour. This involved a loosely structured interview in which the researcher guided the respondents through a set of questions using a topic guide. An experienced assistant moderator was also present to take detailed observational notes about the session including noting the body language. The focused group discussion enabled the researcher to acquire information on perspectives of the nurse educators. This enabled the researcher to acquire in depth information which would not be possible if a questionnaire alone was used (Polit and Beck, 2012). The transcripts were verified by the

researcher against the original recording of the discussion verbatim, and then presented to the lecturers to be member-checked (verified). The assistant moderator also listened to the tapes and checked for accuracy of the transcripts and whether the collected data was sufficient to meet the objectives of the study. Once this process was completed, the original tape-recording and the transcribed interview were stored in a secure place.

In addition, a key informant interview was conducted with the Registrar of the Nursing council of Kenya to enable the researcher to acquire additional information from the nursing regulatory body. The purposively selected key informant was knowledgeable about the phenomenon of research interest, in this case the status of forensic nursing in Kenya and was willing to share information and insights with the researcher. To ensure trustworthiness of the qualitative information obtained from the key informant the researcher interviewed the Education Officer at the Nursing Council of Kenya and this corroborated the collected information. The assistant moderator also listened to the tapes and checked for accuracy of the transcripts and whether the collected data was sufficient to meet the objectives of the study. Once this process was completed, the original tape-recording and the transcribed interview were stored in a secure place.

The data generated from the questionnaires, focus group discussion and key informant guided the choice of the units included in the curriculum for Master of Science in forensic nursing. The founder of forensic nursing Virginia Lynch and one of the thesis supervisors Dr Nancy Cabelus have extensive experience in criminal justice, law enforcement and forensic nursing education and were very resourceful in guiding the researcher in choice of units to be included in the curriculum. The researcher used several textbooks to derive the content for the units.

3.10 Data Management

3.10.1 Data Analysis Procedures and Presentation

Quantitative data from the complete questionnaires was coded and entered into the Statistical Package for Social Sciences (SPSS) version 20.0 database. Demographic data were analyzed using descriptive statistics whereby continuous data was presented as means and standard deviation while categorical data was presented as frequencies and percentages. Categorical data were then subjected to inferential statistics using Pearsons' Chi Square test to determine possible relationships between the variables and the predicted estimates and *P* values of 0.05 or less were considered to be significant. Results were presented using tables, pie charts and column graphs.

Qualitative data obtained from the open-ended questions in the questionnaires were coded for ease in analysis then categorized into emerging patterns which were later grouped into the identified themes. Data obtained from the focused group discussions and key informant interview were stored on tape recorders and later transcribed by listening keenly and writing down the responses. These were later coded for ease in analysis then categorized into emerging patterns. The data were then analyzed using thematic analysis where themes were identified based on the responses of the respondents. Finally, propositions and conclusions were made based on the apparent patterns or relationships within the data. These results are presented in the form of column graphs and narrative text where the respondents are quoted verbatim.

3.11 Ethical Considerations

Approval to conduct the study was sought from the University of Nairobi School of Nursing Sciences. Clearance to carry out this study was sought from Kenyatta National Hospital/ University of Nairobi Ethics and Research Committee (KNH/UON-ERC). Permission to access and enroll the

study population comprised of nurses was obtained from the Medical Superintendent/CEOs of the three hospitals. Consent was obtained prior to enrollment by reading the contents and then signing on the form to approve. The respondents who had met the inclusion criteria were informed that their participation was voluntary and that they could withdraw from the study at will. Excluding identification details on the study tools enabled the researcher to ensure confidentiality.

In summary, this chapter presented the research methods and procedures used in the study. It specifically covered the research design, sampling designs used, methods of data collection and analysis and concludes with ethical considerations. The findings of the study are presented in the next chapter.

CHAPTER FOUR

4.0 RESULTS

4.1 Introduction

This section reports on the findings of the study with regards to various aspects as highlighted in the objectives. The findings are presented using tables, charts, graphs and narratives for interpretation purposes. The first section shows the distribution of demographic characteristics of the participant nurses. The subsequent sections report on findings regarding awareness of forensic nursing specialty, training status in forensic nursing, forensic specialists in the respective hospitals, forensic protocols in the respective hospitals, experience in collection of forensic evidence, aspects of forensic nursing training that the respondents deemed important, attitude towards forensic nursing, evaluation of the current nursing program and challenges in forensic nursing practice. The study observed a 100% response rate in that all the 116 questionnaires distributed to the nurses were completely filled upon return to the researcher. Similarly the ten lecturers who were purposively sampled for the focused group discussion and the key informant were available for the interviews. A total of 116 nurses from three hospitals namely: Kenyatta National Hospital, Mathari Hospital and Nairobi Women's Hospital were interviewed. All the respondents were of Kenyan nationality.

4.2 Demographic Characteristics of Participant Nurses

The distribution of sampled nurses per the hospital of work was as follows: 64.5% (n=76) respondents were from Kenyatta National Hospital, 26% (n=30) were from Mathari Hospital and 8.6% (n=10) were from Nairobi Women's Hospital.

It can be seen that majority of the respondents were from Kenyatta National Hospital. This could be explained by the fact that sampling was done proportionate to the size of hospital.

4.2.1 Age of respondents

The ages of the nurses were categorized and analyzed using descriptive analysis then reported using measures of central tendency as shown in table 4.1.

Table 4.1: Age of sampled nurses

Age group in years	Frequency (n)	Proportion (%)	Mean age in years
25-34	31	26.7	38.75 (±6.93)
35-44	56	48.3	
45-54	28	24.1	
55-59	1	0.9	
Total	**116**	**100.0**	

Table 4.1 shows that 48.3% (n=56) of the respondents were aged between 35-44 years. Those aged between 25-34 years were 26.7% (n=31); those aged 45-54 years were 24.1% (n=28) while only 0.9% (n=1) of respondents was aged 59 years. The age ranged between 25-59 (years) with a mean of 38.75 (±6.93) years. From Table 4.1, it can be seen that majority of respondents were aged between 35-44 years 48.3% (n=56) while only one nurse was aged above 55 years. This implies that the study participants were mature nurses capable of responding to the study items.

4.2.2 Gender of respondents

The gender distribution of the participants was 73.3% (n=85) females while males comprised 26.7% (n=31). This shows that female nurses were almost three times more than males.

4.2.3Respondents years of practice

Information about the number of years of practice for participants' as a qualified nurse was analyzed using descriptive statistics and presented using measures of central tendency. The results are shown in Table 4.2 below.

Table 4.2: Years of experience for sampled nurses

Number of years of practice as a qualified nurse	Frequency (n)	Proportion (%)	Mean in years
1-10	40	34.5	14.48 (±7.58)
11-20	52	44.8	
21-30	22	19.0	
31-40	2	1.7	
Total	**116**	**100.0**	

Table 4.2 shows that the duration of practice since qualification as a nurse ranged from 1-36 years with a mean of 14.48 years (std dev 7.58).This shows that a substantial proportion of the nurses had worked for between 1-20 years since qualifying as a nurse. This shows that the nurses had accumulated enough experience that enabled them to respond to the study questions appropriately.

4.2.4 Years practiced by nurses in the sampled hospitals

The number of years practiced by nurses in the sampled hospitals at the time of study was collected as a continuous variable but later on grouped as categorical variables then descriptive analysis was done to determine the measures of central tendency as shown in table 4.3.

Table 4.3: Nurses' Duration of Practice in the Sampled Hospitals

Years	Frequency (n)	Proportion (%)	Mean in years
1-10	59	50.9	11.07 (±7.91)
11-20	45	38.8	
21-30	10	8.6	
31-40	2	1.7	
Total	**116**	**100.0**	

Table 4.3 above shows that 50.9% (n=59) of the respondents had worked in the present hospital at the time of this study for 1-10 years followed by 38.8% (n=45) who had worked for 11-20 years; 8.6% (n=10) had worked for 21-30 years while 1.7% (n=2) had worked for 31-40 years. The

duration of work at the current hospital ranged from 1-33 years with a mean of 11.07 years (std dev 7.91). This shows that the nurses had acquired enough exposure in caring for forensic patients. This exposure enabled them to respond to the study questions appropriately.

4.2.5 Sampled nurses' professional qualifications

The sampled nurses' had varying qualifications ranging from Masters to Certificate holders as illustrated in Figure 4.1.

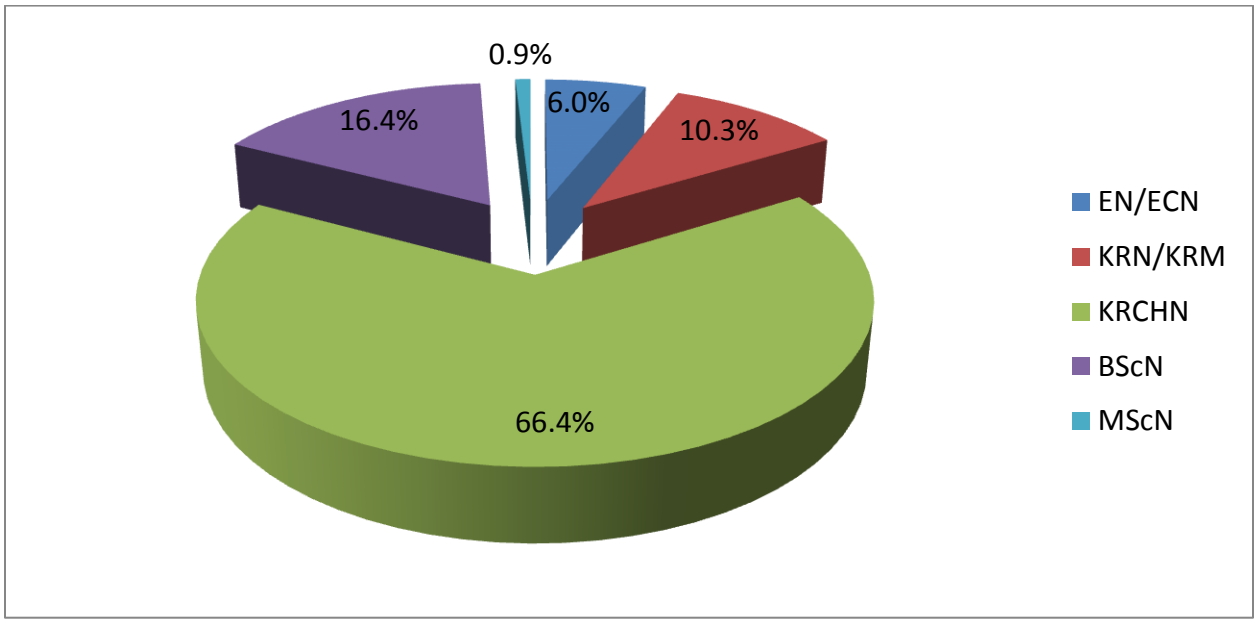

Figure 4.1: Distribution of sampled nurses' professional qualifications

With regard to nursing professional qualifications 66.4% (n=77) had attained KRCHN qualification, 16.4% (n=19) had BSc qualification, 10.3% (n=12) had attained KRN/KRM, 6.0% (n=7) had EN/ECN while one respondent (0.9%) had attained Master's qualification and both had specialized in community and public health. This shows that all the sampled nurses had academic professional qualification required in the practice of nursing.

