

**FACTORS CONTRIBUTING TO ACADEMIC PERFORMANCE  
OUTCOMES IN INSTITUTIONAL EXAMINATIONS AMONG NURSING  
STUDENTS AT THE KENYATTA NATIONAL HOSPITAL SCHOOL OF  
NURSING**

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EDUCATION, DEPARTMENT OF HEALTH SYSTEMS, SCHOOL OF  
PUBLIC HEALTH, AMREF INTERNATIONAL UNIVERSITY**

**JULY 2024**

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This research thesis is my own work and has not been submitted in any other institution for examination or any award.

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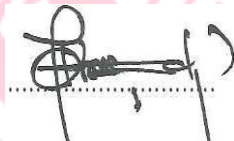
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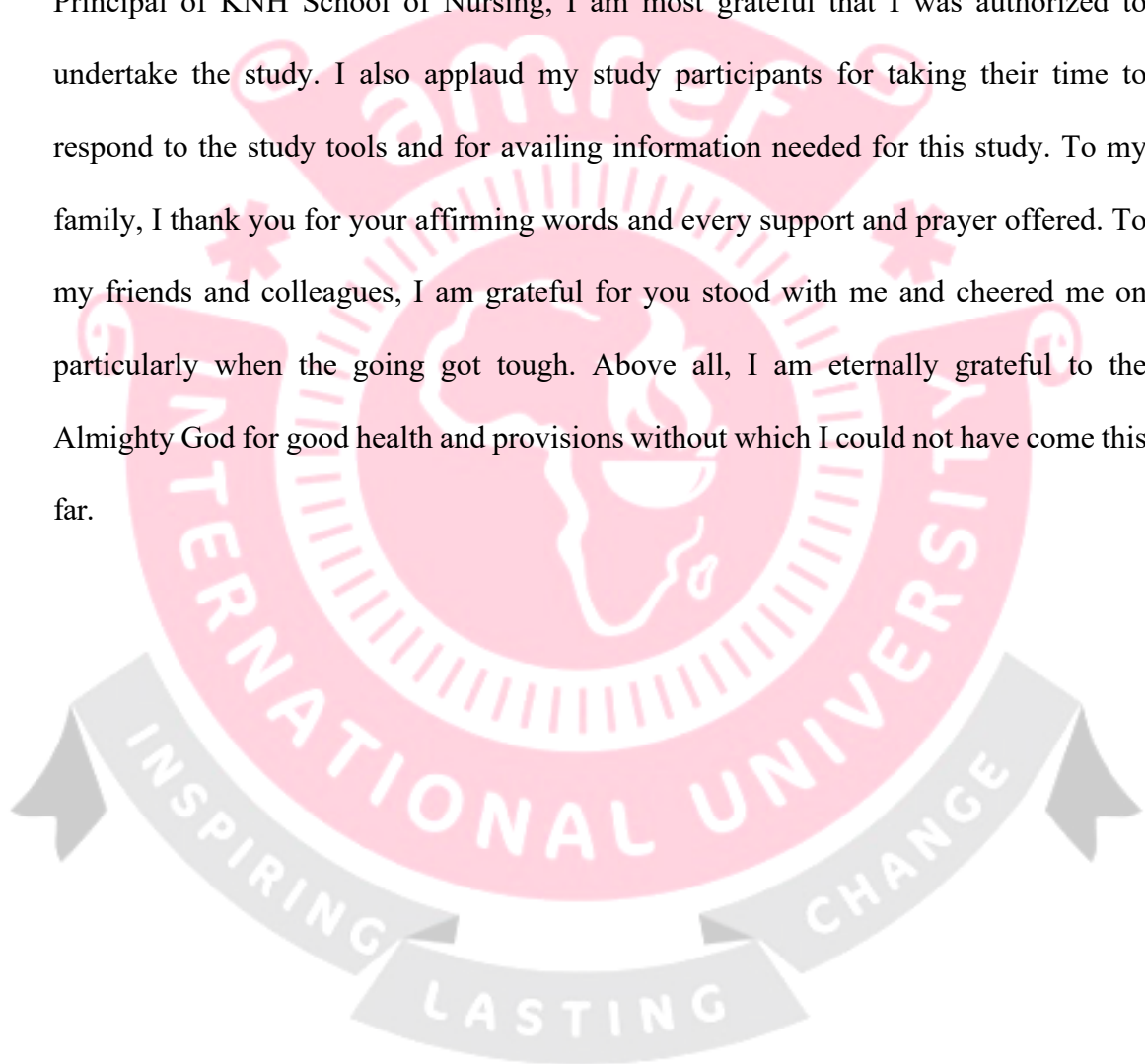
## DEDICATION

To my family - for all the shared memories, love and for being my biggest cheerleaders.



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## ABSTRACT

**Background:** Institutional examinations are critical drivers of students' learning process, outcomes and progress. However, gaps in academic performance outcomes of nursing students at the Kenyatta National Hospital (KNH) School of Nursing were noted occasioning this study.

**Objectives:** To investigate the factors (individual, nurse educators and institutional related) contributing to academic performance outcomes in institutional examinations among nursing students at the KNH School of Nursing.

**Methods:** This was a mixed-methods cross-sectional study conducted among 101 nursing students (57 Critical care nursing and 44 Nephrology nursing) and 23 faculty members at the KNH School of Nursing recruited utilizing census technique. The students responded to a self-administered questionnaire while the faculty members responded to an interview guide. Numerical data was analyzed descriptively with SPSS version 25.0. Associations were probed with chi-square test at 95% CI with outcomes shown in tables and figures. Non-numeric data was organized descriptively with findings reported verbatim. Approvals, consenting, voluntarism, discretion were observed.

**Results:** 75.2% of the students passed while 24.8% failed. The factors found to influence their academic performance outcomes in institutional examinations were time spent on personal studies (89.1%, n = 90; p = <.000); class attendance (75.2%, n = 76; p = .000); examinations revision (87.1%, n = 88; p = .001); kinds and diversity of teaching methods used (92.1%, n = 93; p = .001); nature of assessment methods used (72.3%, n = 73; p = .009); student - lecturer interactions (89.1%, n = 90; p = .000) alongside availability of appropriate learning facilities (92.1%, n = 93; p = .000) and learning resources (94.1%, n = 95; p = .001).

**Conclusion:** Nursing students' academic performance outcomes in institutional examinations were influenced by varied factors.

**Recommendation:** The institutional management should ensure that available learning facilities, resources and amenities adequately support the students' learning needs.

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## ABBREVIATIONS AND ACRONYMS

**BScN** Bachelor of Science in Nursing

**CCN** Critical Care Nursing

**CI** Confidence Interval

**HCWs** Health Care Workers

**KMS** Kilometers

**KMTC** Kenya Medical Training College

**KNH** Kenyatta National Hospital

**NACOSTI** National Commission of Science, Technology and Innovation

**NCK** Nursing Council of Kenya

**SPSS** Statistical Package for Social Sciences



## OPERATIONAL DEFINITION OF TERMS

**Critical care** - Refers to the study of management of health conditions that become life-threatening and require immediate and urgent medical care.

**Nephrology nursing** - Refers to the study of kidney function and its related health conditions.

**Academic performance outcomes** - Refers to how well the nursing students excelled in meeting set examination scoring requirements at the KNH School of Nursing.

**Institutional examinations** - Refers to the internal college-based examinations that the nursing students undertook at the end of each block/semester.

**Factors** - Refers to attributes looked into in the study in relation to contributing to nursing students' performance in institutional examinations.

**Individual related factors** - Refers to personal attributes of the nursing students that influence their performance in institutional examinations.

**Nurse educators related factors** - Refers to attributes relating to the faculty members and how they conducted their teaching role and how this influenced performance in institutional examinations among the nursing students.

**Institutional related factors** - Refers to attributes relating to the learning institution and how they influenced performance in institutional examinations among the nursing students.

## CHAPTER 1: INTRODUCTION

### 1.1 Overview

This is the introductory chapter of the study. It contains the background of the study, statement of the problem, research objectives and questions, the study justification, significance of the study, scope of the study and assumptions of the study.

### 1.2 Background of the Study

In any society, across the world, education is considered to be an important instrument for both personal and societal development, progress and social change, and this holds true in both low- and high-income settings (Almazan, 2020). Education provides the human capital that drives all the processes and activities that are critical for a nation's growth along with advancing economically. It's through education that individual persons' skills and inventive capabilities for self-actualization and overall progress of the society are sharpened and maximized (Roghayeh & Esmaili, 2021). As such, achieving the desired levels of students' academic performance outcomes in all levels of learning is instrumental and nursing education is no exception (Hong, 2022). In institutions of learning, students' performance in institutional examinations is used as a measure of learning outcomes and indicates whether desired educational goals were achieved or not. Emphasis on achieving the desired students' performance in institutional examinations thus remains an integral component of education systems world over (Lancia et al., 2018).

The work of nursing as well as other healthcare profession members revolves around human lives. There is therefore no leeway for errors granted that any mistakes may lead to loss of a patient's life. This then requires that healthcare professionals have the right

competencies and proficiency to effectively execute their duties (Al Alawi, 2020). Present forms of health care systems, intensive demands of health services and advances in medical technology require that student nurses undergo proper training. It requires that student nurses have appropriate academic qualifications for them to be registered and licensed to practice officially in any given nation. This qualification requires passing of recommended institutional and licensure examinations (Wardani, 2019). These demands make nursing students' academic performance a matter of priority with the goal being production of nursing personnel that hold the right competencies necessary to provide high quality nursing care services in clinical settings (Mhlongo & Masango, 2020).

Like in all other education programs, assessments in nursing training are very critical in learning as they drive the learning process. They enable the nurse educators and the nursing training institutions to keep tabs on the nursing students' learning outcomes and progress (Fajar et al., 2019). There is no doubt that when used properly, assessments in the form of institutional examinations could motivate the nursing learners to learn and build or construct new knowledge and to show their readiness in meeting the huge responsibilities of caring for the sick (Gripshi et al., 2022). Emphasis on nursing students' academic success is aggravated by a desire to generate nursing officers that are adequately competent to face up with rising, often, intricate patient care demands (Almazan, 2020). This is in appreciation of the fact that the value of improving the learning outcomes of student-nurses' academic outcomes goes beyond the individual nursing students and institutions in which they learn, with benefits accruing to the communities they serve as well as to the entire healthcare system (Roghayeh & Esmaeili, 2021).

Globally, deficiencies in nursing students' academic performance outcomes, as evidenced by poor scores in institutional examinations, has been identified as an area of concern in the nursing profession (Gripshi et al., 2022). In studies carried out by Alshammari et al. (2017) in Saudi Arabia, Fajar et al. (2019) in Pakistan and Wardani (2019) in Indonesia, academic performance outcomes in institutional examinations among nursing students was reported as being sub-optimal. Poor preparedness for the examinations, inadequate class attendance and negative peer influence emerge as leading factors linked to under-performance in institutional examinations in nursing students (Sharma et al., 2020). Likewise, inappropriate teaching and assessment methods, poor student - nurse-educators' interactions and engagements including inadequate support from the faculty during learning activities, and deficiencies in learning environment also feature as prominent factors associated to failure in institutional examinations among nursing students across the world (Sothan, 2019; Mushtaq et al., 2019).

In Africa, a number of studies on academic performance outcomes among nursing students have reported nursing students' failure in institutional examinations as an area requiring attention. This was also reported in Egypt where poor performance in institutional examinations among nursing students was noted as being prevalent (El-Awady et al., 2022). Similarly, a worrying trend in nursing students' poor scoring in institutional examinations was also reported in South Africa (Mhlongo & Masango, 2020), in Nigeria (Babaji et al., 2023) and in Tanzania (Masenga, 2015). This sub-optimal academic performance outcome in institutional examinations among nursing students has been attributed to factors including poor teaching strategies, inadequate level of engagement and interactions between educators and the students, excessive class work workload, students' poor study habits, students' poor preparedness for

examinations and inadequate support to learners from the faculty (Dube & Mlotshwa, 2018). Inappropriate teaching and assessment methods, weak institutional policies, unavailability of appropriate learning facilities and resources as well as lack of appropriate physical and social amenities are also cited (Babaji et al., 2023). There is need therefore to thoroughly investigate and address the various factors that impair nursing students' academic performance outcomes in nursing examinations (Almazan, 2020).

In Kenya, nurse students in the various levels of nursing training are required to pass their institutional examinations before they can be allowed to sit nursing licensure examinations. Their performance in institutional examinations is therefore a critical subject that forms the basis for evaluating their learning outcomes and ascertaining whether they have achieved the right competencies for practicing in clinical settings (Kamotho et al., 2022). Kenya is known for producing highly competent nursing professionals who serve not just in the local healthcare system but also in other foreign countries. It's therefore important to ensure that local nursing students meet all the set training requirements which include excelling in institutional examinations (Okanga et al., 2017). At Kenyatta National Hospital School of Nursing, nursing students upon being prepared through training are expected to excel in their institutional examinations. Hence, focusing on factors affecting their performance in institutional examinations is therefore important especially in recognition of the fundamental role that nurses play in safeguarding and promoting positive patient care outcomes.

### **1.3 Statement of the Problem**

Nursing students' low or poor performance in institutional examinations remains a matter of grave concern in numerous settings across the globe (Hong, 2022). This is

particularly so considering the recognition of the fundamental role that nurses play in health systems world over, more so, in safeguarding and promoting positive patient care outcomes (Roghayeh & Esmaeili, 2021). Several empirical studies have provided evidence of sub-optimal academic performance outcomes in institutional examinations among nursing students. These include studies by Wardani (2019) in Indonesia, Fajar et al. (2019) in Pakistan and Sothan (2019) in Cambodia. Nursing students' poor performance in institutional examinations was also evident in investigations by Gripshi et al. (2022) in Albania, Sharma et al. (2020) in India, Alos et al. (2019) in Philippines and Alshammari et al. (2017) in the Kingdom of Saudi Arabia. Mhlongo and Masango (2020) in South Africa, El-Awady et al. (2022) in Egypt along with Okanga et al. (2017) locally shared similar observations, illustrating that nursing students' academic performance outcomes in institutional examinations remained an area that warranted close attention. Additionally, unlike most of the cited studies which probed the study subject quantitatively and largely from the students' perspective only, the current study utilized both quantitative and qualitative data approaches and relied on input from both the nursing students and the faculty.

At the Kenyatta National Hospital (KNH) School of Nursing higher diploma nursing students are taken through the stipulated one-year program following the prescribed curriculum. They are subjected to institutional examinations that are set and administered according to the laid down examination regulations. Students are expected to pass all examinations at every level before they are allowed to proceed to the next level of training and subsequent Nursing Council of Kenya examinations. However, there has been a worrying trend in the performance of institutional examinations by the Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing in the past four years. The average failure rate in the Critical Care nursing

cohort rose from 19.2% in year 2018 to 28.6 % in year 2021. Similarly, the average failure rate in the Nephrology nursing cohort rose from 22.5% in year 2018 to 25% in year 2020 before decreasing to 21.2% in year 2021 (Examination Department, KNH School of Nursing, 2022). Indeed, the average performance in institutional examinations in the other programs has been an average failure rate of below 10% while among those undertaking Critical Care and Nephrology nursing it has been an average failure rate of 21 - 26%. It was also observed that the Critical Care and Nephrology nursing students' sub-optimal academic performance outcomes was mainly in internal institutional examinations rather than in external examinations (Examination Department, KNH School of Nursing, 2022). The reasons for this poor academic performance outcomes in institutional examinations among the Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing were not known. It was in view of this that the current study evaluated the factors contributing to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students in the institution.