These qualifications reflect the current trend in nursing education in Kenya where nursing has shifted from training plain Enrolled Nurses and KRNs to comprehensive KRCHN training and above. There was a significant positive relationship between nursing qualification and the need for

forensic nursing training ($p<0.001$). The findings demonstrate that the need for forensic nursing training was felt equally across the cadres of nursing.

4.2.6 Designation of the sampled nurses

The designation of the sampled nurses varied depending on the educational qualification and years of experience obtained by practicing as a nurse. This ranged from Senior Nursing Officers to the Enrolled Nurses as shown in Figure 4.2.

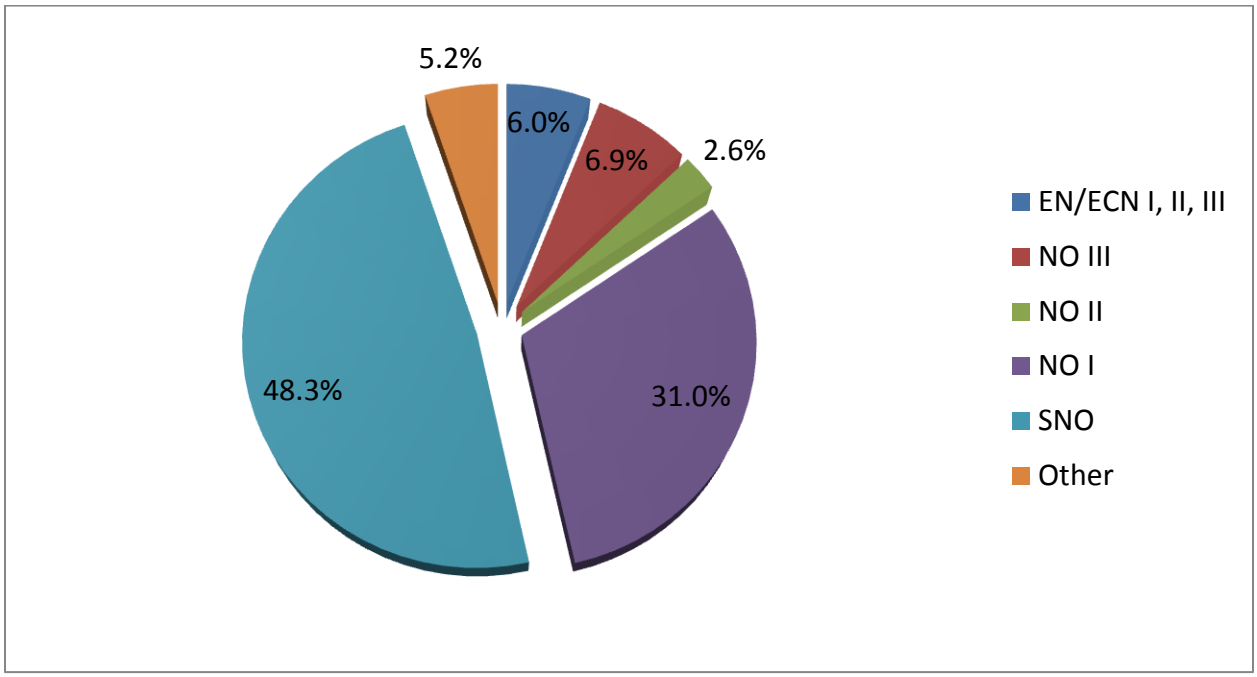

Figure 4.2: Distribution of sampled nurses' designation

Senior Nursing Officers comprised 48.3% (n=56) of the total respondents; 6.0% (n=7) were Enrolled Nurses/Enrolled Community Nurses; Nursing Officers of other cadres, that is Nursing Officer I 31.0% (n=36), Nursing Officer III 6.9% (n=8), Nursing Officer II 2.6% (n=3). This shows that majority of the respondents had attained Senior Nursing Officer level due to the cumulative working experience.

4.3 Nurses' awareness of forensic nursing

The study sought to assess the level of awareness of forensic nursing specialty. The findings are as follows: 58.6% (n=68) were unaware of forensic nursing specialty while 41.4% (n=48) reported being aware. Awareness of forensic nursing specialty by the sampled respondents varied across the hospitals as shown in Table 4.4.

Table 4.4: Sampled nurses' awareness of forensic nursing specialty

Name of Hospital	Awareness of forensic nursing		
	Yes % (n)	No % (n)	Total %
Kenyatta National Hospital	32.9 (25)	67.1 (51)	100
Mathari National Hospital	56.7 (17)	43.3 (13)	100
Nairobi Womens' Hospital	60 (6)	40 (4)	100
Total	**41.4 (48)**	**58.6 (68)**	**116**

Table 4.4 shows that 67.1% (n=51) of nurses sampled from Kenyatta National Hospital compared with 43.3% (n=13) of nurses from Mathari Hospital and 40.0% (n=4) of nurses from Nairobi Women's Hospital were not aware of forensic nursing specialty. Overall, 58.6% (n=68) of the respondents were not aware of forensic nursing specialty. This shows that most nurses are not qualified to care for forensic patients despite being posted in forensic settings.

The difference in awareness of forensic nursing across hospitals was statistically significant ($\chi^2_{(2\ df)} = 17.52$; p=.000). This difference in awareness could be attributed to the sampling proportionate to size of the hospital since majority of the sampled nurses were from Kenyatta National Hospital.

4.4 Preparedness of nurses in forensic nursing practice

The study sought to assess the nurses' preparedness to care for forensic patients and the results of the analyzed data are as shown in Table 4.5 below.

Table 4.5: Sampled nurses' training in forensic nursing

Name of Hospital	Nurses trained on forensic nursing		
	Yes % (n)	No % (n)	Total %
Kenyatta National Hospital	7.9 (6)	92.1 (70)	100
Mathari National Hospital	16.7 (5)	83.3 (25)	100
Nairobi Womens' Hospital	0 (0)	100 (10)	100
Total	**9.5 (11)**	**90.5 (105)**	**116**

The findings show that 92.1% (n=70) of nurses at Kenyatta National Hospital compare with 83.3 % (n=25) of Mathari Hospital nurses had not undertaken any training and all respondents 100% (n=10) from Nairobi Women's Hospital lacked any training in forensic nursing. The difference in training in forensic nursing across the three hospitals was statistically significant ($\chi^2_{(2\ df)}$ =18.94; p=.000). This shows that nurses in the sampled hospitals lack knowledge and skills required to care for forensic patients despite encountering forensic patients in their daily practice.

The study sought to assess the need for training in forensic nursing. The findings were comparable across the three hospitals as shown in Table 4.6 below.

Table 4.6: Need for training in forensic nursing

Name of Hospital	Need for training in forensic nursing		
	Yes % (n)	No % (n)	Total %
Kenyatta National Hospital	94.7 (72)	5.3 (4)	100
Mathari National Hospital	96.7 (29)	3.3 (1)	100
Nairobi Womens' Hospital	100 (0)	0 (0)	100
Total	**95.7 (111)**	**4.3 (5)**	**116**

Overall, 94.7 % (n=72) of nurses from Kenyatta National Hospital, 96.7% (n=29) of nurse from Mathari Hospital and 100% (n=10) of the nurses from Nairobi Women's Hospital need training in forensic nursing. The difference in need of forensic nursing training across the hospitals was not

statistically significant ($\chi^2_{(2\ df)} = 4.88$; p=.087). The findings demonstrate that the need for forensic nursing training was felt equally across the three hospitals under study.

The study sought to determine whether the nurses had collected forensic evidence at their various hospitals of work. Kenyatta National Hospital had 65.6% (n=63), who had not collected forensic evidence; 26.0% (n=25) respondents were from Mathari Hospital while 8.3% (n=8) from Nairobi Womens' Hospital had not collected forensic evidence. Segregation of the findings per hospital revealed that the difference in collection of evidence was not statistically significant ($\chi^2_{(2\ df)}= 0.061$; p=0.970). This shows that despite working in a forensic setting a vast majority of the nurses had not collected any forensic evidence.

According to 30.2% (n=35) of the respondents, the existing nursing curriculum does not address the societal needs. Moreover, 46.6% (n=54) indicated that the nursing curriculum is not comprehensive in that it does not address all the training needs that a nurse requires. Moreover, a significant majority of the respondents 85.3% (n=99) indicated that the current nursing curriculum is not effective in developing forensic skills. A substantial proportion 82.8% (n=96) also indicated that the current nursing curriculum is not based on the global health standards. A significant majority 83.6% (n=97) indicated that the current nursing curriculum does not adequately prepare the respondents as experts in forensic nursing. However, with regards to the curriculum addressing the changing needs of the Kenyan society, 55.2% (n=64) of the respondents indicated that it was adequate while 44.8% (n=54) indicated that it was not adequate. A significant proportion 79.3% (n=92) indicated that the current nursing curriculum does not adequately equip them to handle forensic patients. Similarly 89.7% (n=104) of the respondents indicated that the current nursing curriculum does not adequately prepare them to practice nursing especially in a forensic setting. An evaluation of the existing nursing curriculum with regards to forensic nursing training observed the need for inclusion of a number of components that the respondents felt were important.

4.5: Nurses perceived training needs in forensic nursing

The aspects of forensic nursing that the sampled wish to be trained on varied greatly and they included the following: advanced health assessment, evidence collection and documentation, forensic psychiatry, gender violence, legal implications on forensic nursing and theory & practice in forensic nursing. This is illustrated in Figure 4.3.

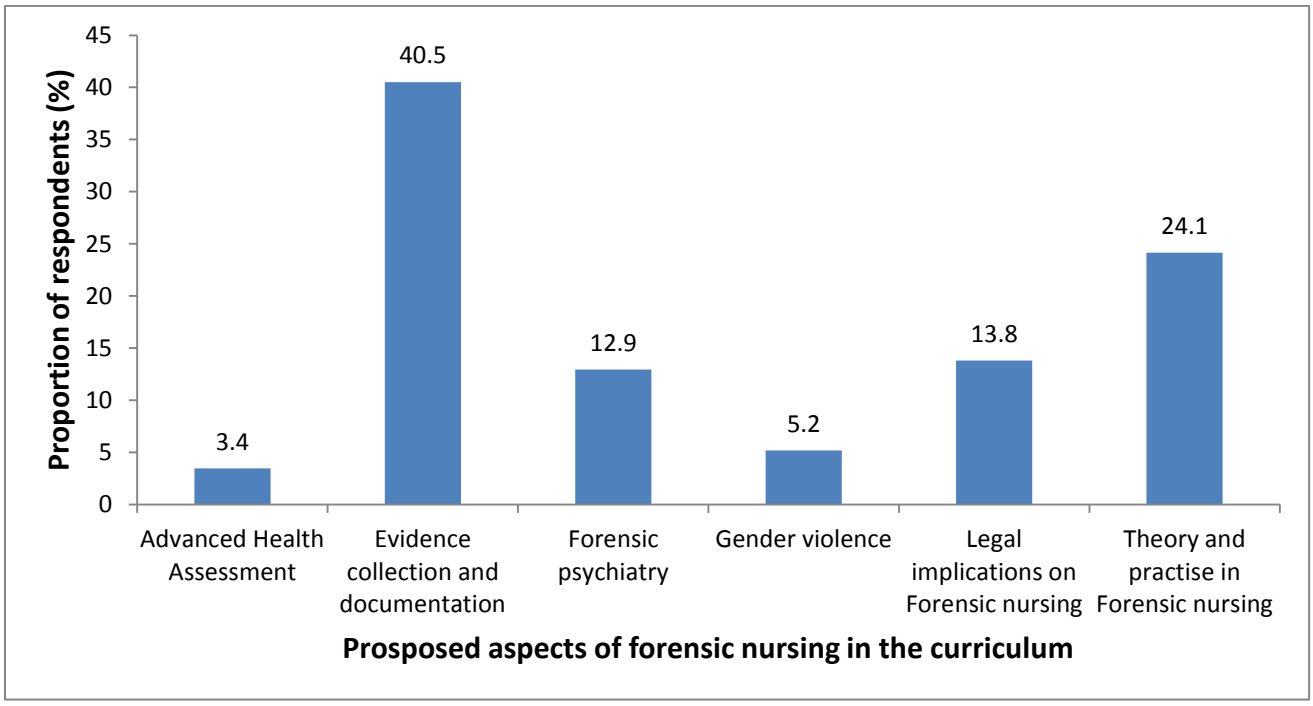

Figure 4.3: Proposed aspects of forensic nursing in the curriculum

4.5.1Respondents perceived training needs

Evidence collection and documentation was reported by 40.5% (n=47), 24.1% (n=28) of the sampled nurses reported that theory and practice in forensic nursing was an aspect they wished to be included in nursing training, 13.8% (n=16) of the respondents indicated that legal implications in forensic nursing was an important aspect. Forensic psychiatry was reported by 12.9% (n=15), gender violence was reported by 5.2% (n=6) respondents while 3.5% (n=4) indicated training in advanced health assessment as an important aspect to be trained on. The findings highlight the need

for training in evidence collection and documentation and theory and practice in forensic nursing as reported by majority of the respondents. The hospitals deal with different cases of patients hence varying forensic evidence.

4.6 Key informant interview

Increased cases of victims of violent crimes in health facilities in the country triggered the NCK to recommend inclusion of forensic nursing in the BSc curriculum. It was also reported that nurses are tasked with the role of handling forensic cases even with the lack of training. A discussion of BScN curricula approved by the Nursing Council in Kenya revealed that all Universities in Kenya, with an exception of Kabarak and Maseno Universities had reviewed their BScN curricula and had included a twenty two hour component of forensic nursing. However, all these universities lack qualified nursing lecturers to teach in that specialty. It was also noted that all the universities copied the content as presented in the Nursing council syllabus. This content is however not purely forensic nursing content. The Procedure manual of the Nursing Council of Kenya also lacks content on Forensic nursing competencies.

4.7 Focused group discussion

The major themes, identified in the data as obtained from the focused group discussion as guided by research questions included awareness of the forensic nursing specialty, preparedness to teach forensic nursing and what to be trained on. Even though all the lecturers reported being of the forensic nursing specialty, they felt unprepared to teach the units added in the BScN curriculum. The following emerged as the main items they felt inadequately prepared to teach: evidence collection and documentation, forensic psychiatry, gender violence, forensic pathology, legal implications on forensic nursing, theory and practice in forensic nursing.

The results presented in this chapter indicate that nurses practicing in forensic settings and the nursing lecturers in Kenya are aware of the forensic nursing specialty but are not prepared to handle forensic patients adequately. They however have a positive attitude towards Forensic nursing since they all reported that forensic nursing is an integral component in the practice of nursing in Kenya. The findings presented in this chapter formed a basis for formulation of the objectives and the content of the curriculum presented later in this document. Consultations with the founder of forensic nursing specialty and three other specialists in forensic nursing helped in the choice of the curriculum design and course content. A discussion of the study findings are presented in the next Chapter.

CHAPTER FIVE

5.0 DISCUSSION; CONCLUSIONS AND RECOMMENDATIONS

5.1 DISCUSSION

5.1.1 Introduction

This section presents a discussion on the findings of the study and relates the findings with previous research findings. In the first section, the demographic characteristics of the respondents are discussed. In the second section is a discussion of the findings regarding sampled nurses' awareness of forensic nursing specialty. The third section highlights the findings on the sampled nurses' preparedness to practice in forensic settings. The fourth section presents a discussion on aspects of forensic nursing training that the respondents deemed important to be included in a model curriculum in forensic nursing practice. Finally the model curriculum is discussed in the fourth section followed by conclusions and recommendations.

5.2 Respondents' demographic characteristics

The mean age of nurses in this study was 38.75 years. This conflicts with the findings of a study carried out in Massachusetts USA which revealed that the median age of nurses in the US was 45 years. Age in this study did not have significant relationship with the need to be trained in forensic nursing. This finding was contrary to the researchers' expectation that age would be related to the need for training in forensic nursing as it is reasonable to assume that older nurses have worked longer thus apprentice type experience acquiring. However, the study findings revealed a positive correlation between age and experience($p<0.001$) (with the older nurses tending to have more experience in terms of years of practice) and a negative relationship between age and professional qualification($p< 0.005$) with younger nurses tending to have higher professional qualifications of KRCHN and above.

The negative correlation between age and professional qualification can be explained by the fact that there has been a considerable change in nurse training curriculums in Kenya whereby most schools of nursing have ceased training enrolled nurses and are now training KRCHNs. This is also supported by the current trend whereby many healthcare institutions are requiring that their nurses be diploma trained. This may indicate that more emphasis is now being put on extra knowledge and skills acquired in an effort to improve their career hence the negative correlation in age and nursing qualification. The study findings support this notion because it was evident that majority of the younger nurses were KRCHNs while the older ones were EN/ECNs.

Study findings revealed that female nurses were almost three times more than males. This gender distribution may be explained by the evolution of nursing as a profession for women, a trend which is currently changing worldwide where we find more males joining the profession. In fact in the 1960s and 1970s, the three most common jobs for a working woman were secretary, teacher and nurse. However the women's rights movement that gained traction in the 1970s fundamentally changed that dynamic, opening up for more career possibilities for women than had existed previously. The allure of occupational choice for women probably opened up more opportunities for men to join nursing because as the New England Public Policy Conference (2005) reports, more men entered the nursing profession at this time as well. Regardless of this fact, nursing is still more than 92% female (WHO, 2003).

Experience as measured by the length of nursing practice was not related to the need for forensic nursing training. This is in agreement with findings by Hoffman *et al*, (2004) who found no relationship. Lutzen and Nordin (2005) stated that an understanding of the connection between patients' vulnerability and their limited self-choice may be learned through experience. They found that all of the nurses in their study had long experience in psychiatric nursing, which they argued

may have sharpened their awareness of the consequences of limiting or enhancing the patients' autonomy

The distribution of respondents per hospital was as follows: Kenyatta National Hospital 64.5%, Mathari Hospital 25.9% and Nairobi Women's Hospital 8.6%.

5.3 Sampled nurses' awareness of forensic nursing in Kenya

Majority of the respondents were unaware of forensic nursing as a specialty even though they handled forensic patients on a daily basis. This is in agreement with the findings of Sugg & Inui, (1992) who revealed that historically, many healthcare providers have expressed that they lack sufficient knowledge to adequately assist victims of crime. It also concurs with Feltoneal (1987) who explains that historically, schools of nursing had been less than responsive to the health needs of forensic populations in the education of nurses because nurses who worked in the prisons and forensic psychiatric settings learnt on the job from each other and from other disciplines.

This could be attributed to the fact that forensic nursing was not included in nursing curricula until 2011. Therefore the nurses might not have introduced to the specialty while in training and yet they were posted in clinical settings where this knowledge is required. Awareness of forensic nursing specialty by the respondents varied across the hospitals. The difference in awareness of forensic nursing across hospitals was statistically significant ($\chi^2_{(2\ df)} = 6.575$; $p=0.037$). A significant majority who indicated not being aware of forensic nursing were from Kenyatta National Hospital, followed by Mathari hospital, while the least number of nurses who reported not being aware were from Nairobi Women's Hospital. This difference in awareness could be attributed to the sampling proportionate to size of the hospital.

This could also be attributed to the fact that these three hospitals are referral hospitals, which cater to the majority of forensic patients in Kenya. It is however interesting to note that Kenyatta

hospital had the highest number of nurses without any forensic training even though the pilot training was done in Kenyatta hospital. This could be explained by the fact that nurses in the Kenyatta National Hospital rotate through all the departments of the hospitals as per the protocols of most hospitals in Kenya. Thus the nurses who had been trained by Dr. Cabelus earlier on might have been moved to work in other departments in the hospital.

The findings also revealed that the lecturers involved in the focused group discussion had little awareness about forensic nursing. For instance a respondent from a public university said that ''*…as much as I have had heard about forensic nursing through the media I feel that I am incompetent in teaching forensic nursing…*''. Her sentiments were echoed by another lecturer from private university who informed the group that ''*…anything to do with forensics should be handled by the law enforcement officers…*''. This assertion culminated into a protracted discussion where other group members agreed with another member stating that ''*forensic nursing is better practiced in developed countries due to the proper systems in place*''. These findings contravene the guidelines on scope and standards of forensic nursing practice (ANA, 2009) which requires that nurses offering forensic nursing education should acquire skills and knowledge appropriate to specialty area, practice setting, role, or situation.

5.4 Sampled nurses' preparedness to practice in forensic settings

Overall with regards to training in forensic nursing, a significant majority of the practicing nurses had not received any training on forensic nursing science. The lecturers unanimously reported that they were inadequately prepared to cover the required 22 contact hours on forensic nursing as stipulated in the Nursing Council of Kenya syllabus. The concerns raised by the nurses and lecturers about preparedness to practice in forensic settings were corroborated by the key informant who affirmed that the reported lack of preparedness is what prompted the NCK to issue a directive requiring forensic nursing content to be included in all BScN curricula in the country.

The aforementioned responses by the study subjects are in agreement with Reid and Glasser, (1997) who articulated that health care providers have expressed concern regarding their inadequate preparation, and frustration with the inability to ensure positive outcomes for victims of violent crimes. This highlights the existence of a significant gap that has been created by the absence of forensic knowledge in traditional nursing education in Kenya. This could also be attributed to the fact that majority of the practicing nurses at the time of study had graduated from nursing schools before 2011 when the content on forensic nursing was included in the national syllabus for nurse training. With increased cases of violence being reported in Kenya today, the lack of knowledge in forensic nursing could impact the way forensic patients are handled negatively.

The practicing nurses reported that they were inadequately prepared in various aspects of forensic nursing namely: evidence collection, documentation and caring for victims of different types of violence in general. A general observation from the respondents was that law enforcement should investigate forensic issues. The lecturers shared similar sentiments as their practicing nurse counterparts. In the focused group discussion one lecturer asked ‘‘…*How do I teach something that I have never been taught before?…*’’. This triggered further discussion within the group and another lecturer opined ‘‘…*Maybe we should be trained first before being asked to teach*… ’’. This sentiment gained a nod of approval from the other lecturers who were present in the discussion reaffirming inadequate preparedness. This observation contravenes the requirement by the Commission for University Education (CUE) standards and guidelines. The requirements stipulate that lecturers teaching undergraduate programmes should be holders of Master’s degree, and lecturers for graduate and post graduate programmes should have doctoral degrees (CUE, 2014). In light of the set standards it is clear that the lecturers tasked with the responsibility of teaching forensic nursing at undergraduate level should have acquired Masters level training in Forensic Nursing.