#### **1.4 Research Questions**

1. How do individual related factors influence academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing?
2. Do nurse educators related factors contribute to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing?
3. What is the association between institutional related factors and academic performance outcomes in institutional examinations among Critical Care and

Nephrology nursing students at the Kenyatta National Hospital School of Nursing?

## **1.5 Research Objectives**

### ***1.5.1 Purpose of the Study***

The purpose of this study was to explore factors that contributed to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing

### ***1.5.2 Broad Objective***

To investigate the factors contributing to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing

### ***1.5.3 Specific Objectives***

1. To determine the individual related factors associated with academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing.
2. To examine the nurse educators related factors that contribute to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing.

3. To identify the institutional related factors associated with academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing.

### **1.6 Study Justification**

With the advancement of the nursing profession in Kenya, various nursing specialty programs including critical care and nephrology have been developed to equip nurses with knowledge, skills and attitudes required to provide specialized care. These two areas of specialization are core in the health sector. The enormous technological advances in these two areas demand that the nurses must keep abreast with the changes in order to meet the changing patient demands for quality care. An evaluation of the factors contributing to sub-optimal outcomes in academic performance among nursing students is instrumental for varied reasons including:

First, poor performance in institutional examinations denotes gaps in nursing students' knowledge and skills which puts into question their competence as health care providers and could be an indication that the nursing students may not be able to provide safe and quality nursing care services to critically ill. This in itself is a source of great concern to the institution and all the stakeholders in the health sector.

Training of nurses is an intensive investment to the individual nursing students, their families, the community and the nation at large. Value for this investment can only be realized if nursing training institutions are able to generate highly competent nursing healthcare professionals. Poor performance in institutional examinations among the nursing students adversely impacts realization of this goal.

Nurses form the bulk and core of health care work force in health care systems across the world with Kenya being no exception. Their competence, marked by their meeting of set institutional and regulatory requirements which includes passing of institutional examinations is thus essential especially acknowledging that their actions in the clinical settings have direct implications on the treatment outcomes of patients.

Further, failure in institutional assessments among student nurses contributes to a reduction in nursing workforce joining the local healthcare systems. This adversely impacts nurses' supply with its attendant unfavourable implications on global health care as sub-optimal nurse-to-patient proportions correlate with a surge in adverse patient care outcomes.

Insights derived from this empirical investigation could be used to inform development of appropriate measures to improve academic performance outcomes among the nursing students. Identifying leading factors contributing to favorable or unfavorable academic outcomes could form the basis for laying out suitable educational support measures in the nursing training institutions in the country.

The study was done at a time when the KNH School of Nursing was mulling over and had concerns over persistent sub-optimal academic performance outcomes in institutional examinations among nursing students in the critical care and nephrology nursing programs/specialties. The uniqueness of this study was that its understanding of the factors that influenced the academic performance outcomes in institutional examinations among the Critical Care and Nephrology nursing students was based on insights derived from both the nursing students and the faculty and not just the students only or faculty only. Insights derived from this study may inform action plans towards

helping nursing students specializing in critical care and nephrology nursing attain desired academic performance outcomes in their studies.

### **1.7 Significance of the Study**

Insights derived can inform policy through increased focus on academic performance outcomes among the Critical Care and Nephrology nursing students at the KNH School of Nursing. This would in turn lead to institution of appropriate interventions aimed at addressing the various factors occasioning sub-optimal performance in institutional examinations among this cohort of students. The study findings can also inform a review of teaching and assessment practices among faculty members at the KNH School of Nursing with a view of developing teaching and assessment tools and procedures that take into account the diverse capabilities of the Critical Care and Nephrology nursing students in the school. The study findings can also form the basis for greater emphasis on the nursing students' competence and skills mastery at the KNH School of Nursing through illuminating factors contributing to their sub-optimal performance and suggesting viable solutions to these obstacles. Further, insights emanating from current empirical investigation can also enrich research through providing useful foundation and references for additional investigations of the subject by other interested scholars.

### **1.8 Scope of the Study**

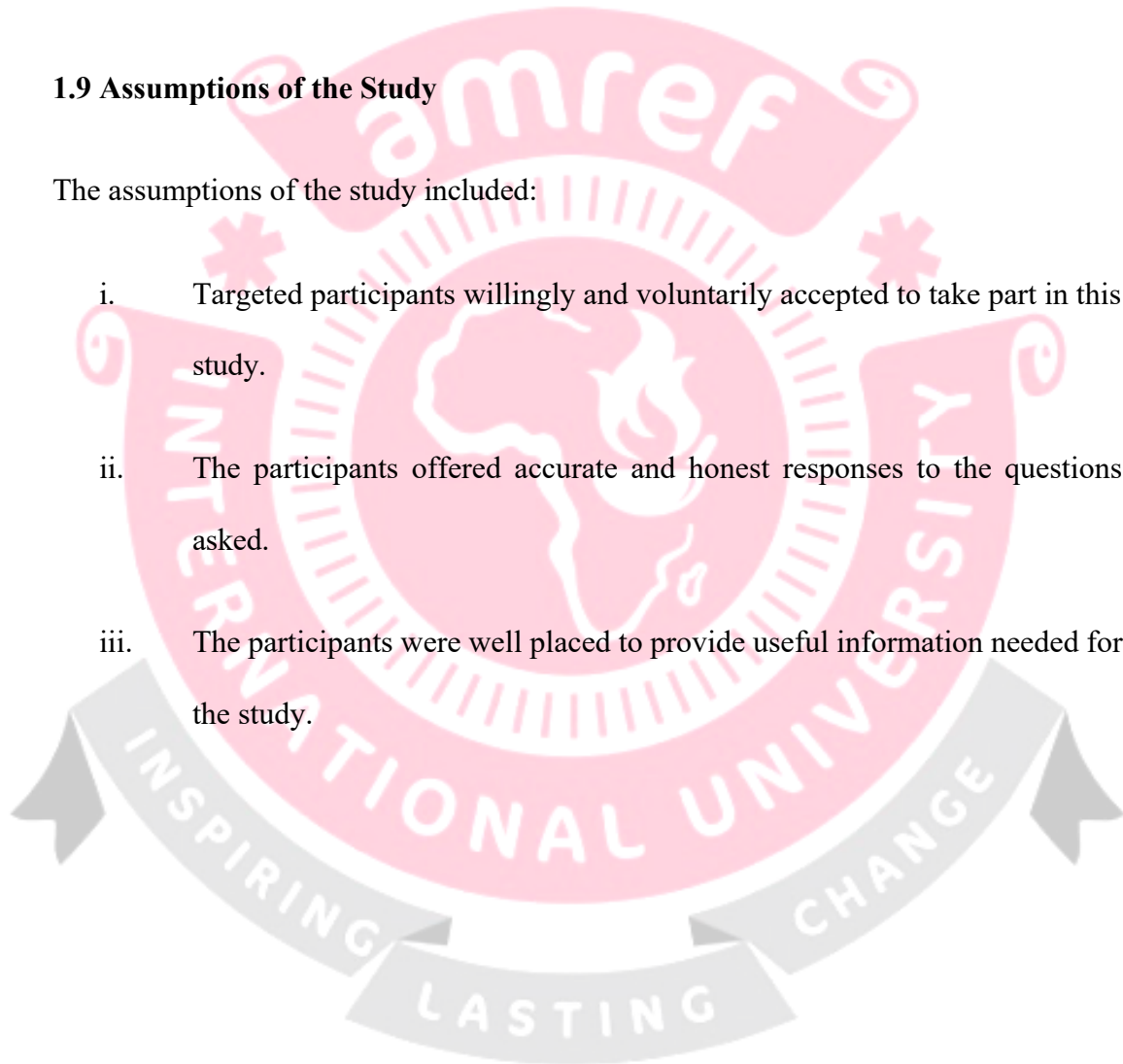
The study focused on factors contributing to academic performance outcomes in institutional examinations among nursing students with individual, nurse educators and institutional related factors as the independent variables and academic performance outcomes in institutional examinations as the dependent variable. The study was carried out at the Kenyatta National Hospital School of Nursing which constituted the study

area. Respondents for the study included critical care and nephrology higher diploma nursing students for the April 2023 and September 2022 class and the faculty at the KNH School of Nursing with the nursing students responding to the study questionnaire while the faculty responded to the interview guide. The participants were recruited using the census method. The study was carried out between September and October 2023.

### **1.9 Assumptions of the Study**

The assumptions of the study included:

- i. Targeted participants willingly and voluntarily accepted to take part in this study.
- ii. The participants offered accurate and honest responses to the questions asked.
- iii. The participants were well placed to provide useful information needed for the study.



## CHAPTER 2: LITERATURE REVIEW

### 2.1 Introduction

The ensuing part offers an exploration of past empirical studies on individual, nurse educators and institutional linked attributes affecting academic-performance in institutional examinations among nursing students in line with the study objectives. The investigation's theoretical and conceptual frameworks are outlined as well alongside summary of looked at studies.

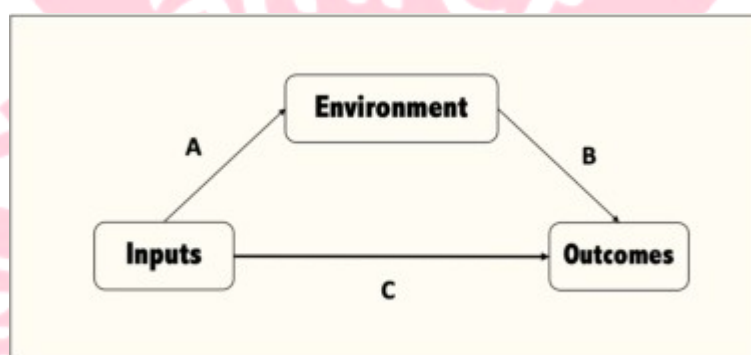
### 2.2 Theoretical Framework

A theoretical framework's aim is making the outcomes of research investigations both conceivable and relatable universally. The Input-Environment-Output (I-E-O) theoretical model developed by A.W. Astin in 2012 guided this study. This model has regularly been applied in appraisal of students' performance in tertiary education level such as in studies by Vattanaamorn et al. (2022), Fooladi et al. (2022) and Lee et al. (2023). The model outlines the association that exists among 3 essential/central conceptualizations for evaluating the performance of students in academic programs. The *input* represents the features/attributes of learners at the point of enrolment into an educational program. It encompasses their demographic information (e.g., gender, how old they are and parental education level), indicators of their readiness for college (such as precollege academic results or their scores in college admission tests), a student's desires and ambitions, and learner behavioral tendencies (such as their study time, how they interacted socially with peers, and their interactions with members of the teaching fraternity) (Astin, 2012). The *environment* constitutes the variables that play a role in the learner's academic involvement/experience all through the course including both

institutional and educators' related factors. The *output* represents the results, outcomes or aftermaths resulting from the input and the environment.

The theoretical model is as illustrated in Figure 2.1. The pathways (A, B, and C) show how the concepts of the model relate with input having a direct correlation with output and the environment mediating the association between the two (Astin, 2012).

### The Input-Environment-Outcome (I-E-O) Model



**Figure 2.1: Theoretical Framework**

**Source: Astin (2012)**

This theoretical model is applicable to the current study given its thorough and far-reaching attempt of making appraisal or evaluation of students' performance a more relevant and productive part of the functions and role of higher education. It provides a viable tool for evaluating students' academic achievement through placing emphasis on the various variables that influence the performance of learners in milieu of higher education. For the current study, the nursing-students' individual factors constitute the *inputs* component. The nurse educators and institutional related factors correspond to the *environment* construct while the nursing students' academic performance outcomes in institutional examinations correspond to the *outcomes* element.

## **2.3 Review of Related and Empirical Literature**

### ***2.3.1 Individual Related Factors and Academic Performance Outcomes in Institutional Examinations among Nursing Students***

In Indonesia, an analytical probe was undertaken to establish predictors of success in institutional nursing examinations among diploma nursing learners in Yogyakarta. An aggregate of 755 learners of nursing at diploma level taking part in the national nursing competency examination at the time were recruited as respondents. They responded to a questionnaire. Association between the student's performance in the said examination and various attributes was assessed using Pearson's correlation analysis. A number of factors related to the individual students were found to adversely affect their performance in the national nursing examination. These included poor mental preparedness for the exam and poor examination revision strategies, inadequate time spent in personal studies and ineffective learning methods (Wardani, 2019).

A descriptive cross-sectional study undertaken in Pakistan explored attributes that affected the academic results of student nurses in their studies. Study participants were undergraduate nursing students selected using convenient sampling technique from one of the local public universities. They were interviewed via self-reporting questionnaires with obtained data probed both descriptively and inferentially. Among the individual related factors identified as contributing to unsatisfactory learning outcomes among the surveyed nursing learners included a poor family background, poor class attendance, low instructive fulfillment, negative influence of peer groups, inadequate time spent on individual studies and low parental support. Adverse student factors, therefore, if left unaddressed, were predictors of poor academic performance outcomes among student nurses (Fajar et al., 2019).

Sothan (2019) carried out a cross-sectional study that explored variables that informed educational outcomes among nursing students in a local Cambodian tertiary learning institution. A total of 329 undergraduate nursing students were interviewed using questionnaires. Results from the analysis showed that several individual related attributes correlated favorably with the participants' educational outcomes. These included higher overall high school grade, good English proficiency, attending classes regularly, considerable efforts in one's studies, high self-belief/conviction in one's studies and stable family-socio-economic background. Being employed on a full-time basis and larger family size adversely impacted the participants' educational outcomes. Even so, no association was established between the nursing students' academic performance outcomes and their gender, age, place of residence, parental education and parental involvement.

Dube and Mlotshwa (2018) carried out a study with a view of identifying attributes that influenced educational outcomes of student nurses in a non-public nursing school in South Africa. A total of 100 nurse students randomly selected were interviewed using questionnaires. The obtained data were analyzed using quantitative analytical approaches. Findings illustrated that a high socio-economic family background, higher-level entry qualifications and receipt of adequate support in their education from their parents/guardians were predictors of positive academic performance outcomes among the surveyed participants while a poor family background, low-level entry qualifications, low self-efficacy and negative peer group influence predicted poor educational outcomes among these learners.

A retrospective study undertaken in Italy evaluated possible attributes that affected the educational results of undergraduate student nurses. Participants were recruited from

an Italian university. The academic outcomes of the selected student nurses were retrospectively observed for the period 2004 to 2017. Obtained data were inferentially probed in identification of possible determinants of the participants' educational outcomes/performance. The characteristics of the individual learners found to positively correlate with higher academic performance outcomes included female gender, having undertaken science-based subjects in O levels and having had a nursing diploma qualification prior to enrolling for the undergraduate program. However, 'program admission test score' was found to have a very low explanatory effect on the nurses' academic outcomes (Lancia et al., 2018).

### ***2.3.2 Nurse Educators Related Factors and Academic Performance Outcomes in Institutional Examinations among Nursing Students***

A qualitative cross-sectional study carried out in Albania explored difficulties that adversely impacted the educational results of student-nurses in one of the local universities. Data were obtained through focus group discussions with 51 undergraduate nursing students in first to third years of study and got thematically analysed. The nature of difficulties established to adversely impact the educational results of the surveyed learners included low engagements/interactions with their lecturers during course work, methods of instructing that were inactive, assessment methods that were not fair and transparent, excessive class work workload and delayed feedback on assessments undertaken. The study called for greater academic support to nursing students from the faculty members (Gripshi et al., 2022).