The practicing nurses expressed concern that the curriculum was lacking important components that they felt would be important in preparing them to care for forensic patients. A significant majority of the respondents indicated that the nursing curriculum used in training them is not effective in developing forensic skills. Owing to the reported unpreparedness by the respondents it was evident that most nurses had difficulties identifying a forensic patient and were uncomfortable in handling victims of violence. This is in agreement with Cabelus (2012) who explains that a number of critical issues related to education, training, and professional development go unresolved in forensic nursing. This is an indication that nurses in Kenya are posted to work in settings that require knowledge in forensic nursing despite inadequate training on the same.

5.5 Proposed aspects of forensic nursing to be included in the curriculum

A significant majority of the practicing nurses, the lecturers and key informant indicated that forensic training is an important aspect in nursing in Kenya. With regards to aspects of forensic nursing that the respondents wish to be trained on, there were varied areas of interest and some of the responses were as follows: *"...I do not have any training on evidence collection and documentation..."* This concern was supported by another respondent who asserted *"...I have never collected any forensic evidence despite working with victims of crime..."*. Another added *"...I find documenting assessment findings of victims of violence challenging...."*. Concerning the handling of victims of violence one respondent offered "*...Patients whose diagnosis have legal implications should be handled by the law enforcement officers...*" Another area of concern was on forensic psychiatry where a respondent asserted "*...I am extremely terrified of mentally ill offenders...*" and further added "*...I wish I could be trained on how to care for the mentally ill offenders...*" .

The aforementioned sentiments offered by respondents highlight the areas that nurses requested training on as follows: advanced health assessment, evidence collection and documentation,

forensic psychiatry, gender violence, legal implications on forensic nursing and theory and practice in forensic nursing. The key informant further indicated that most nurses reported that they were lacking capacity in evidence collection and documentation, nursing theory and practice and chain of custody of evidence collected. This is in agreement with Lynch (2011), who asserted that nurses in Kenya require a solid forensic education as a vital link in the development of clinical acumen required for responding to the forensic circumstances encountered in their daily practice.

These findings are vital because as Keating (2011) asserts, when contemplating a new education program, a needs assessment is indicated. Thus creating a curriculum that addresses Kenyan forensic issues will bridge the gap that has been created by the absence of forensic knowledge in traditional nursing education in Kenya. Consequently, this will prevent the negative outcome of justice lost for victims of crime in Kenya.

5.6 Evidence based curriculum

The data generated from the questionnaires, focus group discussion and Key informant served as the guide the choice of the units included in the curriculum for master of science in forensic nursing. This is supported by ANA (2013) which explains that an evidence-based curriculum is a concept or strategy that is derived from or informed by objective evidence most commonly obtained from educational research. It is also in agreement with Kern *et.al* (2009) who stated that curriculum developers must identify the differences between the ideal and actual characteristics of the targeted learner group and their environment. By considering whether an forensic nursing educational intervention directed at this group the researcher hopes to contribute to solving the health care problems emanating from the increasing rates of violence in Kenya. The founder of forensic nursing Virginia Lynch and one of the thesis supervisors Dr Nancy Cabelus have extensive experience in criminal justice, law enforcement and forensic nursing education and were very resourceful in guiding the researcher in choice of units to be included in the curriculum. The

researcher used several textbooks to derive the content for the units. Specialists from the International Association of Forensic Nurses' curriculum review committee reviewed the curriculum and made suggestions for improvements. This is supported by the other researchers (ANA, 2013; Kern *et.al.,* 2009) who highlight that that consultation with experts and research findings helps determine goals and objectives of a curriculum which in turn direct the choice of curricula content and assignment of relative priorities. Objectives also suggest what learning methods will be effective, suggest what evaluation methods are appropriate and communicating to others what the curriculum addresses and hopes to achieve.

The guidelines from the nursing council of Kenya helped in the core courses to be included in the curriculum. Literature review from forensic nursing text books and further consultation with forensic nursing specialists from the United States and Canada enabled the researcher to decide which content to include in the curriculum. This is in agreement with Jones & Bartlett (2015).who explain that development of an evidence-based curriculum in nursing is a scholarly and creative process intended to produce an evidence-informed, context-relevant, unified curriculum. It is hoped that the evidence-based curriculum for a masters in forensic nursing will lead to evidence-based teaching which will ensure practices that utilize best available, evidence from worldwide research and literature.

5.7 Conclusions

Based on the findings of this study the researcher draws the following conclusions,

1. Nurses practicing in forensic settings in Kenya are not adequately trained to practice in forensic settings based on their current training and yet they are expected to care for forensic patients.
2. The perceived training needs for forensic nursing practice in Kenya highlighted by the respodents included: advanced health assessment, evidence collection and documentation,

forensic psychiatry, gender violence, forensic pathology, legal implications on forensic nursing, theory and practice in forensic nursing.

3. Majority of the nurses had a positive attitude towards forensic nursing in that they reported that forensic nursing is an integral component in the practice of nursing care in Kenya.

5.8 Recommendations

Based on the findings of this study, the researcher recommends that;

Kenyan Universities should introduce forensic nursing science in their nurse education curricula. Creating a curriculum that addresses Kenyan forensic issues will bridge the gap that has been created by the absence of forensic knowledge in traditional nursing education in Kenya. Training nurse educators in forensic nursing at the master's level which is the minimum requirement for teaching undergraduate nurses will be the first step allowing a larger number of nurses to be trained countrywide. This will improve nursing care and help in resolving legal issues that would otherwise remain unanswered in the absence of this expertise.

At the national level, the government should embrace forensic nursing as a potential means of addressing the linked issues of timely evidence collection and extended waiting time for victims to receive legal services.

In summary, this chapter presented a discussion of the study findings and the conclusions and recommendations drawn by the researcher as guided by the study objectives. The evidence-based curriculum is presented next.

EVIDENCE-BASED MASTER OF SCIENCE IN FORENSIC NURSING CURRICULUM: A MODEL FOR KENYA

BY
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H80/91741/2013

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1.0 THE CURRICULUM

1.1 Title of the Programme

Master of Science in Forensic Nursing

1.2 Rationale of the Programme

The modern day world is experiencing an upsurge of criminal and interpersonal violence. As a result, cases of physical and mental health-related injuries, intentional and accidental damage, accidents and death are increasingly being reported in health institutions all over the Country. Since the profession of nursing plays a vital role in providing direct health services, to both victims and the perpetrators of crime, there is a need to design a curriculum that integrates a healthcare system where services are collaborative and comprehensive.

PHILOSOPHY

Nursing Council of Kenya believes that registered nurses need to be trained in forensic nursing in clinical and community settings in order to provide competent care to clients in forensic care settings. Expanding roles of nurses and advances in forensic science and technology necessitates additional training to prepare nurses for effective participation in nursing care of clients in forensic care settings.

1.2.1 Needs Assessment

Globally, the advent of improved security systems resulted in an increase in reported cases of crime hence the recognition of nursing discipline of forensic nursing, as a new practice in nursing and health care. Forensic nursing refers to the application of forensic aspects of nursing and health care to public and legal proceedings. Forensic nursing combines the bio-psychosocial education of

nurses with the scientific investigation of crime, trauma and death and the treatment of victims, suspects or perpetrators of trauma, violence and crime within clinical and community institutions.

In Kenya, violence is a significant public health and societal concern today. Whilst it is evident that crime is associated with physical and mental health consequences, healthcare is a priority for victims, their families, and perpetrators. In particular, nurses provide direct linkages among professionals involved with violence, trauma or crime and help individuals to access services. There are no forensic nurses who are prepared at postgraduate level to carry out these tasks, thus the need for this programme.

A needs assessment carried out at Kenyatta National Hospital, Mathari Teaching and Referral Hospital and Nairobi Women's Hospital revealed that the nurses' were not adequately trained to practice in forensic settings based on their current training. The perceived training needs for forensic nursing practice in Kenya highlighted by the respondents included: advanced health assessment, evidence collection and documentation, forensic psychiatry, gender violence, legal implications on forensic nursing, theory and practice in forensic nursing. It was also evident that majority of the nurses had a positive attitude towards forensic nursing in that they reported that forensic nursing is an integral component in the practice of nursing care in Kenya and they would like to be trained in the specialty.

1.2.2 Justification of the Need for the Programme

While nurses at all practice levels are involved in the process of assessing victimization and proper collection, documentation, and preservation of evidence, this curriculum targets the lecturers. This is because they are the ones who will teach and also develop curricula for teaching other health care providers in forensic science. Training nurse educators in forensic nursing at the master's level will be the first step of allowing a larger number of nurses to be trained countrywide, which is in line

with the Commission of University Education of Kenya regulations that recommend a Master's degree as a minimum requirement for teaching at the undergraduate level.

This program will prepare nurses to practice to the fullest extent of their training with competence in forensic health care. In addition, these nurses will be prepared for the management of the complex health problems that present when a person is a victim of violence, a family member or significant other of the victim, suspect or perpetrator. The nurses will also establish a collaborative practice with other forensic specialists to enhance the practice of forensic nursing in Kenya, and across the world.

1.3 Goal of the Programme

The goal of Master of Science in Forensic Science is to develop a forensic nurse specialist who is able to identify and provide forensic services to victims, suspects, perpetrators and their families across the life span.

1.4 Intended Learning Outcomes

Upon completion of this programme, the learner should be able to:

1. Understand the history and evolution of forensic nursing
2. Examine Forensic nursing specialty roles in relation to emergent health, ethical, and social issues across service settings.
3. Analyze the influences of societal factors on the quality of client services provided by the healthcare and legal systems
4. Discuss the direct and indirect role of the forensic nurse with victims, families, and perpetrators of violence and crime.
5. Integrate nursing intervention into the legal aspects of care

6. Formulate a framework for forensic practice that incorporates tolerance and sensitivity to individuals of diverse backgrounds
7. Develop evidence based plan of care for immediate trauma and long term recovery from victimization.
8. Formulate prevention strategies for at-risk individuals and populations
9. Synthesize theory and research as these apply to the forensic nurse specialist.

1.5 Modes of Delivery

The following two modes of study shall apply:

a) **Full Time Study –** The program shall extend over a period of two calendar years (24 months) for a full time student.

b) **Part Time Study** – The program shall extend over a period of three years (36 months) for part time students.

1.6 Academic Regulations for the Programme

1.6.1 Admission Requirements for Master of Science in Forensic Nursing

In order to be considered for admission into the above program, the candidate must:

i) Holder a Bachelor of Science in Nursing (BSc.N) from any recognized University

ii) Be registered by the Nursing Council of Kenya (NCK) or its equivalent.

iii) Have a minimum of 2 years working experience in a relevant health institution.

1.6.2 Course Requirements

a) During the first year of study, courses will be offered to equip the students with in-depth knowledge and skills in relevant general and specific areas of Forensic Nursing. Teaching

methodology will consist of classroom instruction, seminars, group discussions and field work

b) A cumulative GPA of at least 3.0 is required to continue in the program.

c) Upon successful completion of the course work, the candidate will proceed to conduct a research project.

1.6.3 Assessment and Examination Policy

During the semester each course will consist of two assessments comprising of Continuous Assessment Tests (CATs) and end of semester examination.

a) Continuous Assessments Tests (CATs) and assignments shall constitute 40% of the final total marks

b) End of semester Examination will constitute 60% of the final total marks

i. The final examinations shall be taken in accordance with general examination regulations of the University

ii. The examinations shall be written and will constitute 60% of final total marks

iii. The pass mark for semester examinations will be 50%

iv. A candidate is required to pass the prescribed semester examinations before proceeding to the next semester.

v. A candidate who fails the semester examination shall be given an opportunity for a re-sit examination

vi. A candidate who fails a re-sit examination may be given a second opportunity to re-sit with approval from the Departmental Faculty Board and Board of Postgraduate Studies

vii. A candidate who fails the second attempt will be discontinued from the program.

viii. In case of discontinuation, a candidate may wish to appeal through University guidelines on appeals.

c) Practical: The students will be required to pass a practicum examination which will be graded separately out of 100%

d) Grading System

i) The Grade Point Average (GPA) system will be utilized. **Semester GPA** is a measure of performance of a student for a semester. A GPA is a number between 0 and 4 inclusive. **Cumulative GPA** is a measure of performance of student for a number of semesters. Like semester GPA, Cumulative GPA is a number between 0 and 4 inclusive

ii) Each course is assessed based on the Continuous Assessment Tests (40%) and the Semester Examinations (60%) and given a **letter grade**. The letter grade **E** denotes a failure grade and has a numerical value of zero. The letter grades with their corresponding **numerical values** (including pluses), form an eight-step grade-point scale as shown below. The letter grades having no corresponding numerical values are the following: **W** = Withdrawn course = **No value; T**= Audited course =**No value; P**=Passed course on Pass/Fail no credit basis =**No value; Q**=Failed course on Pass/Fail no credit basis =**No value**

iii) A course withdrawn after the third week of a trimester is recorded as **W** and has no credit points.

Letter Grade	**Range of marks**	**GPA**
A	75 – 100%	**4.0**
B+	68 – 74%	**3.5**
B	60 – 67%	**3.0**
C+	55 – 59%	**2.5**
C	50 – 54%	**2.0**
D+	45 – 49%	**1.5**
D	40 – 44%	**1.0**
E	0 - 39%	**0.0**

Regulations for Thesis and Supervision

a) A candidate will be required to identify a research area and to write a master's thesis based on original work. Preparation for research shall start as early as possible in the programme

b) A candidate shall prepare and write the thesis according to regulations as in the Common Regulations and Procedures for Post Graduate Studies of their institution

c) A candidate must defend the thesis according to the Supervisory Committee's guidelines.

1.6.4 Degree Award

Candidates who pass both taught courses and research thesis examinations shall be awarded a Master of Science in Forensic Nursing degree.

2.0 COURSES OFFERED FOR THE PROGRAMME

The Master of Science in Forensic Nursing (MSc. FN) will be a 60 Credit hours consisting of Nursing and Forensic courses as shown on the Table 1.

Table 1: List of courses

Course Code	Course Title	Credit Hours
MSFN 511	Advanced Nursing Practice	4
MSFN 526	Biostatistics & Epidemiology	4
MSFN 513	Advanced Pharmacology	4
MSFN 533	Advanced Health Assessment	4
MSFN 532	Advanced Nursing Research	4
MSFN 531	Management and Leadership in Nursing	3
MSFN 525	Pathophysiology	3
MSFN 512	Fundamentals of Forensic Nursing in Health Care	3
MSFN 514	Criminal Law and scientific procedures for evidence collection in nursing and health care	4
MSFN 527	Forensic Care: Psychological and Legal Aspects	4
MSFN 528	Forensic Care of Vulnerable Populations	4
MSFN 534	Forensic Practicum I: Theory	4
MSFN 545	Forensic Practicum	6
MSFN 546	Research Thesis	9
	Total	**60**

2.1 Duration of the Programme

The MSc FN programme shall extend for a minimum of eighteen (18) months and a maximum of twenty four (24) months.

2.2 Structure of the Programme

The courses will be structured on a semester basis with credit hours as shown in Table 2 below

Table 2: Course Structure by Semester

Year One Semester One

Course Code	Course Title	Credit Hours
MSFN 512	Fundamentals of Forensic Nursing in Health Care	3
MSFN 511	Advanced Nursing Practice	4
MSFN 513	Advanced Pharmacology	4
MSFN 514	Criminal Law and scientific procedures for evidence collection in nursing and health care	4
	Total	**15**

Year One Semester Two

Course Code	Course Title	Credit Hours
MSFN 525	Pathophysiology	3
MSFN 526	Biostatistics & Epidemiology	4
MSFN 527	Forensic Care: Psychological and Legal Aspects	4
MSFN 528	Forensic Care of Vulnerable Populations	4
	Total	**15**

Year Two Semester One

Course Code	Course Title	Credit Hours
MSFI 531	Management and Leadership in Nursing	3
MSFN 532	Advanced Nursing Research	4
MSFN 533	Advanced Health Assessment	4
MSFN 534	Forensic Practicum : Theory	4
	Total	**15**

Year Two Semester Two

Course Code	Course Title	Credit Hours
MSFN 545	Forensic Practicum II	6
MSFN 546	Research Thesis	9
	Total	**15**

2.3 COURSE DESCRIPTIONS

MSFN 512 FUNDAMENTALS OF FORENSIC NURSING AND HEALTH CARE (3 Credit Hours)

Course Purpose

This course will expose students to the historical and emerging perspectives of forensic nursing. This will enable the learner to apply forensic principles in various nursing and health care practices

Intended Learning Outcomes

By the end of this course, the learner should be able to:

i. Analyze the historical evolution of forensic nursing as a discipline of health care

ii. Evaluate the influence of political, economic and social factors on the access and delivery of forensic care within the health care environments

iii. Apply cognitive, interpersonal and technical skills in the practice of forensic nursing and health care

iv. Demonstrate ability to develop comprehensive plans of forensic care by integrating the principles of forensic nursing with professional nursing standards

Course Content

Forensic nursing: evolution and historical perspectives; scope of forensic practice; Theoretical Perspectives on Forensics: Theories of Violence, Behavioral Theory; Contexts of violence: racial/ ethnic/ religious/ cultural; Victimization and perpetration: causes and effects of victimization; Trauma response and recovery: psychological perspectives on responses to trauma: coping strategies, facilitating coping; The grief process: manifestations of grief, factors influencing the grief reaction, unresolved grief, interventions to facilitate grief and mourning; impact of culture on trauma and recovery: sensitivity and competency

in dealing with forensic patients: crisis management skills; interviewing skills; The family perspective: family tasks and reactions; family assessment; Blending of forensic science, nursing care, and legal aspects; nurses role within the system; interdisciplinary communication; collaboration with other professionals; Global forensic concerns. Consent, confidentiality, privacy, reporting. Collaboration among medical, criminal justice, law enforcement, psychology and social services. Objectivity in forensic nursing. Practice settings of forensic nurse. History taking/interviewing, documentation, cultural and age appropriate assessment, trauma informed care, identification and recognition of forensic cases, professional ethics, objectivity, role of the FN.

Learning and Teaching Methods

i. Interactive lecture

ii. Self-directed learning

iii. Group discussions

iv. Case presentations

Learning Resources

- Core textbooks
- Computers and LCD
- Hand-outs

Assessment

Assignments & presentations	40%
Written End of Semester Examination	60%

Core Text

1. Lynch, V. A., & Duval, J. B., (2011). Forensic Nursing Science (2nd ed) Elsevier Mosby

Course References/Reference Texts

1. Constantino, R. E., Crane, P. A., Young, S. E. (2013). Forensic Nursing: Evidence-based principles and practice. F A Davis. Philadelphia

2. James. J. & Nordby, D. (2014). *Forensic Science: An Introduction to Scientific and Investigative Techniques.* 3rd Ed. CRC Press.

3. Hammer, R. M., Moynihan, B., & Pagliaro, E.M. (2013). *Forensic Nursing: A Handbook for Practice*. MA, Jones and Bartlett, Sudbury.

MSFN 511 ADVANCED NURSING PRACTICE (4 Credit Hours)

Course Purpose

This course will equip learners with in-depth knowledge, skills and attitude in the conceptual frameworks of nursing profession for application in advanced nursing practice

Intended Learning Outcomes

By the end of this course, the learner should be able to:

1. Analyse the various theoretical and conceptual frameworks in nursing profession
2. Discuss the importance of development of nursing theories and their relationship to nursing.
3. Demonstrate the ability to use critical thinking in decision making related to education and practice.
4. Apply various theoretical and conceptual frameworks in nursing practice

Course Content

Trends in Nursing practice. The changing role of the nurse; the nurse clinician, the nurse advocate, the professional nurse, the nurse executive. Scientific foundations of the Nurse role. Definitions and role differentiation, the Nurse practitioners role in areas of specialization; theories in nursing practice; Nightingales' theory, Peplaus theory, Virginia Henderson's theory; Lydia Halls theory; Dorothy Johnsons theory, Faye Glenn Abdellahs Theory, Ida Jean Orlando, Calista Roy, Betty Neumann and Jean Wattson Theories. Modalities of Nursing care delivery; Primary nursing, case assignment. Functional nursing team Nursing. Bioethical concerns in Nursing, Legal issues in Nursing practice. Concepts of health and illness; HIV/AIDS. The Nursing process; assessments diagnosis, planning, intervention, rationale and evaluation. Philosophies, conceptual models i.e

Benner, Globalization and nursing,Technology and nursing, Culture and diversity, Vulnerable populations.

Learning and Teaching Methods

i. Interactive lecture

ii. Self-directed learning

iii. Group discussions

iv. Case presentations

Learning Resources

- Core textbooks
- Computers and LCD
- Hand-outs

Assessment

Assignments & presentations	40%
Written End of Semester Examination	60%

Core Texts

1. McEwen, M.,& Wills, E. M., (2014). *Theoretical basis for nursing.4th Edition.* Philadelphia, Lippincott Ltd.
2. Rider Ellis, J. L. & Love Hartley, C. (2001). *Nursing in Today's World: Challenges, Issues and Trends*. 7th Ed. Philadelphia, Lippincott Ltd.

MSFN 513 FORENSIC PHARMACOLOGY (4 Credit Hours)

Course Purpose

This course offers the learner a unique exposure to drugs encountered in forensic work. It offers a comprehensive account of pharmacological methods and knowledge and explains their use in solving a wide range of crimes. It also deals with negligence in prescribing and administering drugs and adverse reaction to drugs. The course also introduces the learner to the basic principles of toxicology.

Expected learning outcomes

By the end of the course the learner will be able to:

1. Demonstrate acquisition of knowledge of the pharmacological methods used in Forensic work.
2. Explain how the various drugs used in forensic work are used in solving crime.