El-Awady et al. (2022) carried out a correlational descriptive empirical review to examine variables associated with educational outcomes among student nurses in Egypt. A total of 140 nursing students purposively selected from the Technical Institute

for Health - a tertiary educational institution located in Port Said city took part. Data got obtained utilizing a self-reporting questionnaire and were scrutinized both descriptively and inferentially. Nurse educators related factors were found to affect the students' educational results materially. These included the lecturer's good mastery of the subject taught, the lecturer's use of diverse teaching methods, the lecturer's willingness to support the students in the learning process, positive lecturer-student relationship, the lecturer stimulating an active learning environment with full participation of the students in the learning process and good communication skills among the faculty members.

Mhlongo and Masango (2020) undertook a descriptive quantitative study to identify factors leading to poor performance in examinations among nursing students in South Africa. A total of 114 student nurses studying anatomy and physiology in a local medical college were recruited using census method with the sampled respondents responding to a self-reporting questionnaire. Utilized data was recorded in Excel spreadsheets. It got probed descriptively as well as inferentially utilizing SPSS. The factors identified as contributing to poor outcomes in examinations among the surveyed nurses were poor teaching strategies, poor lecturer-student relationships and engagements, lack of after-class interaction sessions with the educators, language barriers and inadequate study periods for examinations. The study concluded that nurse-trainers should adopt innovative teaching strategies and ensure learners do actively learn.

A descriptive survey study undertaken in a public university in Philippines assessed factors that affected academic outcomes of nursing students. The study utilized quantitative data approaches. A total of 74 nursing students in their final year of study

were enrolled. They responded to a self-reporting questionnaire with data analyzed both descriptively and utilizing inferential statistics as well. The nurse educators attributes found to positively contribute to better academic performance outcomes among the surveyed nursing students included the lecturer having a good mastery of the subject matter, the lecturer making use of both audio and visual aids during teaching, the lecturer providing a variety of learning activities, the lecturer using diverse teaching methods (lectures, demonstrations, discussions among others), consistent attendance of classes by the lecturer and the lecturer being friendly and supportive (Alos et al., 2019).

A descriptive quantitative assessment undertaken in South Africa assessed the attributes that influenced the educational outcomes of student nurses undertaking training in a non-public nursing education institution. A total of 100 nurse students randomly selected were interviewed using questionnaires. The obtained data were analyzed using quantitative analytical data approaches using SPSS. A number of nurse educators' related factors were identified as contributing to poor academic performance outcomes among the surveyed student nurses. These included low quality of nurse educators (or inadequately qualified nurse instructors), using English as the language for teaching in class and poor lecturer-student relationships. To improve nursing students' performance, the study called for nurturing of positive lecturer-student relationship and recruitment of more qualified nurse tutors (Dube & Mlotshwa, 2018).

### ***2.3.3 Institutional Related Factors and Academic Performance Outcomes in Institutional Examinations among Nursing Students***

Sharma et al. (2020) carried out an empirical review assessing attributes that influenced academic outcomes of nursing learners in India utilizing a descriptive design of study. A total of 420 nursing trainees (308 females and 112 males) of ages 17 to 25 years were

enrolled on a random basis. They responded to a self-reporting questionnaire with SPSS v. 23 utilized in analyzing gathered data. Among the institutional related factors established to have notable influence on surveyed nursing students' performance academically included presence of a well-equipped school library, availability of adequate relevant learning materials, and availability of learning facilities that were appropriate and strictly applied institutional policies on student academic outcomes.

Ravi and Flinsi (2019) examined the attributes impacting educational outcomes of nursing learners in India. They adopted correlational research design and utilized quantitative data approaches. The study was conducted on 118 higher diploma nursing students that were studying at Apollo School of Nursing in New Delhi. The study participants were selected through total enumerative sampling technique. A structured questionnaire based on a 5-point likert scale was utilized as study tool. Study data were descriptively analyzed though inferential statistics were also used. Findings showed that institutional based factors had a significant effect on the participants' academic outcomes. These included whether the institution had a well-equipped library, whether it had appropriate learning facilities, comfort of classrooms, whether it had good recreational facilities and whether it had suitable accommodation facilities.

Similarly, Mushtaq et al. (2019) also undertook an empirical investigation to establish attributes impacting the academic results of nursing learners in Pakistan. They made use of descriptive cross-sectional study approach. A total of 129 student nurses studying at a domestic university were recruited using simple random sampling method. A likert scale based ordered questionnaire constituted the study tool. Gathered Data were descriptively probed. Institutional related factors were established as having a notable effect on how the surveyed student nurses performed academically. The institutional

variables included availability of appropriate learning facilities, the learning facilities being in good condition, a strict class attendance policy, access to internet in the library and availability of appropriate physical and social amenities within the institution.

Okanga et al. (2017) undertook a mixed-methods study to evaluate institutional attributes that influenced the learning outcomes of Bachelors student nurses in NCK licensure examinations in Kenya. They undertook a retrospective review of performance records of 1,292 nursing learners examined with the NCK's licensure exam/test for the interval July 2012 to June 2015 from the NCK database. Key informants, purposively sampled from leading nursing schools in Kenya, were also interviewed. Several statistical measures, inferentially and descriptively, were utilized in probing numerical data while non-numerical one was analyzed thematically. The institutional variables found to significantly influence the nursing students' performance were class attendance policy, experience of the nursing faculty and availability of adequate learning resources.

In Saudi Arabia, factors that affected the learning outcomes of learners in nursing programs were studied. The study employed a quantitative-correlational study design. Using convenience sampling, the study recruited a total of 201 nursing students were from a local nursing college. An adjusted structured questionnaire was applied as the data collecting instrument with the tool evaluated for validity and reliability prior to its use in the main survey. Gathered data were descriptively and inferentially probed. Institution related factors were established as having a notable effect on the surveyed nursing learners' educational results. These factors included necessary learning facilities being available, the learning facilities meeting the right standards, institutional policy on use of English for all learning and communication purposes, access to internet

in the library and existence of appropriate physical and social amenities in the school (Alshammari et al., 2017).

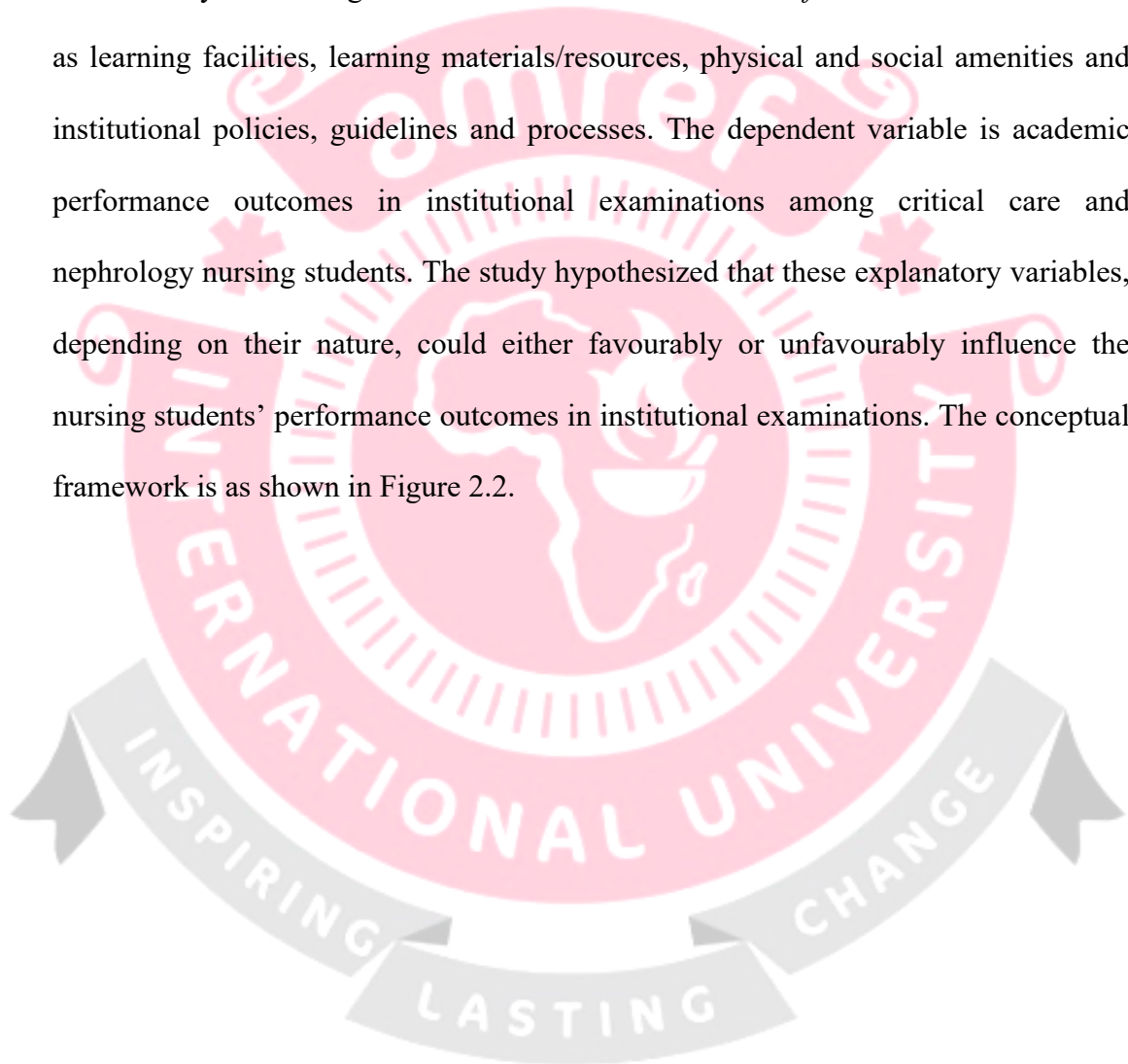
## **2.4 Knowledge Gap**

The reviewed empirical studies provided evidence that the learning outcomes of learners undertaking nursing as seen in their success or failure in institutional examinations remained an area of concern in many settings across the world. In addition, the reviewed studies offered evidence that a wide range of individual, nurse educators as well as institutional related factors had an influence on the academic performance outcomes of nurse students across diverse settings. However, comparison of the studies is difficult owing to the diversity in study settings, study designs and data approaches utilized, sample sizes and participants' selection basis as well as ways in which they analyzed their data. Further, a large number of the herein highlighted studies had been undertaken within foreign jurisdictions whose healthcare infrastructure, organization along with processes possibly varied with the local ones. From the studies presented, it's apparent that there was inadequacy of indigenous research investigations relating to the study topic. Consequently, the current probe sought to evaluate the factors contributing to poor performance in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing.

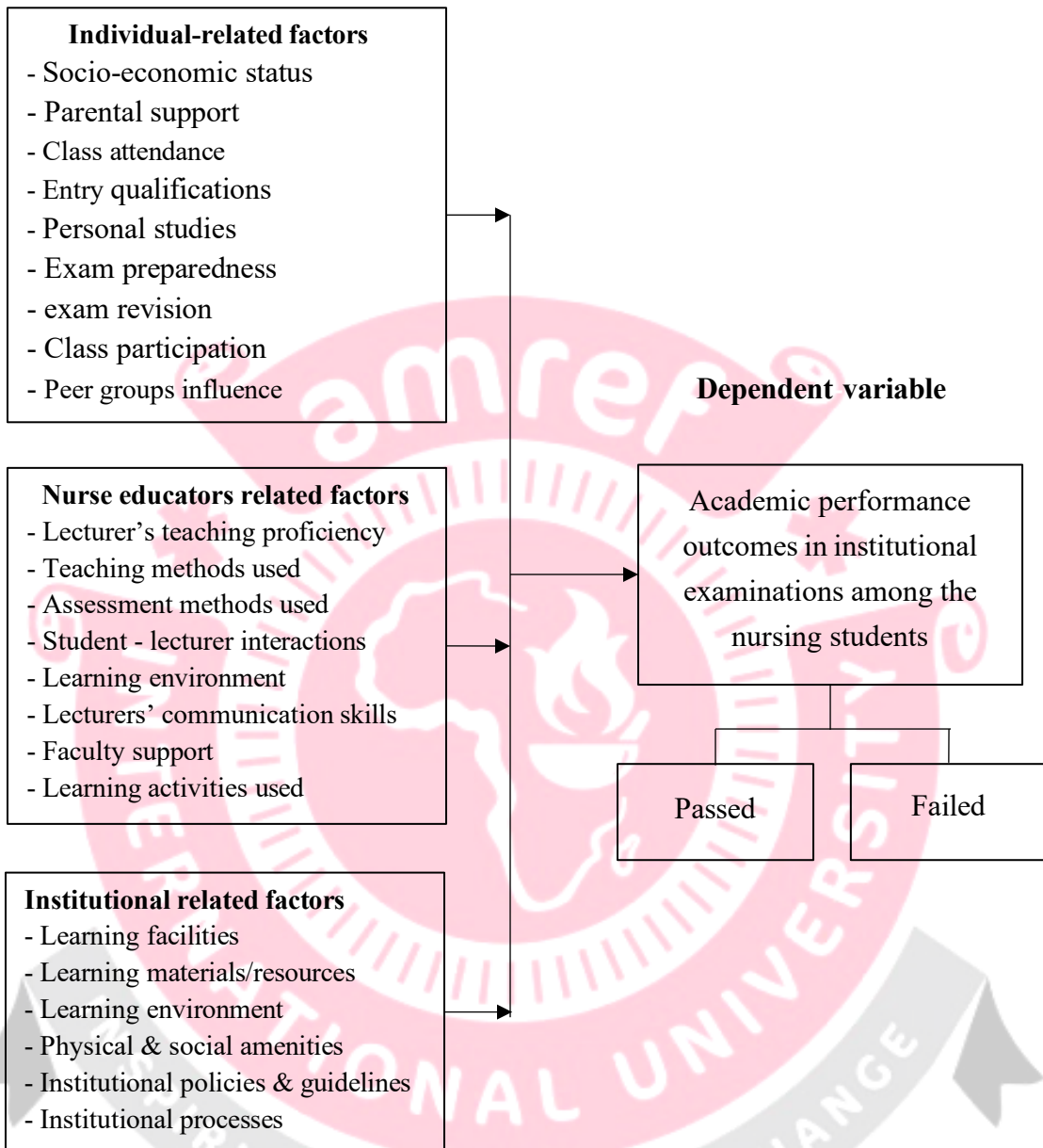
## **2.5 Conceptual Framework**

The schema outlines in a diagram form how the various study variables relate (Burkholder et al., 2019). It highlights the study's explanatory and explained variables (or any other variables), hence providing a quick overview as to the study's main-variables (Babbie & Edgerton, 2023). This study's independent variables include

*individual related factors* its indicators being parental support, class attendance, entry qualifications, time spent on personal studies, exam preparedness and revision, participation in class work and influence of peer groups; *nurse educators related factors* its indicators being the adopted teaching and assessment methods, student - lecturer interactions, lecturers' communication skills, faculty support to the students and nature and diversity of learning activities and *institutional related factors* with its indicators as learning facilities, learning materials/resources, physical and social amenities and institutional policies, guidelines and processes. The dependent variable is academic performance outcomes in institutional examinations among critical care and nephrology nursing students. The study hypothesized that these explanatory variables, depending on their nature, could either favourably or unfavourably influence the nursing students' performance outcomes in institutional examinations. The conceptual framework is as shown in Figure 2.2.



### Independent variables



**Figure 2.2: Conceptual Framework**

**Source: Researcher (2023)**

## CHAPTER 3: METHODOLOGY

### 3.1 Introduction

This chapter elaborates in detail procedures along with approaches that were applicable in undertaking this research work. Its contents therefore include study approach utilized, the study setting, persons targeted as participants, sample derivation and selection, basis for their consideration as participants, instruments and procedures used to obtain the data, the tools' assessment for appropriateness of purpose, analyzing of the data, observed appropriate ethical guidelines, limitations of the study and sharing of the study's outcomes.

### 3.2 Research Design

A mixed-methods descriptive cross-sectional research design was adopted. This entailed use of quantitative data which was derived from the study questionnaire alongside qualitative data which was derived from the interview guide. A sequential approach was followed in which numerical data was gathered first then followed by the qualitative data. Creswell (2012) averred that this approach allows investigators to probe the research phenomenon utilizing data and techniques that are both numerical and non-numerical in nature. The outlined approach was favored given it permitted obtaining of both numeric and non-numeric data on the study phenomenon from the nursing students and faculty at the Kenyatta National Hospital School of Nursing as a result yielding greater insight into the study aspect being explored (Burkholder et al., 2019).

### 3.3 Study Area

This empirical investigation was conducted at the Kenyatta National Hospital (KNH) School of Nursing. Kenyatta National Hospital School of Nursing was inaugurated in 1996. It was established for purposes of building competence for expert nursing care within KNH in specific areas. These include care of neonates, accident & emergency, theatre, intensive care and kidney care. This has in turn benefited the hospital's general wards as well as others across the country. The institution therefore provides training in six higher diploma courses in nursing that include nephrology nursing, neonatal nursing, oncology-care, critical care nursing, peri-operative nursing as well as trauma and emergency care nursing. The institution also offers supplementary brief courses for nurses and other health care workers (HCWs).

The institution is domiciled at Kenyatta National Hospital. Kenyatta National Hospital (KNH) is a national public referral hospital in Kenya. It was founded in 1901 with 40 patients with the hospital having grown over the years to its current bed capacity of about 2,000. It is located about four kilometers from the Nairobi city center, off Ngong road on Hospital Road. The facility offers a wide range of specialized in and out-patient health care services. The specialized health-care services provided at KNH include heart surgery, neurosurgery, oncology, diabetic, renal dialysis and kidney transplant operations, plastic and reconstructive surgery, orthopedic surgery and burns management among others. The hospital also facilitates medical training and research and participates in national healthcare planning.

All the higher diploma programs administered at the KNH School of Nursing are regulated by the Nursing Council of Kenya (NCK). Every year, about 210 nurses complete their studies at the school. Student nurses in the School are thoroughly

prepared in adequately equipped specialized medical care areas where they hone their expertise and know-how in their specialty domains (Kenyatta National Hospital School of Nursing, 2023). Critical Care nursing and Nephrology nursing areas of study are selected for evaluation owing to notable failure rates in institutional examinations recorded/reported among students of these two courses in the School.

### **3.4 Study Population**

The study focused on the entire April 2023 and September 2022 higher diploma students in Critical Care and Nephrology nursing plus the faculty at the KNH School of Nursing. Records at KNH School of Nursing indicate that currently there are 57 Critical Care nursing students, 44 Nephrology nursing students and 23 faculty members in the School (KNH School of Nursing, 2023). These constituted the study population. Critical Care and Nephrology nursing students were selected for evaluation owing to alarming failure rates in institutional examinations recorded/reported among students in these two courses in the School.

#### **3.4.1 Inclusion Criteria**

Entire April 2023 and September 2022 higher diploma Critical Care and Nephrology nursing students and all the faculty members at the KNH School of Nursing who were accessible/available at the time of the study and who consented to take part were included in the study.

#### **3.4.2 Exclusion Criteria**

Those excluded included;

- i. Critical Care and Nephrology nursing students and faculty members unavailable or inaccessible at the time of the study.
- ii. Students of April 2023 and September 2022 Critical Care and Nephrology nursing classes who had not done their institutional examinations.
- iii. Newly hired faculty members.
- iv. Students and faculty members who were unwell at the time of the study.
- v. Students and faculty members who did not consent to participate.

### **3.5 Sample and Sampling Technique**

#### ***3.5.1 Technique for Selecting the Participants***

The researcher used census method whereby all April 2023 and September 2022 higher diploma Critical Care and Nephrology nursing students and the faculty at the KNH School of Nursing were enrolled thus constituting the participants which conforms to Burkholder et al. (2019) view that the entire target population can be recruited to constitute the study sample when it is-small.

#### ***3.5.2 Sample Size***

The study sample therefore comprised of the 57 Critical Care nursing students, 44 Nephrology nursing students and 23 faculty members. The study's response rate was enhanced through provision of clear explanation as to the need and value of the study to the targeted study participants.

### 3.6 Data Collection Instruments

A structured questionnaire along with an interview guide constituted the study tools. The nursing students responded to the questionnaire while the faculty members responded to the interview guide. The questionnaire was self-administered while the interview guide was interviewer offered. The questionnaire provided quantitative data while the interview guide provided qualitative data.

The questionnaire contained queries in accordance with the study's aims and was organized in four (4) sections. Section A contained questions on the respondents' demographic information. Section B had questions regarding the individual related factors affecting the academic performance outcomes in institutional examinations among the respondents; Section C had questions on the nurse educators' related factors affecting the academic performance outcomes in institutional examinations among the respondents while Section D contained questions on the institutional related factors affecting the academic performance outcomes in institutional examinations among the respondents.

The interview guide contained unstructured queries guided by the research aims. The interview schedule helped the researcher to obtain the views of the faculty members relating to how various nurse educators and institutional related factors influenced nursing students' academic performance outcomes in institutional examinations in the school hence enriching the data gathered from the nursing students. The interviews with the faculty members were audio taped.

To avoid insider bias and to complete the data collection in time, the principal researcher recruited and trained four research assistants to administer the study tools. The four research assistants were final year Master of Science in Nursing (MScN)

students (two from the critical care and the other two from nephrology nursing specialties) from the University of Nairobi's Department of Nursing Sciences.

### **3.7 Pretesting of the Study Tools**

The structured questionnaire was pretested among five (5) Critical Care and five (5) Nephrology nursing students drawn from the Kenya Medical Training College (KMTC) Nairobi campus. The interview guide was pretested among three (3) faculty members also from KMTC Nairobi campus. This represented 10% of the study sample. Babbie and Edgerton (2023) shared the view that at least ten percent of targeted sample respondents are sufficient for aims of pre-evaluation of a study's data gathering tools. Results of the pretesting were utilized in refinement of this study's data gathering tool. Kenya Medical Training College (KMTC) was selected for the study tools' pretesting as it offers similar programs which were under review in this study.

#### **3.7.1 Validity of the Study Tools**

Validity represents the level to which a data collecting tool evaluates that which it is devised to assess (Burkholder et al., 2019) or the level to which the data it obtains adequately reflects the subject being examined (Hall, 2020). Peers and the supervisors aided in evaluating the tools' content hence constructing validity to verify that their material/content adequately representing the subject being investigated.

#### **3.7.2 Reliability of the Study Tools**

Reliability denotes a research instrument's ability to generate findings that are alike over repetitive tests (Pandey & Pandey, 2021). The study questionnaire's consistency was evaluated utilizing the Cronbach's alpha coefficient with data from the pretest. The questionnaire yielded an overall Cronbach alpha coefficient value of 0.838. and hence

it was deemed to be reliable. Further, the interview guide's consistency was evaluated using the test-retest procedure and was found to have high consistency.

### **3.8 Participants' Recruitment and Consenting Procedures**

For the nursing students' enlisting, the research assistants after acquiring appropriate sanction from the administration of KNH School of Nursing spoke to the right cohort of nursing students while in class. The research assistants made use of the brief happenstances to create rapport including introducing themselves, creating awareness among the participants about the study, its aims; outlining basis for participation, providing clear instructions on how to respond to the questionnaire especially on how to rate themselves honestly and accurately and requesting for their consent to be part in the study. The participants affirmed their taking part through signing the informed consent form. The principal investigator was responsible for recruitment of the faculty members into the study and providing liaison between the research assistants and the faculty members. The participants consented in a context observing principles of participating on one's own volition, decorum and respecting the participants' independence, observing utmost confidence on data provided as well as anonymity in responding to the study tools.

### **3.9 Data Collection Procedures**

Numerical data was obtained through the respondents' feedback on the questionnaire. This was through providing the respondents with the tool and allowing them to answer the queries contained within the questionnaire. To mitigate bias associated with self-reporting in response to the questionnaire, the research assistant implored the respondents to offer accurate and honest responses to the study questionnaire.

Gathering of the non-numerical data encompassed administering the interview guide among the faculty members with one research assistant leading the discussion while another recorded the interview. The interviews audio-recordings were supported by notes taken by the interviewer throughout the interview guide administration sessions. Interactions with those who participated took place in the School's counselling office. The interactive sessions while gathering the data lasted for about half an hour per person. Before the close of each of the interactive interview sessions, every participant was accorded the chance to give a closing remark or to highlight areas of the discussion they would want left out in the penultimate outcome reporting. The recordings and notes made in each of the interviews were securely stored for their safety before the next stage of analysis. Existing protocols for guarding against Covid 19 were heeded to during the process of collecting the data. Respondents to both the questionnaire and the interview guide had to first consent before responding to the study tools. The entire exercise for obtaining the data lasted for a period of four weeks.

### **3.10 Data Storage**

The informed consent forms along with research instruments have been securely stored inside a lockable locker only accessible and opened by investigator. The information from the completed surveys was also added to Ms Excel and is kept in a password safeguarded laptop that is only accessible by the researcher. Additionally, the researcher has a backup copy of the data stored on a password-protected flash drive. These actions were taken to guarantee the security of the obtained data.

### **3.11 Data Analysis and Presentation**

Data was first cleaned and entered prior to its analyzing. The numeric data was probed descriptively via proportions along with occurrence rates. Additionally, the explanatory

and explained components correlations were measured utilizing the chi-square test at 95% confidence interval. The chi-square test was deemed appropriate as the study dwelt with categorical variables and is useful in evaluating relations between variables in question. It's also simple to compute and versatile. Numerical outcomes were reported in figures and tables. SPSS v. 25 was made use of in probing numeric data.

Thematic analysis was used to examine non-numeric data from the interview guide responses. The six-step method for finding, analyzing, and summarizing themes in data that Braun and Clarke (2006) outlined was adhered to in the thematic analysis. The codes were identified using an inductive approach. The six steps listed below were adhered to: data transcription alongside thorough review of the taped discussions to ensure the accuracy of the transcriptions and to achieve familiarity with the data; developing codes for the transcribed data; categorization of the codes to potential themes; continued appraisal of the identified potential themes till; suitable definitions and labels of the final themes and subthemes were created, and finally compiling and reporting the qualitative study findings. Qualitative data analysis was performed using NVivo v.12 and the findings were presented verbatim.

### **3.12 Ethical Considerations**

The ethical and research committee of Kenyatta National Hospital as well as from Amref Ethics and Scientific Review Committee (ESRC) ethically approved the study. Investigation permit for the study was given by the National Commission of Science, Technology and Innovation (NACOSTI). Authority to gather data from eligible participants was granted by the Head of KNH School of Nursing. Targeted respondents offered individual informed acquiescence before responding to the tool. Information

provided by the participants was handled and processed in utmost confidence. The study findings were anonymously reported.

Partakers participated in the study voluntarily without any coercion. There was no ill treatment or loss of any entitlements to those who willingly declined being part of the study and as such any of the targeted individuals was free to discontinue his/her engagement at any point with no any change in how they were treated while in the institution. The partakers' intention to withdraw from the study or to withdraw any data already offered would be communicated to the researcher in writing or verbally. In such a case, the already collected data from the withdrawing participant would be withdrawn too and would therefore not be used in the study.

In addition, those who participated in this study received no compensation or benefits in exchange for their participation. There was no planned risk to participants' health or any other negative outcome from taking part in this study. However, the investigator would send study participants to a counsellor for appropriate help if they experienced emotional or mental difficulties as a result of taking part in this study. The results of the study would only be shared in accordance with the policies of the organization. Additionally, the security of the interview audio recordings was guaranteed.

### **3.14 Study Limitations**

Insights derived relate only to KNH School of Nursing, and hence may not be generalized to all other institutions offering the same programs in the country. Comparable empirical investigations are needed in additional nursing schools locally for the outcomes achieved to be deemed to hold universally. In addition, some of those who participated were initially reluctant to be part of the study owing to the study subject's sensitive nature along with worry of being ill-treated. This was however

resolved by providing assurances to them that information offered would be handled and processed with great care and would be applied only for the purpose of the study. They also responded to the tool incognito.

### **3.15 Study Findings Dissemination Plan**

Outcomes of this investigation have been circulated by presenting a draft of the thesis to Amref International University and the KNH School of Nursing. Presentations of the outcomes derived shall also be made in appropriate seminars, symposiums and seminars. A publication of the work shall also be pursued.

### **3.16 Study Team Members and Their Roles**

The study team members and their roles were as outlined below;

- |                          |   |
|--------------------------|---|
| Maywaka Margaret Loice   | Is the principal investigator who is carrying out this research study.  |
| Dr. Solomon Kilaha, PhD  | Is the lead supervisor and is supervising, reviewing and guiding the principal researcher in undertaking the research study.        |
| Dr. MaryJoy Kaimuri, PhD | Is the second supervisor and is also supervising, reviewing and guiding the principal researcher in undertaking the research study. |
| 4 research assistants    | Supporting or helping the principal investigator in carrying out data collection among the study respondents.                       |

## CHAPTER 4: RESULTS

### 4.1 Introduction

This chapter presents the results of the study as set out in the research methodology. The results presented are on the factors contributing to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing. The chapter begins with highlighting the study's response rate, then provides results on the respondents' demographic characteristics before outlining the findings of the study based on the research objectives.

#### 4.1.1 Response Rate

The study targeted 57 Critical care and 44 Nephrology nursing students as well as 23 faculty members in KNH School of Nursing as respondents. The nursing students responded to a questionnaire while the faculty members responded to an interview guide. From the questionnaires administered, the researcher was able to obtain adequate responses from all the 101 nursing students translating into a response rate of 100% for the questionnaires. This response rate was considered sufficient and representative and conforms to Babbie and Edgerton (2023) stipulation that a response rate of at least 60% is sufficient for statistical evaluation and reporting. Based on the principle of data saturation, an aggregate of 15 faculty members also took part.

### 4.2 Demographic Characteristics of the Respondents

The demographic profile of the nursing students was evaluated. Results on the demographic characteristics of the nursing students are as depicted in Table 4.1.