Course Content

General considerations: Drugs, their behavior and their effects on the body; Analyses of drugs and drug concentrations in blood and other body compartments; Legal considerations. **Specific problems:** Effects of drugs on behavior; Effects of drugs on victims of crime; Negligence and medicines. **Specific drugs of forensic importance:** Ethanol; benzodiazepines; Insulin; Potassium Chloride and other potassium salts; Antipsychotics; Opiates and related drugs; Vaccines; Paracetamol; Anabolic androgens(Steroids).

Mode of delivery

- Lectures
- Class Discussion

- Assignments
- Case Studies
- Self-Directed Learning

Instructional materials and /or equipment

- Internet and computers
- LCD
- E-learning

Learning Resources

- Core textbooks
- Computers and LCD
- Hand-outs

Assessment

Assignments & presentations	40%
Written End of Semester Examination	60%

Core Texts

1. Burns, M, (2006). Medical legal Aspects of Drugs. Lawyers and judges publishing Oxford University Press
2. Zedeck, B. E., Zedeck, M. S. (2007). Forensic Pharmacology. Chelsea House publications

Course References/Reference Texts

1. Kartzung, B. G. (2011). Basic and Clinical Pharmacology: McGraw-Hill; 12th Edition
2. Goodman and Gilman's (2009): The Pharmacological Basis of Therapeutics; Edited by J.G. Hardman et al; McGraw-Hill, 12th Edition
3. H.P Rang, M.M Dale et al (2005): Pharmacology; Churchill Livingstone, 5th Edition
4. Drummer., O. H., Odell, M. (2001). Forensic Pharmacology of drugs of abuse. Hodder education publishers
5. Mozayani, A., Raymon, L. (2011). Handbook of drug interactions: A clinical and Forensic guide**.** Humana Press

MSFN 514 CRIMINAL LAW AND SCIENTIFIC PROCEDURES FOR EVIDENCE COLLECTION IN NURSING AND HEALTH CARE (4 Credit Hours)

Course Purpose

This course will expose learners to the broad perspectives of legal processes and the role of the forensic nurse in criminal law.

Intended Learning Outcomes

By the end of this course, the learner should be able to:

i. Discuss criminal and civil justice institutions and procedures
ii. Analyze practical issues related to the ethical and legal aspects of evidence procedures
iii. Examine the various types of physical and clinical testing of the multitude of evidence that may be collected in any one case
iv. Examine criminal applications of forensic practice related to violence against women, elder abuse, and forensic psychiatric-mental health nursing
v. Describe the role and use of forensic science in criminal proceedings

Course Content

The criminal justice system in Kenya: Criminal code, Legal terminology, rules of evidence, courtroom procedure, courtroom demeanor **Legality:** actus reus, mens rea, strict liability, causation, insanity, intoxication, mistake, justification, excuse, parties, attempt, conspiracy, and homicide; **Relevancy:** authentication, the "Best Evidence" doctrine, categorical rules of exclusion; Examination and impeachment of witnesses, opinion and expert testimony; **Collection and preservation of evidence:** examination of victims, documentation, classification of wounds and injuries; Chain of custody/continuity of evidence. **Presentation of evidence:** privilege, the hearsay rules and exceptions, presumptions and burdens of proof; **Procedures of arrests:** search, seizure,

interrogation, pre-trial identification, pre-trial release and preventive detentior discovery and disclosure, guilty pleas, and double jeopardy; deterrents to crime and criminal justice systems.

Learning and Teaching Methods

- ✓ Interactive lecture
- ✓ Self-directed learning
- ✓ Group discussions
- ✓ Case presentations

Learning Resources

- Core textbooks
- Computers and LCD
- Hand-outs

Assessment

Assignments & presentations	40%
Written End of Semester Examination	60%

Core Textbooks

1. Evans, C. (1996). *The Casebook of Forensic Detection*. Wiley & Sons, Inc. New York.
2. James. J. & Nordby, D. (2014). Forensic Science: An Introduction to Scientific and Investigative Techniques. *(*4th Ed). CRC Press.
3. Shelton, E., (2011). Forensic Science in Court: Challenges in the twenty-first century. Rowman & Littlefield Publishers,Inc UK.

MSFN 525 PATHOPHYSIOLOGY (3 Credit Hours)

Course Purpose

This course aims at equipping learners with knowledge and skills on pathophysiological processes at the cellular/ system level with manifestations of signs, symptoms or laboratory findings. It explores various factors in relationship to the pathogenesis of diseases.

Intended Learning Outcomes

At the end of this course, the learner will be able to:

1. Describe pathophysiology of the common disorders involving various parts of the body system.
2. Describe the process of inflammation and mechanism of body self-defense.
3. Explain the clinical manifestations of pathophysiological processes.
4. Demonstrate ability to carry out and interpret basic laboratory tests

Course content

Basic concept of pathophysiology: The cell; Altered cellular and tissue biology; Genes and gene – environment interaction, Mechanisms of the body self defence; Immunity; Infection and changes in immunity and inflammation, Stress and disease; Humoral response, Cellular proliferation, Biology of Cancer; Tumor invasion and metastasis, Amyloidosis, **Pathophysiological changes of organ systems;** Neurologic system; Concepts of neurologic dysfunction; Alterations of neurologic function in adult and children. **Endocrine system:** Mechanisms and changes of hormonal regulation; Growth disorders, **Reproductive system;** Alterations of the reproductive systems, sexually transmitted infections. **Hematologic system:** Alterations of hematologic function; Disorders of the blood in adult and children, Conditions associated with high or low erythrocyte, leukocyte, lymphoid and their causes, Thromboses and embolism, Anemia; iron deficiency,

Pernicious anemia, Sickle cell anemia, Thalassemias; Alpha and Beta Thalassemias, Hemophilia, Malignant and benign disorders of blood; Leukemia- Myelocytic and lymphocytic, Chronic Vs Acute, Myeloma, Hodgkin's and non-Hodgkin's lymphoma. **Cardiovascular system;** Hypertension; chronic and essential, Congestive heart failure, Endocarditic, Congenital disorders, Dysrhythmias and arthymias Lymphatic system: Lymhoid tissue disorders, elephantiasis, **Pulmonary system**; Lower respiratory infections and tumors; asthma, pneumonia, tuberculosis and others, Upper Respiratory tract infections and tumors, **Renal and Urologic system**: Infections; glomerulonephritis, Cystitis, arthritis, **Digestive system**: condition affecting oral cavity, liver and pancreatic functions motility, upper and lower alimentary tract. **Musculoskeletal system:** Type of bones fractures, Common disorders of bone, malignant bone tumors; Osteosarcomas, Osteoarthritis, Rheumatoid arthritis, Scoliosis. **Integumentary system;** Skin lesions, Malignant and non malignant lésions, cutaneous infections, inflammatory conditions

Multiple organs dysfunction syndrome; Shock (cardiogenic, hypovalemic neurogenic, anaphylactic, and septic), **Burns & Scalds:** Classification

Mode of delivery

- Lecture
- Small group discussion
- Group presentations
- Demonstrations

Methods of Assessment

Assignments & presentations	40%
Written End of Semester Examination	60%

Instructional Materials and Equipment

- Books and manuals
- Handouts
- Internet sources

Core text

1. Porth, C. (2005). Pathophysiology: Concepts of altered health states. (7th Ed.). Philadelphia: Lippincott. ISBN 10: 0781749883, ISBN: 9780781749886.

Course References/Reference Texts

1. Harsh, M. (2005). Textbook of Pathology. (5th Ed.). ISBN 9781 904 798194.
2. Huether, S.E. & McCance, K. L. (2004). Understanding Pathophysiology. (3rd Ed.). St. Louis: Mosby. [PACKAGE] ISBN 10: 0323082811X, ISBN 13: 9780323028110.
3. Jarvis, C. (2004). Physical Examination and health assessment. (4th Ed.). Philadelphia: W. B. Saunders. ISBN 10: 0721697739, ISBN 13: 9780721697734.
4. Kumar, V., Cotran, R.S. & Robbins, S.L. (2003). Robbins Basic Pathology. (7th Ed.). Philadelphia: Saunders.
5. Springhouse. (2007). Fluids and electrolytes made incredibly easy. (4th Ed.). Springhouse. ISBN 10: 1582555656, ISBN 13: 97811582555652.

MSFN 526 BIOSTATISTICS AND EPIDEMIOLOGY (4 Credit Hours)

Course Purpose

The main aim of the course is to enable learners acquire competences on statistical procedures relevant to nursing research and public health statistics. The emphasis will be on descriptive and inferential statistics and statistical evaluation of qualitative and quantitative research.

Expected Learning Outcomes

By the end of this course, the learner should be able to:

1. Distinguish the characteristics and uses of descriptive and inferential statistics.
2. Demonstrate the ability to use appropriate statistics relevant in nursing research.
3. Discuss statistical procedures utilized to analyze both quantitative and qualitative data.
4. Evaluate a researcher's presentation of statistical information in a report.
5. Discuss public Health statistics.

Course Content

1. Statistical procedures relevant to nursing research to include; descriptive and inferential statistics, measures of central tendency, normal distribution, and correlation coefficient, parametric and non-parametric tests.
2. Applications and principles of regression and analysis of covariance.
3. Statistical methods critique from published nursing research.
4. Exploration of Public health statistics; ratios proportions, mortality and morbidity rates.

Teaching/Learning Methods

- Lectures
- Group discussions
- Self-directed learning
- Individual and group assignments
- Case studies

Teaching/Learning Resources

- Textbooks
- Computers and LCD
- Handouts
- Library

Assessment

- CATs 40%
- Trimester Examination 60%

Core Textbooks

1. Daniel, W. W. (2005) Biostatistics; A Foundation for Analysis in the health Sciences. Published by Wiley.
2. Munro, B. H. (2005) Statistical Methods for Health Care. Philadelphia, Lippincot Williams and Wilkins.
3. Rosner, B. A (2005) Fundamental of Biostatistics: Thomson Brooks/Cole.

Course References/Reference Texts

1. Dawson-Sounders, B and Trapp R. G. (1994) Basic and Clinical Biostatistics 2nd ed. Appleton and Lange.
2. Glantz, S. A. (2005) Primer of Biostatistics, 6th ed. McGraw Hill.
3. McLaughlin, Frank E (1990) Advanced Nursing and Health Care Research; Quantitative Approach, Philadelphia: W. B Saunders Company.

MSFN 527 PYCHOSOCIAL AND LEGAL ASPECTS OF FORENSIC NURSING AND HEALTH CARE (4 Credit Hours)

Course Purpose

This course will expose learners to the intensive examination of the behavior, emotional responses and cognitive decision making of both the victim and perpetrator of a crime. This will enable student to conduct intensive examination of issues within the subspecialties of sexual assault nurse examiner, child abuse, elder abuse specialist, battered woman specialist, psychiatric forensic examiner and legal nurse consultant.