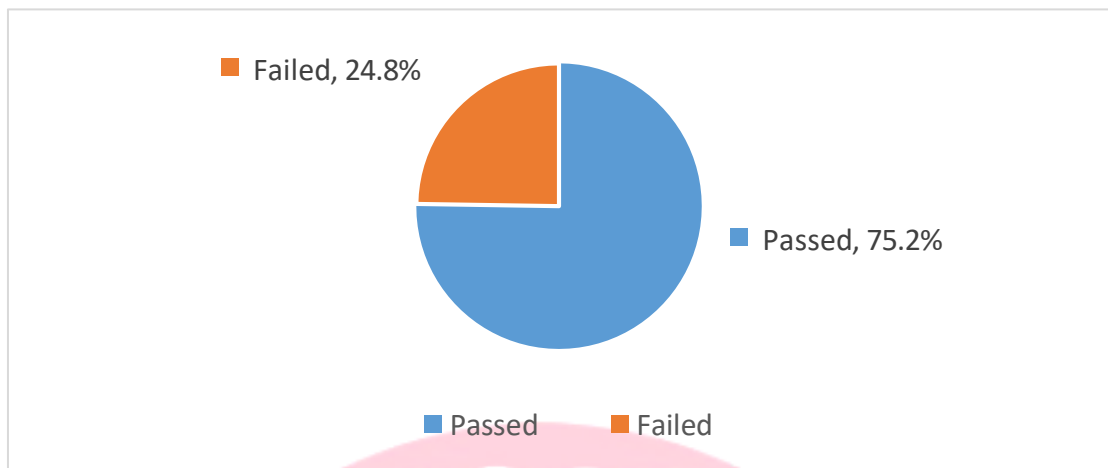
**Table 4.1: Demographic characteristics of the nursing students**

| <b>Demographic attributes</b>      |                | <b>Frequency<br/>(n)</b> | <b>Percentage<br/>(%)</b> |
|------------------------------------|----------------|--------------------------|---------------------------|
| Gender                             | Male           | 36                       | 35.6                      |
|                                    | Female         | 65                       | 64.4                      |
|                                    | <b>Total</b>   | <b>101</b>               | <b>100.0</b>              |
| Age                                | 20 - 29 years  | 43                       | 42.6                      |
|                                    | 30 - 39 years  | 50                       | 49.5                      |
|                                    | 40 - 49 years  | 8                        | 7.9                       |
|                                    | <b>Total</b>   | <b>101</b>               | <b>100.0</b>              |
| Marital status                     | Married        | 66                       | 65.3                      |
|                                    | Not married    | 35                       | 34.7                      |
|                                    | <b>Total</b>   | <b>101</b>               | <b>100.0</b>              |
| Their residence<br>from the School | < 10 kms       | 36                       | 35.6                      |
|                                    | 10 kms or more | 65                       | 64.4                      |
|                                    | <b>Total</b>   | <b>101</b>               | <b>100.0</b>              |
| Religious faith                    | Christianity   | 96                       | 95.0                      |
|                                    | Islam          | 5                        | 5.0                       |
|                                    | <b>Total</b>   | <b>101</b>               | <b>100.0</b>              |

Results in Table 4.1 indicate that most of the nursing students were female (64.4%, n = 65) and were aged 30 - 39 years (49.5%, n = 50) or 20 - 29 years (42.6%, n = 43). Additionally, most were married (65.3%, n = 66), lived 10 kms or more from the school (64.4%, n = 65) and were Christians (95%, n = 96). This implied that the participants were largely middle-aged male and female Critical Care and Nephrology nursing students at KNH School of Nursing who were largely married, Christians and did not live in close proximity to the institution.

### **4.3 Academic Performance Outcomes in Institutional Examinations among the Nursing Students**

The nursing students' academic performance outcomes in institutional examinations was evaluated. The results are shown in Figure 4.1.



**Figure 4.1: The nursing students' performance in institutional examinations**

The nursing students were queried on whether they had passed or failed in their institutional examinations for the immediate past semester. From the findings shown in Figure 4.1, 75.2% (n = 76) said they had passed while 24.8% (n = 25) indicated that they had failed. This implied that a considerable proportion of the nursing students had failed in their most recent institutional examinations.

#### **4.4 Individual Related Factors Contributing to the Nursing Students' Academic Performance Outcomes in Institutional Examinations**

The first objective of the study sought to determine the individual related factors contributing to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing. To achieve this objective, the nursing students were requested to identify individual related attributes that influenced their academic performance outcomes in institutional examinations. Results are outlined in Table 4.2.

**Table 4.2: Individual related factors contributing to academic performance outcomes in institutional examinations among the nursing students**

|  | Proportion that identified the factor |      |
|--|---------------------------------------|------|
|  | Freq. (n)                             | %    |
| Personal and/or familial socio-economic background/status    | 79                                    | 78.2 |
| Level of parental support and/or involvement in your studies | 51                                    | 50.5 |
| Your level of class attendance                               | 76                                    | 75.2 |
| Your entry qualifications for the course                     | 48                                    | 47.5 |
| Time spent on personal studies                               | 90                                    | 89.1 |
| Mental preparedness for an examination                       | 75                                    | 74.3 |
| Amount of time spent in revision for an examination          | 88                                    | 87.1 |
| Active participation in class work                           | 67                                    | 66.3 |
| Influence of peer groups                                     | 50                                    | 49.5 |

From the findings shown in Table 4.2, the individual related factors that influenced academic performance outcomes in institutional examinations among the Critical Care and Nephrology nursing students at the KNH School of Nursing included personal and/or familial socio-economic background/status as cited by 78.2% (n = 79) of the students; level of parental support and/or involvement in their studies as cited by 50.5% (n = 51) of the students; their level of class attendance as cited by 75.2% (n = 76) of the students; their entry qualifications for the course as cited by 47.5% (n = 48) of the students; time spent on personal studies as cited by 89.1% (n = 90) of the students; mental preparedness for an examination as cited by 74.3% (n = 75) of the students; amount of time spent in revision for an examination as cited by 87.1% (n = 88) of the

students; active participation in class work as cited by 66.3% (n = 67) of the students and influence of peer groups as cited by 49.5% (n = 50) of the students.

In addition, chi-square test at 95% confidence interval was used to assess the association of these individual related factors with academic performance outcomes in institutional examinations among the nursing students. Results are summarized in Table 4.3.

**Table 4.3: Association of individual related factors with academic performance outcomes in institutional examinations among the nursing students**

| Individual related factors                                   |     | Students' academic performance |                 | Chi-sq. p value [at 95% CI] |          |
|--|-----|--------------------------------|-----------------|-----------------------------|----------|
|  |     | Passed [N = 76]                | Failed [N = 25] | X <sup>2</sup>              | Sig. (p) |
| Personal and/or familial socio-economic background/status    | Yes | 62                             | 17              | 2.036                       | .154     |
|  | No  | 14                             | 8               |                             |          |
| Level of parental support and/or involvement in your studies | Yes | 36                             | 15              | 1.201                       | .273     |
|  | No  | 40                             | 10              |                             |          |
| Your level of class attendance                               | Yes | 64                             | 12              | 13.243                      | .000*    |
|  | No  | 12                             | 13              |                             |          |
| Your entry qualifications for the course                     | Yes | 37                             | 11              | 0.166                       | .684     |
|  | No  | 39                             | 14              |                             |          |
| Time spent on personal studies                               | Yes | 74                             | 16              | 21.583                      | <.000*   |
|  | No  | 2                              | 9               |                             |          |
| Mental preparedness for an examination                       | Yes | 64                             | 11              | 15.912                      | .000*    |
|  | No  | 12                             | 14              |                             |          |
| Amount of time spent in revision for an examination          | Yes | 71                             | 17              | 10.840                      | .001*    |
|  | No  | 5                              | 8               |                             |          |
| Active participation in class work                           | Yes | 56                             | 11              | 7.423                       | .006*    |
|  | No  | 20                             | 14              |                             |          |
| Influence of peer groups                                     | Yes | 35                             | 15              | 1.464                       | .226     |
|  | No  | 41                             | 10              |                             |          |

\* Statistically significant at 0.05 significance level

From the findings shown in Table 4.3, the individual related factors established to have a statistically significant association with the nursing students' academic performance outcomes in institutional examinations were their level of class attendance (chi-square p value = 0.000), time spent on personal studies (chi-square p value = < 0.000), mental preparedness for an examination (chi-square p value = 0.000), amount of time spent in revision for an examination (chi-square p value = 0.001) and active participation in class work (chi-square p value = 0.006).

However, no statistically significant association was established between the nursing students' academic performance outcomes in institutional examinations and individual related factors which included personal and/or familial socio-economic background/status (chi-square p value = 0.154), level of parental support and/or involvement in their studies (chi-square p value = 0.273), their entry qualifications for the course (chi-square p value = 0.684) and influence of peer groups (chi-square p value = 0.226). This clearly denoted that the individual related factors that influenced the nursing students' academic performance outcomes in institutional examinations mainly related to their class attendance and participation in class work, effort in personal studies and exam preparedness.

#### **4.5 Nurse Educators Related Factors Contributing to the Nursing Students' Academic Performance Outcomes in Institutional Examinations**

The second objective of the study sought to determine the nurse educators related factors contributing to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing. To achieve this objective, the nursing students were requested to

identify nurse educators related attributes that influenced their academic performance outcomes in institutional examinations. Results are presented in Table 4.4.

**Table 4.4: Nurse educators related factors contributing to academic performance outcomes in institutional examinations among the nursing students**

|   | Proportion that identified the factor |      |
|---|---------------------------------------|------|
|   | Freq. (n)                             | %    |
| Your lecturers' demonstration of mastery of the subjects they teach                           | 92                                    | 91.1 |
| Kinds and diversity of teaching methods used by the lecturers                                 | 93                                    | 92.1 |
| Nature of assessment methods used by the lecturers  | 73                                    | 72.3 |
| Nature of student - lecturer interactions and engagement during their teaching                | 90                                    | 89.1 |
| A stimulating and active learning environment   | 75                                    | 74.3 |
| Communication skills of the lecturers   | 83                                    | 82.2 |
| Level of support received from the lecturers in the course of the learning process/activities | 87                                    | 86.1 |
| Nature and diversity of learning activities used by the lecturers                             | 73                                    | 72.3 |

From the findings presented in Table 4.4, the identified nurse educators related factors that influenced the nursing students' academic performance outcomes in institutional examinations included their lecturers' demonstration of mastery of the subjects they taught as cited by 91.1% (n = 92) of the students; kinds and diversity of teaching methods used by the lecturers as cited by 92.1% (n = 93) of the students; nature of assessment methods used by the lecturers as cited by 72.3% (n = 73) of the students; nature of student - lecturer interactions and engagement during their teaching as cited by 89.1% (n = 90) of the students; a stimulating and active learning environment as

cited by 74.3% (n = 75) of the students; communication skills of the lecturers as cited by 82.2% (n = 83) of the students; level of support received from the lecturers in the course of the learning process/activities as cited by 86.1% (n = 87) of the students and nature and diversity of learning activities used by the lecturers as cited by 72.3% (n = 73) of the students.

In addition, chi-square test at 95% CI was used to assess the association of these factors with the students' academic performance outcomes. Results are outlined in Table 4.5.

**Table 4.5: Association of nurse educators related factors with academic performance outcomes in institutional examinations among the nursing students**

| Nurse educators related factors   |     | Students' academic performance |                 | Chi-sq. p value [at 95% CI] |          |
|---|-----|--------------------------------|-----------------|-----------------------------|----------|
|   |     | Passed [N = 76]                | Failed [N = 25] | X <sup>2</sup>              | Sig. (p) |
| Your lecturer's demonstration of mastery of the subjects they teach                           | Yes | 73                             | 19              | 9.319                       | .002*    |
|   | No  | 3                              | 6               |                             |          |
| Kinds and diversity of teaching methods used by the lecturers                                 | Yes | 74                             | 19              | 11.777                      | .001*    |
|   | No  | 2                              | 6               |                             |          |
| Nature of assessment methods used by the lecturers  | Yes | 60                             | 13              | 6.818                       | .009*    |
|   | No  | 16                             | 12              |                             |          |
| Nature of student - lecturer interactions and engagement during their teaching                | Yes | 73                             | 17              | 15.254                      | .000*    |
|   | No  | 3                              | 8               |                             |          |
| A stimulating and active learning environment   | Yes | 61                             | 14              | 5.793                       | .016*    |
|   | No  | 15                             | 11              |                             |          |
| Communication skills of the lecturers   | Yes | 68                             | 15              | 11.158                      | .001*    |
|   | No  | 8                              | 10              |                             |          |
| Level of support received from the lecturers in the course of the learning process/activities | Yes | 70                             | 17              | 9.155                       | .002*    |
|   | No  | 6                              | 8               |                             |          |
| Nature and diversity of learning activities used by the lecturers                             | Yes | 64                             | 9               | 21.821                      | <.000*   |
|   | No  | 12                             | 16              |                             |          |

\* Statistically significant at 0.05 significance level

Results in Table 4.5 indicate that the identified nurse educators related factors were all established to have a statistically significant association with the nursing students' academic performance outcomes in institutional examinations as they all yielded chi-square p values  $< 0.05$ . This implied that a wide range of nurse educators related factors including lecturers' demonstration of mastery of the subjects they taught and their communication skills; kinds and diversity of teaching methods and learning activities as well as nature of assessment methods adopted by the lecturers; nature of student - lecturer interactions and engagement during their teaching; a stimulating and active learning environment and level of faculty support offered to the students significantly influenced the nursing students' academic performance outcomes in institutional examinations in the School.

The findings are collaborated by sentiments shared by the faculty members through the interview guide in relation to their perspectives regarding nurse educators related attributes that contributed to academic performance outcomes in institutional examinations among the Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing. The faculty members were requested to offer their views as to how nurse educators related factors influenced their students' academic performance outcomes in institutional examinations.

Two major themes emerged in relation to the faculty members' views of the influence of nurse educators related factors on the students' academic performance outcomes in institutional examinations. These were *role of teaching and assessment methods* which signified the effect of nurse educators' adopted teaching and assessment methods and learning activities on how the students' performed in their institutional examinations. The *nature of nurse educators - student relations and interactions* which signified the

effect of the nature and level of interactions and engagement between the nursing students and their educators as well as support that the students had or received from their educators/lecturers on the students' performance in institutional examinations.

From the findings, the faculty members were categorical that the nature and forms of learning activities as well as teaching and assessment methods alongside the nature of relations and interactions between them and their students had profound influence on the students' academic performance outcomes in institutional examinations. The influence on academic performance in examination is either positive or negative depending on the appropriateness of the cited nurse educators related attributes. The two themes are described as follows:

**Theme: Role of teaching and assessment methods**

Role of teaching and assessment methods emerged as the first overarching theme in relation to faculty members' views on nurse educators related factors contributing to academic performance outcomes in institutional examinations among the surveyed nursing students at the KNH School of Nursing. The theme signified the faculty members' belief that the nature and forms of learning activities and teaching and assessment methods adopted by the lecturers did contribute to the academic performance outcomes in institutional examinations among the students in the school. From the findings, the faculty members unanimously agreed that the nature and forms of teaching and assessment methods used as well as the nature of learning activities engaged in had profound effect on how the students performed in their institutional examinations. The faculty members also agreed that use of diverse and relevant teaching and assessment tools and methods, such as use of lectures, individual and group assignments, group discussions, demonstrations, practicum and physical and

virtual classes as teaching methods as well as use of short-answer questions, long-answer questions and MCQs or written examinations alongside clinical evaluations as assessment methods favorably influenced the students' academic performance outcomes in institutional examinations. The faculty members also shared the view that lack of diversity and application of inappropriate teaching and assessment methods had adverse influence on the students' performance in institutional examinations. These views are illustrated in the ensuing verbatim excerpts:

"Indeed, teaching methods do influence the students' academic performance in that if the methods employed, for example writing a brochure, physical learning and teaching in class or having online classes. all these are teaching methods but you find that each of them has its own advantages and disadvantages. So it is imperative that educators choose the right teaching methods." (NE001)

"... some of the teaching methods that you use like virtual (that is, in the absence of the teacher), some students may not be concentrating. So in view of that, if the student was not in class, then they're likely not to get what the teacher was teaching and therefore, if part of whatever was taught in that class is in the examination, a student may not be able to tackle the question, because they have not understood because not everything is put on paper, some of that is just explained without putting it down and therefore the methods used in teaching may greatly affect how a student performs in their examinations." (NE004)

"Teaching methods, I would say, like virtual learning is not very effective as compared to the physical or in class mode. When students come to class, the one who is teaching is able to interact and identify the one (*meaning students*) are not comprehending what is being taught. So, Yes, teaching methods used do affect how the students perform in their examinations/studies." (NE008)

"My view of the teaching methods, the ones that we are having usually that's observation, demos, I think we need to get newer methods because what you've been having has been the traditional way of doing things. Now we need to employ other techniques like virtual, like learning, demos. We can have those which have better, they bring, if it's a topic that you want to show, it actually shows everything as it's going and like the traditional one where you have to depend on words, here you are looking at something that is being demonstrated. So we need to get newer methods of teaching and that involves the students more, more fully. So that it's not only just thinking of the information and getting it and just recapitulating the information, but we need to get methods that involve the student where they are participating actively." (NE009)

"In the skills lab, I think different modes of teaching are very important because not all of them can take up material in the same way. So I believe most of the time they use lecture method, here we use actually simulations most of the time.