Intended Learning Outcomes

By the end of this course, the learner should be able to:

1. Describe the interfaces of health care and legal system in providing care to victim and perpetrators of crime
2. Examine recognition, collection, analysis and preservation of physical evidence.
3. Compare and contrast various types of clinical testing and multitude of types of evidence that may be collected in any one case.
4. Synthesize objective and subjective data to support assessment of forensic care needs of patients and families in a variety of clinical settings
5. Apply strategies to overcome patient, clinician, health care system, social, legal and economic barriers to resource management and trauma recovery
6. Understand the psychological impact of trauma and provide trauma sensitive care that mitigates psychological sequlae
7. Determine case management strategies through case-based studies of forensic patients, their families, and perpetrators

8. Analyze practical issues related to the roles and subspecialties with forensic practice

Course Content

Violence is a healthcare issue. Core domains of forensic nursing; caring, holism, person-centred, collaboration, sociological/social justice, criminal justice. Public health. Typologies of perpetrators i.e sexual offenders, murderers, child abusers, pedophiles etc, motivation, profiling; Theories of victimization and perpetration: perpetrator typologies and profiling; Ethical and Legal Issues related to forensic care. Legal responsibilities in forensic care; Professional socialization: the role of the Forensic nurse; Competency in caring for forensic clients: culturally sensitive care; Entry level vs. advanced practice roles in all areas of forensic nursing, neurophysiology of pain and the physical response; Neurobiology of trauma, trauma informed care, post-traumatic stress and cultural interpretation. Intergenerational trauma. Rape-trauma syndrome.

Practical issues: case management, interventions for subspecialties of violence against women, elder abuse, and forensic psychiatric-mental health; child abuse ; Legal process and assessment criteria needed for prosecution: role of the forensic practitioner in providing testimony for court; Prevention levels of prevention (primary, secondary, tertiary) and risk reduction. Program evaluation. Performance measurement. Populations at risk for victimization and perpetration of violence. Social issues/ social determinants of health (racism, poverty, social inequities.

Learning and Teaching Methods

- ✓ Interactive lecture
- ✓ Self-directed learning
- ✓ Group discussions
- ✓ Case presentations

Learning Resources

- Core textbooks
- Computers and LCD
- Hand-outs

Assessment

Assignments & presentations	40%
Written End of Semester Examination	60%

Core Texts:

1. James & Nordby (ed.) (2014). Forensic Science: An Introduction to Scientific and Investigative Techniques. 3rd Edition. CRC Press.

2. Lynch & Duval (ed.) (2011). Forensic Nursing Science. 2nd Edition. Elsevier

3. US Federal Rules of Evidence. (any unabridged source)

   Commonwealth of Massachusetts Rules of Evidence. (Any unabridged source)

   [Recommended, but not required]

   You may be able to find both on the internet, but it's not worth the paper it will take

Course References/Reference Texts

1. Saferstein, R. (2014). Criminalistics. Prentice Hall.
2. Evans, Colin. (1996). The Casebook of Forensic Detection. Wiley & Sons, Inc. New York.
3. Wambaugh, J. (1989). The Blooding. Bantam Books. New York. (Or anyone's edition)

MSFN 528 FORENSIC NURSING AND HEALTH CARE OF VULNERABLE POPULATIONS (4 Credit Hours)

Course Purpose

This course will expose learners to the role of forensic nurses in providing assessment, diagnosis, treatment, and advocacy services to vulnerable groups of patients

Intended Learning Outcomes

By the end of this course, the learners should be able to:

1. Examine the societal factors that influence the quality of client services provided the healthcare and legal systems
2. Analyze the direct and indirect role of the advanced practice nurse with victims, families, and perpetrators of violence and crime
3. Develop evidence based plans of care for immediate trauma and long term recovery of victims, families, and perpetrators of violence and crime
4. Formulate a framework for forensic practice that incorporates tolerance and sensitivity to individuals of diverse backgrounds
5. Formulate prevention strategies for at-risk individuals and populations

Course Content

Role of forensic nurse in scientific investigation of trauma, violence and crime; Interventions in family violence, violence against women, interpersonal victimization and forensic psychiatric-mental health; Violence and abuse in marginalized groups such as ethnic minorities, and immigrants, children, elders, mentally ill, impoverished, sex trade workers, homosexual, criminals; Collaborating and coordinating plan of care with medical, psychological, social services, law enforcement and criminal justice system; Recognition of at-risk populations, prevention efforts for

victimization and re-victimization; Promoting evidence-based practice and developing outcomes and evaluation. Stages of change. Mandatory reporting obligations.

Learning and Teaching Methods

- ✓ Interactive lecture
- ✓ Self-directed learning
- ✓ Group discussions
- ✓ Case presentations

Learning Resources

- Core textbooks
- Computers and LCD
- Hand-outs

Assessment

Assignments & presentations	40%
Written End of Semester Examination	60%

Core Texts

1. Constantino, R. E., Crane, P. A., Young, S. E. (2013). Forensic Nursing: Evidence-based Principles and practice. F A Davis. Philadelphia
2. Darnell, C., (2013). Forensic Science in Health care: Caring for patients, preserving evidence. CRC Press.

Course References/Reference Texts

1. Campbell, J. C. (2007). Violence and batterers and child abusers: Assessing dangerousness (2nd ed) Springer. New York.
2. Humpreys, J. & Campbell, J. (2011). *Family violence and nursing practice*. (2nd Ed.) Springer.
3. Hammer, R. M., Moynihan, B., & Pagliaro, E.M. (2013). *Forensic Nursing: A Handbook for Practice*. MA, Jones and Bartlett, Sudbury.
4. James. J. & Nordby, D. (2014). Forensic Science: An Introduction to Scientific and Investigative Techniques. *(*4th Ed). CRC Press
5. Kristoff, N. D. & WuDunn, S. (2009) Half the Sky: *Turning Oppression into Opportunity for Women Worldwide*. Vintage; Random House. New York.

MSFN 531 MANAGEMENT AND LEADERSHIP IN NURSING (3 Credit Hours)

Course Purpose

The course is designed to enable learners acquire relevant competencies in health systems management to improve health care organizations and educational institutions. The course will focus on health information systems, performance, health financing policies and health care economics.

Expected Learning Outcomes

By the end of this course, the learner should be able to:

1. Discuss the health care systems and different modes of health service delivery.
2. Analyze the role and impact of managed health care.
3. Describe the concepts and principles of management information system
4. Demonstrate the ability to establish appropriate information systems for management functions.
5. Discuss concepts and principles in health care financing and budgeting
6. Identify and analyze various approaches of managing finances in health care organizations and educational institutions.
7. Demonstrate ability to budget and institute control mechanisms to sustain budgets in educational organizations.

Course Content

1. The structure and levels of health care systems with reference to Kenya.
2. The role and impact of managed health care to include objectives and types, key players in health care systems nationally, regionally and internationally.

3. Management information systems; including types of information systems, classification, sources of data, methods and techniques of collecting data.
4. Financial management in health systems; approach of managing finances for educational institutions, sources of finances, accounting procedures, budget and budgeting.

Teaching/Learning Methods

- Lectures
- Group discussions
- Self-directed learning
- Individual and group assignments
- Case studies

Teaching/Learning Resources

- Textbooks
- Computers and LCD
- Handouts
- Library

Assessment

- CATs 40%
- Trimester Examination 60%

Core Textbooks

1. Charles J. Austin and Stewart B. Buterman (2003) Information for Health Care Management. Administration Press.
2. Laidner, D. (2003). Strategic Information Management. Health Butterworth, Heineman.
3. Williams, S. J. (2002). Introduction to Health Services. Thomson Delmar Learning.

Course References/Reference Texts

1. Foege, H. William (2005) Global Health Leadership and Management, San Francisco: Jossey Bass
2. Shortell, Stephen M and Arnold, D. kalzny (1997) Essentials of Health Care Management, USA: Delmar Publishers.
3. Vissers, Jan (2005) Health Operations Management, London. Routledge

MSFN 532 ADVANCED NURSING RESEARCH (4 Credit Hours)

Course Purpose

This course will equip learners with in-depth knowledge in research methodology to enable conduct evidence- based research in nursing education and utilize results for decision making and improvement of educational programs.

Intended Learning Outcomes

By the end of the course, the learners should be able to:

1. Identity and describe the steps/process of conducting scientific research
2. Demonstrate ability to utilize different types of research designs and methodologies
3. Demonstrate the ability to design different types of research instruments
4. Critically evaluate various published nursing research in terms of their scientific merit
5. Apply the principles of research to develop a research proposal and thesis.
6. Present and utilize the findings of scientific studies as a basis for making decisions in education
7. Discuss and apply the research process to promote the body of nursing knowledge

Course Content

Scientific research: importance and purposes of research; Core aspects of the research process: problem definition, hypotheses formulation, review of literature; probability theory and sampling techniques, research design and development of research instruments; Qualitative and quantitative

research; Data collection procedures, analysis and presentation; the principles and process of writing research proposal, thesis and dissemination of information and publication; Critical analysis of theory and research findings related to nursing education; Evaluation and grading of research studies. Scientific reviews. Levels of evidence. Ethical issues in research. Literature search.

Learning and Teaching Methods

- ✓ Interactive lecture
- ✓ Self-directed learning
- ✓ Group discussions
- ✓ Case presentations

Learning Resources

- Core textbooks
- Computers and LCD
- Hand-outs

Assessment

Assignments & presentations	40%
Written End of Semester Examination	60%

Core Textbooks

1. Burns, N. & Grove, S.K. (2013) *The Practice of Nursing Research: Conduct, Critique, and Utilization*. Elsevier/ Saunders.
2. Polit, D.F. & Beck Tatano, C. (2015). *Nursing Research: Generating and Assessing Evidence for Nursing Practice*. Lippincott Williams & Wilkins.

MSFN 533 ADVANCED HEALTH ASSESSMENT (4 Credit Hours)

Course Purpose

The overall goal for this course is to enable the student to acquire knowledge and skills in assessment of patients/clients. It involves both collection and data analysis for clinical decision making. Developmental/physical changes are taken into consideration.

Expected Learning Outcomes

By the end of this course, the learner should be able to:

1. Describe various methods of assessments - including interviewing, observation and physical assessment.
2. Conduct clinical interviewing
3. Conduct a complete physical examination.
4. Analyze and record data utilizing the functional health patterns.

Course Description

Assessment of the whole person; Conducting health history, Ethical considerations, Basic guidelines for the interview, Complete health history, Biological data, Source of data, Present health or history of present illness **Past health and developmental history,** Family health; Developmental considerations through lifespan, General survey of the individual, Physical appearance, Body structure, Mobility, **Behaviour**, **Measurement**, Weight, Height, **Vital signs**, Temperature, pulse, Respiration, blood pressure, **Assessment** using Gordon's functional health patterns, **Physical examination techniques,** Inspection, Palpation, Percussion, Auscultation

Methods of Teaching

- Lecture
- Demonstration

- Role play
- Small group exercise

Assessment

- CATs 40%
- Trimester Examination 60%

Course Texts

1. Jarvis, C. (2000) Physical Examination and Health Assessment (3rd edn.), W. B. Saunders.

Course References/Reference Texts

1. Barbarito D (2007) Health and Physical Assessment in Nursing, Pearson education Inc.
2. Bickleys S. L(2007) Guide to Physical Examination and History taking (9th edn.), Lippincott Williams & Wilkins
3. Fuller, J and Schaller-Ayers, J. (1994) Health Assessment: A Nursing Approach. (2nd edn.), L. B. Lippincott

MSFN 534 FORENSIC NURSING PRACTICUM I (4 Credit Hours)

Course Purpose

This course will prepare learners to integrate advanced knowledge of forensic care in assessing and managing the symptoms of those experiencing violent crime as victims, family members, and perpetrators within the forensic care focus. Complex psychological, ethical, social and spiritual issues and emotional reactions will be the focus of the development of a practicum plan.