So I believe the different methods are important because for the slow student who is not able to capture the idea in the lecture section, they are able to grasp something during the simulation process.” (NE010)

“Okay. In the institutional examinations, different assessment methods are integrated, which has the MCQs. It has a short answer questions, it has the long answer questions, and actually this is a venue to have the student learn more materials or learn widely in the area of teaching. Because remember, if you just concentrate on MCQs, this student would be too narrow. Will not even be able to express himself or herself in other fields. So we need to integrate all those sections and we have seen it has really helped even in the higher level when they actually attempt or do the Nursing Council Examinations, we are able to excel. Our students are able to excel in the same.” (NE002)

“True, used assessment methods affect the students. There are those students who are able to elaborate things and they are good at doing that elaboration. So you might end up finding that the students are limited only to specific few choices of answers and they have not been given opportunity to elaborate themselves because of the choice of assessment methods such as MCQs. So these students are limited and they are not able to express themselves or to elaborate their answers. So it narrows students down to few options or too few choices. If we give them the long answer questions, again it is good for those students who are able to express and give narration but again we have time factor here. We cannot give them a whole day to do examination. So these choices of assessment method, in one or the other they affect the student, so I agree.” (NE006)

“Okay, for MCQs, what I can say, some of the students are not very good in MCQs. So, if you put MCQs alone, they may affect their performance. There are Some of those students would like to express themselves, so they do that with long answer questions. So, it's good to balance, put both MCQs and long and short answer questions. Those ones who are not good in MCQs can be able to express. Yes. And again, it affects in a way that if the MCQs only, students just look for past papers so that they cram. Because they know that most of the times, the course is repeated. Yes. So, they won't be able to read, but they will be looking for past papers, past papers, past papers. So, if they go on the ground now to give services, they do not do anything.” (NE007)

“Even in the examinations, the methods that we are using now, some of it is about whether the student is able to memorize while others is on whether they can demonstrate varied aspects. But we have different students who internalize their learning materials differently. So you might find someone is not good at memorizing but is very good at demonstrating. That can affect the student's academic performance.” (NE009)

“The academic performance of students in our institutional examination is affected by the assessment methods used, because sometimes we use the theory assessment and the practical assessment. And these students are very diverse. So some may be good in practical, and others good in theory. And this might affect their performance, depending on the area that they are good in.” (NE012)

### **Theme: Nature of nurse educators - student relations and interactions**

Nature of nurse educators - student relations and interactions emerged as the second overarching theme in relation to faculty members' views on nurse educators related factors contributing to academic performance outcomes in institutional examinations among the surveyed nursing students at the KNH School of Nursing. The theme signified the faculty members' belief that the nature and level of interactions and engagement between the students and their lecturers during learning alongside support and guidance accorded to the students by their lecturers contributed to the academic performance outcomes in institutional examinations among the students in the School. From the findings, the faculty members unanimously agreed that students' performance in institutional examinations was positively influenced by productive learning engagements and interactions as well as cordial relations between faculty members and the students. The faculty members also indicated that consistent support and guidance accorded to the students by their lecturers also enhanced the students' academic performance outcomes in institutional examinations. The faculty were also emphatic that their students' academic performance outcomes in institutional examinations improved (or the students performed better) when their relations and interactions with the students were kind, caring and understanding. The faculty members were also clear that strained relations, inadequate interactions and poor communication and lack of close collaboration between students and the teaching fraternity had negative effects on the students' performance in institutional examinations. These views are illustrated in the ensuing verbatim excerpts;

“Yeah, student-lecturer interaction and engagement influences the learners greatly because as a facilitator you need to motivate the students and help them through. You know, walk together with them, identify the gaps and take them through and if as a facilitator you do not have that touch and interact with the

learners so that you can identify that then you may not know what they are going through and especially the courses that we are taking, they are adult learners because they are higher diploma students, so they tend to go through a lot and if you do not interact with them probably their social issues could be interfering with their performance. So going forward the environment should be very good, so that they can open up and share their issues so that they can be addressed early enough and by that they will even perform better.” (NE015)

“No doubt, the interactions influence their (*referring to the students*) performance, because if you interact with the students frequently, and you are available most of the time, we will have students performing better. But if one (*referring to the faculty members/lecturers*) is not available, or maybe you are not approachable, this might negatively affect the students’ performance, because they might fear coming to ask you questions, or maybe you are not available most of the time, you are busy with other engagements. So it might make the interactions difficult. So one (*referring to the faculty members*) should interact with the students positively and those that are weak in some areas, you can also go on one-on-one with them.” (NE012)

“Yes, I think so, I think it does. Particularly I had mentioned the interpersonal where say the student has challenges and they are not able to communicate that in good time to the nurse educator. It may affect students because we've had situations where you see students' academic performance deteriorating and it is until say we go through something we call a moderation here, where now some of our peer’s highlight that you know beyond just teaching, are there other factors that could be contributing to this student's performance that we have not looked at and then we as educators then seek to engage the student, the particular student and just find out. So where that communication particularly is encouraged, free communication between the student and the educator is encouraged, then such things can be picked up early and where that has been done, we have seen that you know and I think I've seen that even here, you know when we are informed that you know this particular student will not be able to come because we have adult students, some of them work besides them coming here, some of them are parents you know. So when we know we are able to tailor our teaching or whatever instruction that we are giving here to accommodate as many students as we can and where some students have challenges then we can address those. So they do influence the student's performance. So how can they be positively influenced? I think encouraging more free interactions beyond just the classroom, maybe even having a counsellor or having colleagues you know when we realize that there's a challenge and maybe it's because of a maybe personality of myself or another of my colleague, then we are able to bring in someone else who is agreeable I think to both the student and ourselves to maybe come in and address that issue with the student. So, yes.” (NE011)

“Nurse educator plays a very big role because they tend to view the nurse educator not just as a trainer, but also as a colleague. So when they look at them as a colleague, they tend to develop this level of trust that will enable them to actually go to them should they come across something that they are not sure of, or if they did not grasp a technique in the skills lab, while they are with the

nurse educator in the clinical area, they are actually able to follow up on it and be able to do this. But this is based on the fact that there is a level of trust they develop as a result of the nurse educator not just being their educator, but also appear as a colleague in the clinical area..” (NE010)

“Yes, nurse educators and even their character according to me affects the student learning. It depends on their (*referring to nurse educators*) temperament, how engaged are they, how involved are they with the student mentorship. If they are well engaged and have the students’ welfare at heart, then they will be there giving them instructions and teaching them. But if they are distant, you know some of them like I have seen in other institutions where students are just brought to the clinical area and no one is even following up. Their clinical instructor is not even following but will only appear during assessments to come and assess which poses the question, what are you assessing, if you have not been there with them in the first place.” (NE009)

“Yes, the performance would be influenced positively, if there is more constructive engagement between the nurse educator and the student even in the clinical setting, apart from the one that's done in class, so in the clinical environment.” (NE008)

“The relationship of an educator and a student affects the student’s performance. If the educator is not friendly to the students, the students can also develop a poor attitude towards the trainer, lack concentration while in class or maybe not persevere to finish the course, all of which negatively affects their performance. But if the educator is friendly, the students will likely have good attitude towards learning and also will be encouraged to even perform better. Yeah, because of that good relationship. The students are likely to love the training they are receiving from the school.” (NE007)

“Our relationship with the students is very, very key. If we have a negative relationship or negative interpersonal relationship, definitely this will deter the student from concentrating, it will deter the student from openly engaging the lecturer or the nurse educator or even asking the questions where they are not aware or they are not sure. That type of poor interpersonal relationship will make the students not be able to grasp the content of the lecture very well in turn leading to poor performance in the examinations. On the other side, if we have a positive interpersonal relationship with this student, this student will be free to ask you questions, they will be free to interact with you, they will be free to seek more information and therefore the good or positive interaction with the students, is likely to have a definite positive consequence on the student’s performance in examinations.” (NE006)

“They (*referring to student-nurse educators’ interactions*) are instrumental. When you involve the students in your lesson, actually, I'm sure they are able to understand quite well. And when you also give them live examples, they are able maybe to remember what you taught them by the end of the lesson when you are examining them. So it is also good to create some humor as you're in class, because whatever examples that you give them, and they have some humor in them, they will be able to remember. Yeah.” (NE005)

“Nurse educators, you see, that relationship in class where when you go to class, you ensure that you create an enabling environment for the students is very, very important. That friendly face even in class because your students, they may be learners but somehow you have to put up a face where the students feel that they can engage with you but not that gloomy face that shows that even asking a question is not an easy thing.” (NE001)

#### 4.6 Institutional Related Factors Contributing to the Nursing Students’ Academic Performance Outcomes in Institutional Examinations

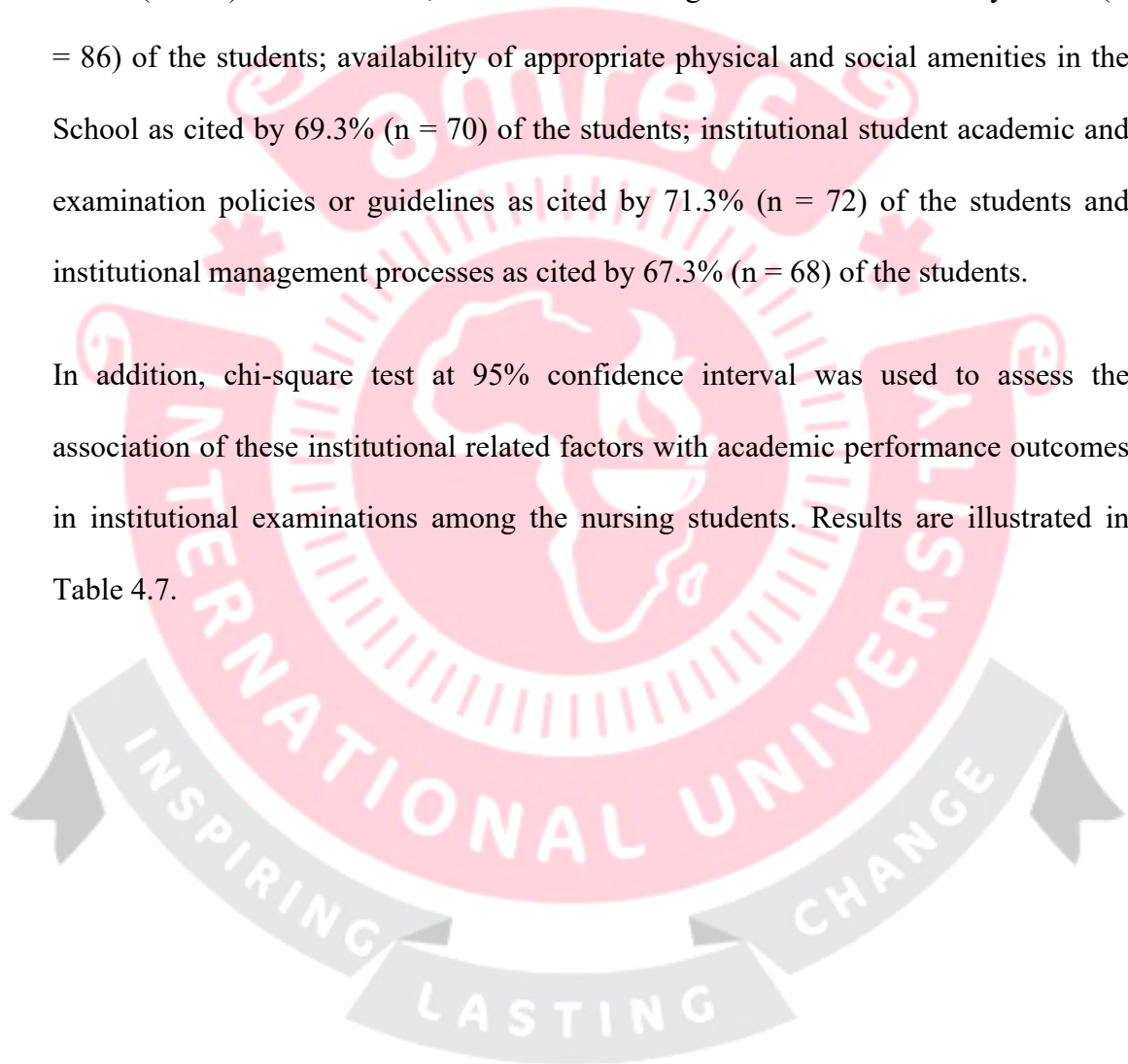
The third objective of the study sought to determine the institutional related factors contributing to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing. To achieve this objective, the nursing students were requested to identify institutional related attributes that influenced their academic performance outcomes in institutional examinations. Results are shown in Table 4.6.

**Table 4.6: Institutional related factors contributing to academic performance outcomes in institutional examinations among the nursing students**

|   | Proportion that identified the factor |      |
|---|---------------------------------------|------|
|   | Freq. (n)                             | %    |
| Availability of appropriate learning facilities e.g. library among others | 93                                    | 92.1 |
| Availability of appropriate learning materials/resources                  | 95                                    | 94.1 |
| A conducive learning environment  | 86                                    | 85.1 |
| Availability of appropriate physical & social amenities in the School     | 70                                    | 69.3 |
| Institutional student academic and examination policies or guidelines     | 72                                    | 71.3 |
| Institutional management processes  | 68                                    | 67.3 |

From the findings, the institutional related factors that influenced academic performance outcomes in institutional examinations among the Critical Care and Nephrology nursing students at the KNH School of Nursing included availability of appropriate learning facilities such as the library among others as cited by 92.1% (n = 93) of the students; availability of appropriate learning materials/resources as cited by 94.1% (n = 95) of the students; a conducive learning environment as cited by 85.1% (n = 86) of the students; availability of appropriate physical and social amenities in the School as cited by 69.3% (n = 70) of the students; institutional student academic and examination policies or guidelines as cited by 71.3% (n = 72) of the students and institutional management processes as cited by 67.3% (n = 68) of the students.

In addition, chi-square test at 95% confidence interval was used to assess the association of these institutional related factors with academic performance outcomes in institutional examinations among the nursing students. Results are illustrated in Table 4.7.



**Table 4.7: Association of institutional related factors with academic performance outcomes in institutional examinations among the nursing students**

| Institutional related factors   |     | Students' academic performance |                 | Chi-sq. p value [at 95% CI] |          |
|---|-----|--------------------------------|-----------------|-----------------------------|----------|
|   |     | Passed [N = 76]                | Failed [N = 25] | X <sup>2</sup>              | Sig. (p) |
| Availability of appropriate learning facilities e.g. library among others | Yes | 75                             | 18              | 18.366                      | .000*    |
|   | No  | 1                              | 7               |                             |          |
| Availability of appropriate learning materials/resources                  | Yes | 75                             | 20              | 11.753                      | .001*    |
|   | No  | 1                              | 5               |                             |          |
| A conducive learning environment  | Yes | 71                             | 15              | 16.616                      | .000*    |
|   | No  | 5                              | 10              |                             |          |
| Availability of appropriate physical & social amenities in the School     | Yes | 58                             | 12              | 7.09                        | .008*    |
|   | No  | 18                             | 13              |                             |          |
| Institutional student academic and examination policies or guidelines     | Yes | 63                             | 9               | 20.211                      | <.000*   |
|   | No  | 13                             | 16              |                             |          |
| Institutional management processes  | Yes | 57                             | 11              | 8.218                       | .004*    |
|   | No  | 19                             | 14              |                             |          |

\* Statistically significant at 0.05 significance level

From the findings, the institutional related factors established to have a statistically significant association with the nursing students' academic performance outcomes in institutional examinations were availability of appropriate learning facilities such as library among others (chi-square p value = 0.000), availability of appropriate learning materials/resources (chi-square p value = 0.001), a conducive learning environment (chi-square p value = 0.000), availability of appropriate physical and social amenities in the School (chi-square p value = 0.008), institutional student academic and examination policies or guidelines (chi-square p value = < 0.000) and institutional management processes (chi-square p value = 0.004). This implied that varied institutional related factors including existence of appropriate learning facilities,

resources as well as physical and social amenities, a conducive learning environment and institutional policies, guidelines and processes did influence the nursing students' academic performance outcomes in institutional examinations at the KNH School of Nursing.