Intended Learning Outcomes

By the end of this course, the learner should be able to:

1. Works with a forensic care team to conduct a comprehensive forensic nursing evaluation and assessment
2. Evaluate outcomes of care using established forensic care standards and criteria
3. Formulate an innovate forensic nursing programme of management of patient care
4. Develop a preventive initiative in forensic practice across diverse health care settings

Competencies

1. Collection, preservation and examination of evidences in the crimes related sexual offences
2. Collection, preservation and processing of evidences in burns cases
3. Collection, preservation and examination of evidences in cases of asphyxia deaths
4. Collection of evidences in cases of drowning deaths
5. Collection of evidences in cases of child abuse
6. Collection, preservation and examination of evidences in injuries of all types and forms
7. Documentation in emergency rooms in the relevant cases
8. Evidence collection for toxicological analysis in cases of poisoning
9. Examination of victims of child abuse

10.Emergency room nursing management – forensic perspective 11.Identification features for personal identity

Learning and Teaching Methods

- ✓ Seminars
- ✓ Shared content with forensic team

Assessment

Appraisal report from person in charge of clinical agency	50%
Practical assessment based on competencies	50%

MSFN 534 FORENSIC NURSING PRACTICUM II: CLINICAL ATTACHMENT (6 Credit Hours)

Course Purpose

This course will prepare learners to integrate advanced knowledge of forensic care in assessing and managing the symptoms of those experiencing violent crime as victims, family members, and perpetrators within the forensic care focus. Complex psychological, ethical, social and spiritual issues and emotional reactions will be the focus of the development of a practicum plan.

Intended Learning Outcomes

By the end of this course, the learner should be able to:

1. Demonstrate ability to conduct forensic assessment within practical settings
2. Conduct advanced forensic nursing role in the care of victims, families, and perpetrators of violent crime
3. Evaluate outcomes of forensic nursing practice and share content.

Competencies

1. Observation, History taking, Interview, Mental Status Evaluation, Investigations and Recording of Collected information (with special reference to Forensic Cases)
2. Forensic Counselling of victims/witnesses/criminals
3. Psychological Rehabilitation of the victims/criminals
4. Forensic investigative methods for the assessment of perpetrators
5. Counselling Techniques from rehabilitation aspects
6. Forensic Rehabilitation and Family counselling
7. Minimum five case studies/case presentation

Learning and Teaching Methods

- ✓ Clinical tasks

Assessment

Appraisal report from person in charge of clinical agency	50%
Practical assessment based on competencies	50%

MSFN 546 RESEARCH/ THESIS (9 Credit Hours)

Course Purpose

This course will provide the learners with an opportunity to develop and carry out an appropriate research thesis in forensic nursing. The research should be original and should contribute to the body of forensic nursing knowledge.

Intended Learning Outcomes

By the end of this course, the learner should be able to:

1. Identify and develop a relevant research title in forensic nursing
2. Formulate and defend a research proposal
3. Carry out a research project based on the proposal
4. Prepare and present a thesis

Course Content

This is a practical course in which the student will engage with supervisors to the end.

Learning and Teaching Methods

- ✓ Consultation and supervision
- ✓ Seminars
- ✓ Presentations and discussions

Assessment

Proposal Development and Presentation	40%
Defense and Presentation of the Final Thesis	60%

Core Texts

1. Burns, N. & Grove, S.K. (2013) *The Practice of Nursing Research: Conduct, Critique, and Utilization.* Elsevier/ Saunders.
2. Polit, D.F. & Beck Tatano, C. (2015). *Nursing Research: Generating and Assessing Evidence for Nursing Practice.* Lippincott Williams & Wilkins

Experts review of the curriculum

The evidence- based curriculum was further subjected to forensic nursing expert judgement. The experts' comments and suggestions (See attached full report) were taken into consideration in amending the forensic nursing curriculum presented in this study.

Overall, both reviewers reported that this dissertation makes an important contribution to the forensic nursing literature. It also provides evidence for the need for education and implementation forensic nursing in Kenya and throughout the world and the subsequent benefits to the healthcare system, society, patients and communities.

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APPENDICES

Appendix 1: Consent Explanation Form.

Dear respondent,

My name is Irene Mageto. I am a student at the University of Nairobi pursuing a Doctoral degree in Nursing. One of the requirements of this degree is that a student carries out a research study of their choice. I am carrying out a training needs assessment for forensic nursing in Kenya. I have developed a questionnaire which will aid me in obtaining the information I need in order to complete this study. I am kindly requesting you to participate in the study by filling in the questionnaire. Participation is voluntary and there is no penalty for declining to participate. There are no risks or costs involved.

The information you provide will be kept confidential. You are not required to write your name on the questionnaire. The only people who will have access to the questionnaires are the researcher and the research assistants. After completion of the study all records will be destroyed.

You are free to refuse to participate and withdraw from the study at any time without fear or victimization.

The results of this study will help the researcher to develop an evidence based curriculum for training forensic nurses in Kenya. This will help improve patient care outcomes and inform policy on training. If you have any questions about this study, you can contact the researcher on 0724205419. If you want to ask someone independent anything about this study please contact:

The Director

School of Nursing Sciences

University of Nairobi

P.O Box 19676 – 00202

Nairobi

Declaration of the respondent

I have read and understood the purpose of the study. I consent voluntarily to participate in the study.

Signature of participant.....

Investigator.....

Date.....

Appendix 2: Questionnaire for Nurses

INTRODUCTION

1. Information obtained with this questionnaire is for study purposes only. Your responses will be held in total confidence.

2. Do not write your name on the questionnaire.

3. The questionnaire has four sections. Please complete all the sections.

4. Place the filled questionnaire in the envelope provided and seal it. Hand it over to the researcher or the research assistants.

Section A: Demographic factors:

Write/choose the most appropriate responses.

1. Hospital _____

2. Age_____ years

3. Gender

[1] Male ☐ [2] Female ☐

4. Nationality _____

Section B: Professional information.

5. Indicate your nursing qualification.

[1] EN/ECN☐ [2] KRN/KRM☐ [3] KRCHN ☐ [4] BScN☐

[5] MScN☐(Specify area of specialization)_____

[6] Other_____

6. List other courses you have undertaken to improve your work performance.

.....

.....

7. What is your designation?

[1]EN/ECN I, II, or III☐ [2] No III☐[3] No II☐

[4] No I☐ [5] SNO ☐Other (specify)_____

7. How long have you practiced nursing _____

8. How long have you worked at Mathari ☐Nairobi Womens' Hospital GVRC ☐Kenyatta National Hospital ☐.

Section C: Forensic Protocols/Education

9. Are you aware of the forensic nursing specialty? [1]Yes☐ [2] No ☐

If yes explain_____

_____

10. Have you ever received any training in the forensic sciences?[1] Yes☐[2] No☐

If yes, explain_____

_____

11. Is there need to have forensic nursing training in Kenya? [1] Yes☐ [2] No☐

12. What aspects of forensic nursing would you like to see included in the current nursing curricula?_____

_____

_____

13. Have you ever collected forensic evidence in your work place? [1] Yes ☐ [2] No ☐

If yes explain_____

_____

14. What special skills do you require in order for you to care for forensic patients appropriately?

_____

_____

20. In your own opinion what are the barriers to forensic nursing practice in Kenya today?

_____

_____

A Rating Scale to evaluate current nursing curriculum in regard to Forensic nursing preparation/content

The ratings are ranked with weights as follows

Strongly disagree [1] disagree [2] Uncertain [3] Agree [4] Strongly agree [5]

Sr. No	**Please indicate the extent to which you agree or disagree with the following statements**	**Strongly agree[5]**	**Agree[4]**	**Disagree[2]**	**Strongly disagree[1]**
1.	Current nursing curriculum is based on the needs of the society				
2.	Current nursing curriculum is comprehensive				
3.	Current nursing curriculum helps me in developing skills that equip me to practice care for forensic patients adequately				
4.	Current nursing curriculum is based on the global health standards for caring for forensic patients.				
5.	Current nursing curriculum prepares me as an expert nurse in all subspecialties of nursing including forensic nursing				
6.	Current nursing curriculum is flexible to the changing trends of Kenyan society				
7.	Current nursing curriculum equips me to function effectively as a member of the health team charged with care of forensic patients.				
8.	Current nursing curriculum prepares me to practice competently in forensic care setting				

Section D: Attitudes and beliefs

The ratings are ranked with weights as follows

Strongly agree [5] Agree [4] Uncertain [3] disagree [2] strongly disagree [1]

No.	Please indicate the extent to which you agree or disagree with the following statements	Strongly agree [5]	Agree [4]	Disagree [2]	Strongly disagree [1]
1	Forensic education is important in the practice of nursing care				
2	Forensic protocols are important in hospitals				
3	I am not adequately trained to address forensic issues.				
4	There is no time to worry about forensics in hospitals.				
5	The patient's medical needs are the most important				
6	I am uncomfortable dealing with victims of violence.				
7	Forensic issues should be catered for by the police.				
8	Collection of forensic evidence from a patient is a nurse's role.				
9	I would like more training to deal with forensic patients in my practice				
10	I would not want to go to court				
11	Forensics is really not my responsibility				

Appendix 3: Focused Group Discussion Guide

Q1. Are you aware of forensic nursing as a specialty of nursing?

Q2. What is your perception of forensic nursing in Kenya?

Q3. Would you accept to teach forensic nursing?

Q4.The new NCK syllabus requires 22 contact hours of forensic nursing: Are you adequately prepared to carry out this task?

Q6. What aspects of forensic nursing would you like to see included in the current nursing curricula?

Appendix 4: Key Informant Interview Guide

Q1. What triggered the inclusion of forensic nursing by the Nursing Council of Kenya?

Q2. How many Universities have included the 22 hours forensic nursing content in their curricula?

Q3. What is the status of Forensic Nursing in Kenya?

Appendix 5: Letter for Approval by KNH Ethics and Research Committee

Mageto I. Gacheri
P.O. Box 30269 – 00100
Nairobi, Kenya.

3rd June 2013

The Chairman,
KNH Ethics and Research Committee,
P.O. Box 20723- 00202
Nairobi, Kenya.

Dear Sir/Madam,

REF: AUTHORITY TO CARRY OUT RESEARCH

I am writing to request your permission to carry out a "Training needs assessment for forensic nursing among nurses at the Kenyatta National Hospital's Emergency Department, Nairobi Women's Hospital's Gender Violence Recovery Center and Mathari Psychiatric Hospital's Maximum Security Unit.

The research findings will enable me to develop an evidence based curriculum on forensic nursing thus improving patient care and outcomes in Forensic settings in Kenya.

Your kind consideration will be highly appreciated.

Yours faithfully,

Mageto I. Gacheri
PhD Candidate.
University of Nairobi.