The findings are collaborated by sentiments shared by the faculty members through the interview guide in relation to their perspectives regarding institutional related attributes that contributed to academic performance outcomes in institutional examinations among the Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing. The faculty members were requested to offer their views on institutional related attributes that influenced their students' academic performance outcomes in institutional examinations.

Three major themes emerged in relation to the faculty members' views of the influence of institutional related factors on the students' academic performance outcomes in institutional examinations. These were *the role of appropriate learning facilities and resources* which signified the critical importance of availability of appropriate learning facilities and resources and a conducive learning environment on the students' academic performance outcomes in institutional examinations; *the role of physical and social amenities* which signified the critical importance of existence/availability of appropriate physical and social amenities in the students' academic performance outcomes in institutional examinations and *the role of institutional operational rules and policies* which signified the influence of the School's various regulations and policies such as on the students conduct while in the School, students academic affairs and general institutional management on the students' academic performance outcomes in institutional examinations.

From the findings, the faculty members were categorical that the students' academic performance outcomes in institutional examinations at the School was profoundly affected by the three institutional related factors: availability of appropriate learning facilities and resources; availability of appropriate physical and social amenities and prevailing institutional regulations and policies. The faculty members were clear that availability of sufficient, diverse and relevant learning facilities and resources, physical and social amenities and appropriate institutional regulations and policies helped improve the students' academic performance outcomes in institutional examinations and vice-versa. The three themes are outlined as follows;

**Theme: The role of appropriate learning facilities and resources**

The role of appropriate learning facilities and resources emerged as the first theme in relation to the faculty members' views as to the institutional related factors that contributed to the nursing students' academic performance outcomes in institutional examinations at the School. The theme signified the faculty members' strong belief that availability of appropriate learning facilities and resources had profound effect on the students' performance. From the findings, the faculty members were unanimous that existence of the right and functional learning facilities, resources and materials including a well-equipped library with good reference materials, the right books, appropriate teaching aids, appropriately equipped skills simulation laboratory, functional wifi, spacious, clean and well-ventilated classrooms, comfortable desks and seats, functional computers and laptops and a calm and conducive learning environment among others was instrumental in achieving good performance in institutional examinations among the students. The faculty members were also clear that the lack of or inadequacy of the right learning facilities and resources, no doubt, negatively impacts

the students' academic performance outcomes in institutional examinations. The views are demonstrated in the ensuing few verbatim excerpts;

“Our facility is wifi challenged. So, the students are not able to access more materials from online sources as would be appropriate, yes. Also, the learning environment matters a lot and I would say our environment is not very friendly because sometimes it is very noisy. The learning space is also inadequate especially when you need to have a physical class for many students, there is a lot of congestion. So there is a problem with space.” (NE008)

“If we do not have adequate learning materials, then it will affect their (*meaning students*) performance. But you can also have them, the resources, but if they are outdated at the same time, it also affects. So, we need to have learning materials that are up to date. Like if the students now need to use the library, the library needs to be a virtual library now, whereby they can be able to access the learning materials from wherever they are. They do not necessarily have to come to the library physically. If we have a virtual learning library, it would even be better and easier for them.” (NE009)

“I believe we have an advantage in that area (*referring to existence of appropriate learning facilities and resources*). Being that the School is within the same locality as the hospital, so we are able to put what we have learnt into practice. So I believe that does influence. It is actually a positive attribute on our side. It (*referring to existence of appropriate learning facilities and resources*) definitely improves their performance (*she adds*).” (NE010)

“The influence, of course, there is an influence of learning facilities on our students' academic performance, especially when there is congestion of students in the clinical areas. There are so many students. So these students may struggle sometimes to get the knowledge, because they are so overcrowded, because we have different students from different institutions. So when they become many, one may not be having ample time for each of them individually. And for those who have issues, may also not be, they are not catered for well, because of the large number of students. When the students are not having appropriate learning materials, these will affect their academic performance, such that they will not be able to achieve whatever they are supposed to achieve. Because when the learning materials are not available, these may delay whatever they are supposed to learn. And this will definitely affect their academic performance.” (NE012)

“Of course availability of learning facilities and materials is very important to their (*referring to the students*) performance. You know, whether you are talking about adequately spacious and clean learning halls, right text books, functional wifi, computers/laptops and projectors for the trainers, and an ambience learning environment. All these are indeed crucial.” (NE001)

“... I think we have a functional library and it has good books. ... The only problem I may say that we are yet to have a strong Wi-Fi where the students can be able to search and use relevant materials as part of their learning. I know it

is important for our students to have e-learning materials. Yeah, Um, that's an area we need to improve on. Another area that we need to improve on is the space. The space sometimes is mostly not enough. And I know this is a long term a goal, but if it is done, then, it would be a good gesture.” (NE002)

“Yes, to some extent it does, it (*meaning students' academic performance*) is affected by the nature of the learning environment, like I have alluded before. The ambience, the congestion of the lecture rooms, the furniture that is the chairs need to be comfortable for long sitting, the lighting, the noise, (it has to be away from noise), the books, the wifi, the whiteboard markers, the washrooms, the changing rooms... I can go on and on. Yeah, they are all quite important and should be both adequate and functional.” (NE003)

“I think this one (*referring to the nature of the learning environment*) is a great deal. The learning environment affects them (*referring to the students*) greatly. Particularly if it is virtual learning environment as at times within the school the network is quite low and may not be supportive of the learning and there are a lot of interruptions. So this environment really affects because of the frustrations of the learners at times they miss out important points that they need to remember and that finally may trickle down to the assessments where as a result they miss out to bring out the right concept or the right answer.” (NE015)

### **Theme: The role of physical and social amenities**

The role of physical and social amenities emerged as the second theme in relation to the faculty members' views as to the institutional related factors that contributed to the nursing students' academic performance outcomes in institutional examinations at the School. The theme signified the faculty members' strong belief that availability of appropriate physical and social amenities also had profound effect on the students' performance. From the findings, the faculty members shared the views that availability of appropriate functional physical and social amenities including adequate accommodation, easily accessible places where the students can buy lunch during lunch breaks or tea during tea breaks, games, social, entertainment and recreational facilities, good ablutions among others was instrumental in achieving good performance in institutional examinations among the students. The faculty members were also clear that students' academic performance was not just about books and studying only but

that having appropriate physical and social amenities was also critical to producing holistic and all round competent nursing students. The faculty members however noted that there were gaps and deficiencies in relation to availability of appropriate physical and social amenities for students in the School and identified this as an area requiring improvement. The views are demonstrated in the ensuing few verbatim excerpts;

“In our situation, we can improve, we can do better. I feel that we do not have adequate physical and social amenities. Again, even the supplies of things like tissue, toiletries, we do not have adequate toiletries. Even some of the rooms that we are having, like the washrooms, they are not adequate and as clean. They are not up to the standard that you would expect in our level of training. So we need to have one adequate supply of appropriate physical and social amenities that are specific to the needs of the students.” (NE009)

“The availability of physical and social amenities in our institution affects the students’ performance, because these students also need to relax, sometimes. Education is not just about learning in class. They need to interact, and they also need ample areas where they’re supposed to socialize. And because this is not available in our institution, it really makes them just think what we are doing is just about books. And this affects their performance, because sometimes we need the students also to relax. The unavailability of these things (*referring to various physical and social amenities*) makes them feel overworked and overwhelmed.” (NE012)

“... Then again, I have talked about a canteen. We require a canteen for these students, where they can easily purchase tea, food, and again, they do not have resting places within the compound, whereby they can have a shed with some few chairs, where they can even congregate and even do their revisions. Yes, we really need such amenities. When they get sick, they can be seen in our main hospital, but at a fee. So I was wondering whether the students can be advised to have an insurance cover, which they can utilize when they are unwell within the school, to seek medical services, in instances where they get unwell, and some of them even do not have money. So we really need to go beyond to have them provided with medical care ...” (NE013)

“Another issue is about accommodation of our learners. We receive them from all over the country and beyond and some need to be accommodated within the facilities so that they can have good time to be in their classes and the clinical areas as expected and at times that becomes a challenge, so it is an institutional factor that we really need to see. It affects their performance; some would report that they are being accommodated by relatives who might not give them a favorable environment for learning or to do their revision. I will also talk about the recreational amenities which currently we may not have, particularly, for the students who are housed within the school and that has been, to me personally, I have heard it being raised by the students because there are no facilities at all and the students would raise it and say that if they had such, they would have

some moment to relax and even have a place where they can rest and even have some discussions within the school. So without it, they tend to look for other social or recreational things out of the school and they tend to divert from their core and now they miss out on even revising and doing their schoolwork.” (NE015)

“Of course, I would say yes. For example, if you are teaching students and maybe where they need to take their tea break, lunch break is far. If they spend more time on the way, walking to look for food, for example, we need cheap food which is closer to the students’ class so that they can rush to the dining or the restaurant, they eat and they come back to class. But if they are going shopping around, maybe if it is like in KNH for example, going to the KMTC side looking for the cheapest food on the road, on the roadside, so that they can now come back. So, they will spend like a whole hour. So, they will get back in class late, maybe you have already started teaching. So, they will miss some points.” (NE007)

“Of course, of course it does ... Maybe during break time, where do they go to take their break? During lunch time, do we have availability for meals, or are they able to go and take meals within the locality, if not being provided within the institution? So by the end of the day, if you find that all these services are not there, sometimes it might put a strain on the students, and somehow they might do as well as they are capable of doing. ... The other one is about the accommodation. There are those students who might require to be accommodated within the organization because of where they come from, or because of many other factors. And if they are housed in a place, they are able to study well, to interact, come in groups, helping them to perform better.” (NE001)

“Yes, I would say yes. Yes, because it is important to have some time to relax after class. And just in that moment of relaxation, they say if you are playing cards or even playing football or just jogging. It is important. It also enhances the kind of a team building within themselves. Yes, yes, the physical and so is the social amenities. It is very important for students to relax, because we can not just be in books throughout, we need to relax our minds. So that we tap in well in the next lessons...” (NE003)

“First of all the physical, it is the building, yes, so our building is not so big. So, sometimes when you want to hold the joint classes, it becomes difficult and therefore, they have to have a virtual, class, to which some of them have challenges, especially in the initial phases and that affects their learning and therefore it will affect how they perform in the examination. Secondly, for the social amenities we do not have a setup environment where they can just come and carry their lunch and eat. Because if we had that facility, then they just bring in their food warm instead of going out where they have to look for food in there for some time, it takes time and delays them to come back for the next lesson. Or when they are late for the lesson, maybe the lecture has started. And that affects the flow of that specific topic. Other social amenities, we do not have really much social amenities, in terms of recreation for them, because after learning activities, then you need about in between your breaks, you need where you can, you can rejuvenate. And therefore you need a place where you can sit

with your colleagues talk and then come back for class. So if it was possible, then other social amenities should be availed, where they can just sit and hang out and make it a place that will help them to rejuvenate in preparation for the next class.” (NE004)

“I would think they do, because like, when we come to ablutions, we do not have enough for our students. And especially for the ladies who are the most, we do not have adequate. So you will find that sometimes you will release them for a short break, but they have to take more time because they have to wait for one another. So, most of the time, you will find you even have to tell them to go away from where they need to go and look for other such facilities else where. So, it wastes time. Yeah, I wonder whether it has an influence on their performance but we do not have enough physical and social amenities facilities for them.” (NE005)

“There is lack of hostels where the students can stay. And therefore the students have to be housed away and far. coming all the way from far makes some to arrive late or even miss classes. Our playing ground is also not well equipped and not well maintained. The ground is there but we do not have outdoor... What do you call this? Balls, playing cards, we do not have those things for students to use. So, the students are not able to interact well socially outside class work and this likely influence their performance in studies negatively.” (NE006)

“I think maybe I would say students, I think learning, reading, it takes a lot of energy especially mental energy. So what I have realized is and some students have said that they would appreciate it if we had a place where they could eat food that is available near here. Our ablution facilities are also inadequate for the student numbers we have which eats into the time they would spend in class. Things like having a playing ground, allowing students to participate in different co-curricular activities. I am sure it would help enhance their ability to learn and their cognitive faculties would be much better if they are able to also exercise and do things like these, yes.” (NE011)

### **Theme: The role of institutional operational rules and policies**

The role of institutional operational rules and policies emerged as the third theme in relation to the faculty members’ views as to the institutional related factors that contributed to the nursing students’ academic performance outcomes in institutional examinations at the School. The theme signified the faculty members’ belief that students’ academic performance outcomes in institutional examinations was influenced by the institution’s existing internal operational regulations and policies such as those on the students conduct while in the School, on students’ academic matters and on

general institutional management. From the findings, the faculty members shared the views that their work of teaching the students was guided by the institution's policies and regulations on academic affairs and acknowledged that the School's policies and regulations were instrumental in creating a good and conducive learning environment for the students. The faculty members were also clear that prevailing institutional policies and regulations were also core in ensuring the nurse educators' delivery of high quality and standardized learning to the students which in turn contributed to better academic performance outcomes among the students. The faculty members identified institutional policies and regulations on admission requirements, class attendance, clinical placement and supervision, examinations, fees, research, accommodation, provision of appropriate learning materials, employment of competent educators and conflicts resolution as having a profound effect on the students' academic performance outcomes in institutional examinations and therefore called for a review and enhancement of these policies and regulations. These views are as illustrated in the ensuing few verbatim excerpts;

“Okay, institutional policies are there to guide and to give directions on the way forward regarding students' academic matters. For example, if a student has done so well, the policy in place should be able to encourage this person, and for those that fail their examinations, it (*referring to the policies*) can allow for a resit. The policies also guide who qualifies to join the School and for which program and if you are doing research, you have somebody who is guiding you, you know, you are given a mentor who will take you through that. All those things come in the policies.” (NE001)

“We do have policies in the institution that governs every activity that is carried out, we have examination guidelines, we have, we have policies on admission, policies on class attendance, policies on clinical placement and supervision and so on. So, the policies are on board. They are there and govern what we normally do. Also remember that in any institution, management is very important. Management is key to everything and guides both the trainers and the students. Yes. So, everything, the education and life inside the institution is guided by the management. So, students’ performance, is no doubt, affected by the nature of the management and the regulations and policies they put in place.” (NE002)

“In my view, it is important to have policies that guide the academic matters. Because then we have a direction in which we are moving and because if we did not have them in place, then we will just be doing our own things that are probably not of the required standard. They (*referring to the policies*) help us actually make the learning standardized as much as possible. Like now, the policies we have from admission of the students, to the teaching, to the administration of exams, to practical sessions and all, are important in guiding us through so that we do not do our things haphazardly and this is very important. Otherwise, it would be difficult to create a good learning environment for our students if we did not have them in place.” (NE003)

“Yeah, they (*referring to institutional policies*) directly affect on how first of all the lessons are delivered; secondly, on how the examinations are conducted, and within which environment. And thirdly, also, I think, policies like the school fee policy plays a very big role in that if you have not paid your examination fee, you are not able to sit for your exams. So, if the students have not been able to raise the fees, then basically, there is no way they can be assisted by the institution, or the college itself. Then, there is the research, the research itself, the process, the processes under which the research goes, might be challenging for the students. And this is because of the policy, therefore they have to have their research go through the ERC before they do it. So, if it delays, then basically that delays the whole academic process for that specific student, yeah. I would add that the management plays a big role, such as in procuring all the necessary resources needed for the training of the students and generally ensuring that the learning environment is conducive for the learners.” (NE004)

“My own observation is that policies on areas such as students’ admission, availability of accommodation and fees settlement have significant effect on how the students perform in their examinations. On admission, only those who meet the set qualifications for a given course should be admitted and I am glad that is the case with our institution. Accommodation is a big challenge as we have very few rooms, very, very, very few rooms for our students, and you find that sometimes they will go very far away to look for accommodation. On fees, not every student, and especially this time of economic hardships, is able to settle their fees in time which affects their doing of examinations and even studying. So, I feel all these, in one way or the other, affects the students’ academic performance.” (NE005)

“Yes, these institutional policies... Institutional policies, of course, if you do not have the right institutional policies, it is like you are planning to fail. That is what I would say. You need to have a policy in place to be able to enhance the

students' performance. Any institution that does not have a policy, it is like you do not have a goal or you do not have a driving force that guides your behavior, that guides your actions. So, policies on academic matters, examinations, students' conduct here, resolving conflicts among the teaching staff and many others, all impact students' academic performance in one way or the other.” (NE006)

“For me, I would say, policies like now, like on finance, which says that students must complete their school fees before they can sit for their exams. We find that some of the students we are having are in-service students. They may be working somewhere, but they need also to go to school. Some of them may not be released from their work. And they have to work to get the school fees. So you cannot tell them to stop working. So, me, I would suggest, they are allowed to do their exams, but not collect the certificate, until they clear, then you can give them the transcript. That would be better than a student deferring a whole year because of lack of school fees. And of course, if the institutional policies and management processes are effective and good, performance of the students would be excellent and the opposite is also true.” (NE007)

“When you have policies in place and they are adhered to, it will actually lead to improvement and if you have policies in place and they are not adhered to, then it will lead to certain problems. For instance, one of the policies is on the days for students to have their classes, you are supposed to be seated in class and waiting for your lecturer, not the other way around. But if you have a situation where students come in at any time they feel like, then they tend to miss out on a lot and also when it comes to understanding of the content, they pull the rest back. That actually delays everyone. Hence, rules and regulations play a very important role. Because when you have rules and regulations in place, they (*meaning students*) have no choice but to adhere to them which makes life easier for everyone, themselves and their educators.” (NE010)

“Yes, the policies are quite important and very key because they do guide us on how to go about issues, and particularly if I talk about the policy that guides us on examination, It is very clear and gives us direction on what is expected of the students' performance wise. So, the policies need to be checked over time so that we see whether they are still guiding us rightly. So, without the policies, we will be doing things without headway and without a definite vision of where we are going.” (NE015)

“Okay, so one of the major institutional policies on academic matters is the need to limit absenteeism and there are cut-offs for that. That policy works very well because it ensures that the students are in class or in the clinical areas where they are supposed to be and doing what is required of them. The other policy that affects our students is the policy of pass marks, so that the students know they have to meet a certain mark for them to progress in their studies or to successfully complete the program. So, those are two major policies which help make sure that learning is actually taking place.” (NE014)

“I think policies are important because like now we have something here, it is called the service delivery charter. The student and maybe their guardians can look at the service delivery charter and see whether the services that we are

providing are provided for within the institution's service delivery charter, and as per the set timelines, yes, so that the student can see the effectiveness, like you know, are we sticking to the provided timelines and where not, how the student can seek redress. And the fees, I think there is a policy on all fees details for all the programs so that the students and their guardians are able to see how much they are supposed to pay and by when. I think also there is an orientation program that happens at the beginning of every academic year where someone from the different divisions within the school gets to talk to the students to let them know how the students can inquire about the different services provided within the school and that at this or that point this is what will happen, so that the student is aware and they can ask questions about those policies.” (NE011)

“About policies, most of the policies, when the students report here, we normally take them through the institutional policies together with the school rules and guidelines. One thing we remind them, or we let them know, is that they can only remain in school when they clear their fees at the stipulated periods, so that failure to pay does not stop them from sitting their exams. Because if they don't pay their fees, tuition fees in time, that may stop them from doing their exams’ So we really emphasize on them paying their school fees in good time, so that when they come back the second and third block, they are able to sit their exams at the right time. We also have rules and guidelines whereby we talk to them about being properly dressed as they appear in classes and even in the clinical areas, so that they are not chased away. Because when they lose time, that time will not be recovered. So we really tell them to behave well, to dress well, so that they do not lose time on disciplinary actions. Again, we also tell them that they come here to do post-basic courses and they are nurses, and they are registered and licensed by the Nursing Council. And so we really emphasize on the fact that even when they join our institution, they should still remember that they are nurses who are registered and licensed by the Nursing Council, and in so doing they should behave as the Nursing Council also requires them to do. And in so doing, this one improves their performance because if they do not meet the institutional policies, school rules and guidance, together with the ethics as we are guided by the Nursing Council, this can even make them be terminated during their courses, and this will interfere with their academic performance. So we really emphasize on them adhering to institutional policies, school rules and guidance as well as maintaining their behavior as per the ethics stipulated by the Nursing Council.” (NE013)

## CHAPTER 5: DISCUSSIONS

### 5.1 Introduction

This chapter presents discussion of findings in line with the study objectives. The study findings are therefore compared to previous studies' findings and existing knowledge and implications of the findings are discussed. The study evaluated factors contributing to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing.

### 5.2 Discussion of Findings

#### *5.2.1 Academic Performance Outcomes in Institutional Examinations among Nursing Students*

The nursing students' academic performance outcomes in institutional examinations were assessed. The study established that, though most of the nursing students, had passed their institutional examinations for the immediate past semester, a considerable number had also failed in the institutional examinations. This clearly demonstrated that the academic performance outcomes in institutional examinations among the nursing students at the Kenyatta National Hospital's School of Nursing were sub-optimal. The results showed that there were gaps or deficiencies in the nursing students' academic performance outcomes in institutional examinations, a matter requiring attention. Similar findings were also reported in studies by Alshammari et al. (2017) in Saudi Arabia, Fajar et al. (2019) in Pakistan and Wardani (2019) in Indonesia in which the academic performance outcomes of nursing students in institutional nursing examinations were reported as being sub-optimal. Similarly, Sharma et al. (2020) also noted that a significant proportion of nursing students in India under-performed in their

institutional examinations, a view also espoused by Mushtaq et al. (2019). Other studies in which the academic performance outcomes in institutional examinations among nursing students was reported as underwhelming included those by El-Awady et al. (2022) in Egypt, Mhlongo and Masango (2020) in South Africa and Babaji et al. (2023) in Nigeria.

### ***5.2.2 Individual Related Factors Contributing to Academic Performance Outcomes in Institutional Examinations among the Nursing Students***

From the findings, the individual related factors identified as contributing to academic performance outcomes in institutional examinations among the Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing were personal and/or familial socio-economic background/status; level of parental support and/or involvement in their studies; their level of class attendance; their entry qualifications for the course; time spent on personal studies; mental preparedness for an examination; amount of time spent in revision for an examination; active participation in class work and influence of peer groups. Indeed, a statistically significant association was established between the nursing students' academic performance outcomes in institutional examinations and several of these factors including their level of class attendance, time spent on personal studies, mental preparedness for an examination, amount of time spent in revision for an examination and active participation in class work as signified by chi-square p values < 0.05.

The findings signified that several individual related factors including the level of class attendance and actively participating in class work, time devoted to personal studies and revision for examinations and level of mental preparedness for the examinations were significant contributors to academic performance outcomes in institutional

examinations among the nursing students at the KNH School of Nursing. The implication of the findings is that individual nursing students' commitment to personal learning aspects such as class attendance, being an active participant in class work, commitment to personal studies and adequate revision for examinations were instrumental and contributed to their performance in institutional examinations in a significant way. It is therefore clear that the nursing students' individual factors played a significant role in their academic performance outcomes in institutional examinations and therefore emphasis on the need for them to commit to their studies and to adequately prepare for examinations is needed.

The findings were in agreement with those of Wardani (2019) who in a study conducted in Indonesia identified inadequate time spent in personal studies, poor mental preparedness for the examinations and poor examination revision strategies as individual attributes with adverse effects on nursing students' performance in institutional examinations. Similarly, Fajar et al. (2019) reported poor family background, poor class attendance, low instructive fulfillment, negative influence of peer groups, inadequate time spent on individual studies and low parental support as being the individual related factors which contributed to poor academic performance outcomes in institutional examinations among nursing students in Pakistan. In a cross-sectional study carried out in Cambodia, regular attendance of classes, coming from a stable family-socio-economic background, higher course entry qualifications and putting considerable efforts in one's studies were identified as the individual related factors that had favorable influence on nursing students' academic performance outcomes in institutional examinations as reported by Sothan (2019). In a study carried out in India, Ravi and Flinsi (2019) also pointed out that nursing students' performance in institutional examinations was significantly influenced by the amount of time they

devoted to personal studies, their commitment to class work and their level of preparation for the examinations.

In a study conducted in an American tertiary institution, variables that influenced nursing students' success in institutional examinations were explored. Results showed that nursing students' individual factors including level of class attendance, time spent on personal studies and on revision for examinations and general mental preparedness for the tests were found to significantly affect how the students performed in their institutional examinations as reported by Al Alawi (2020). In a narrative literature review on nursing students' academic performance outcomes and success in nursing examinations, Almazan (2020) also argued that individual nursing students' commitment to their studies seen in the amount of time they devote to personal studies, their level of class attendance and how actively they took part in learning activities had profound implications on how well they performed in their nursing examinations. In South Africa, Dube and Mlotshwa (2018) also noted that a high socio-economic family background, higher-level course entry qualifications and receipt of adequate support in their education from their parents/guardians were predictors of positive academic performance outcomes among surveyed nursing students and vice-versa. Similar sentiments were also shared by Lancia et al. (2018) who also singled out the amount of time devoted to personal studies, commitment to participating in learning activities and how well they prepared for the examinations as being instrumental to how well nursing students performed in their examinations.

### ***5.2.3 Nurse Educators Related Factors Contributing to Academic Performance Outcomes in Institutional Examinations among the Nursing Students***

From the findings, the nurse educators related factors identified as contributing to academic performance outcomes in institutional examinations among the Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing were their lecturers' demonstration of mastery of the subjects they taught; kinds and diversity of teaching methods used by the lecturers; nature of assessment methods used by the lecturers; nature of student - lecturer interactions and engagement during their teaching; a stimulating and active learning environment; communication skills of the lecturers; level of support received from the lecturers in the course of the learning process/activities and nature and diversity of learning activities used by the lecturers. Indeed, a statistically significant association was established between the students' academic performance outcomes in institutional examinations and these identified nurse educators related factors as signified by chi-square p values  $< 0.05$ .

Similar views were also espoused by the faculty members who also acknowledged that the nature of learning activities and teaching and assessment methods adopted by the lecturers as well as the nature of nurse educators-student relations and interactions did influence the students' academic performance outcomes in institutional examinations. Indeed, the faculty members unanimously agreed that the nature and forms of teaching and assessment methods used, the nature of learning activities engaged in and the nature of rapport and interactions between the trainers and the nurse students had profound effect on how the students performed in their institutional examinations. The faculty members also shared the view that use of diverse, relevant and practical teaching and assessment methods and learning resources alongside constructive and supportive

engagements and interactions between the teaching fraternity and the nursing students favorably influenced the students' academic performance outcomes in institutional examinations.

This signified that nurse educators related factors, particularly those related to nature and diversity of teaching methods, assessment methods and learning activities used by the lecturers, nature and level of support as well as interactions and engagement between lecturers and the learners during their teaching and creation of a stimulating and active learning setting were significant contributors to academic performance outcomes in institutional examinations among the nursing students at the KNH School of Nursing. The implication of the findings is that nurse educators related factors were instrumental in nursing students' success in their studies and how well they performed in institutional examinations. The findings therefore implied that to enhance nursing students' performance in institutional examinations, nurse educators must adopt and utilize appropriate teaching and assessment methods, diverse and suitable learning resources and activities, ensure they are well versed with the subjects they teach, nurture and maintain a conducive and stimulating learning environment, nurture and maintain constructive engagement and positive interactions with the students during learning activities and continually support the nursing students in their educational endeavors.

The findings agreed with those of Gripshi et al. (2022) who in a study conducted in Albania identified inadequate level of engagements/interactions of students with their lecturers during the course work, use of inappropriate teaching and assessment methods, an inactive and non-stimulating learning environments and delayed feedback on assessments as having a negative influence on the academic performance outcomes in institutional examinations of nursing students in the country. Similarly, in a study

conducted in India, Sharma et al. (2020) nursing educators' use of diverse teaching and assessment methods, use of diverse but relevant learning resources and activities and positive engagements with their students correlated strongly with positive academic performance outcomes among surveyed nursing students. Similar views were also espoused in a study performed in Egypt in which El-Awady et al. (2022) identified the lecturer's good mastery of the subject taught, the lecturer's use of diverse teaching, learning and assessment methods, the lecturer's willingness to support the students in the learning process, robust and positive lecturer-student engagements, the lecturers' support for an active and stimulating learning environment which encouraged full participation of the students in the learning process and good communication skills among the faculty members as some of the critical nurse educators related variables that greatly influenced nursing students' academic performance outcomes in institutional examinations.

In a study carried out in South Africa, Mhlongo and Masango (2020) identified several nurse educators' factors that adversely impacted performance of nursing students including poor rapport and low levels of engagement between nurse-educators and the students, use of inappropriate teaching and assessment methods, lack of diversity in learning resources and activities, and communication gaps between the learners and the educators. On their part, Dube and Mlotshwa (2018) argued that poor lecturer-student relationships, poor communication skills among the nursing educators and use of inappropriate teaching and assessment tools and methods led to poor academic performance outcomes in institutional evaluations among the surveyed student nurses while constructive student-lecturer engagements, use of diverse teaching and assessment methods and recruitment of highly competent nurse educators positively influenced the students' academic performance outcomes in institutional assessments.

The role of nurse educators related attributes in nursing students' performance was also espoused by Mhlongo and Masango (2020) who pointed that nursing students' academic performance outcomes in institutional examinations could be improved through constructive and proactive student-lecturer learning engagements throughout the course period, lecturers' application of appropriate learning activities as well as teaching and assessment methods and lecturers' proficiency in their communication skills and subject mastery.

#### ***5.2.4 Institutional Related Factors Contributing to Academic Performance Outcomes in Institutional Examinations among the Nursing Students***

From the findings, the institutional related factors identified as contributing to academic performance outcomes in institutional examinations among the Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing were availability of appropriate learning facilities such as the library among others; availability of appropriate learning materials/resources; a conducive learning environment; availability of appropriate physical and social amenities in the School; institutional student academic and examination policies or guidelines and institutional management processes. Indeed, a statistically significant association was established between the nursing students' academic performance outcomes in institutional examinations and these identified institutional related factors as signified by chi-square  $p$  values  $< 0.05$ .

Similar views were espoused by the faculty members who also identified availability of appropriate learning facilities and resources, availability of appropriate physical and social amenities and institutional operational policies and regulations as institutional related attributes with profound effect on the nursing students' academic performance

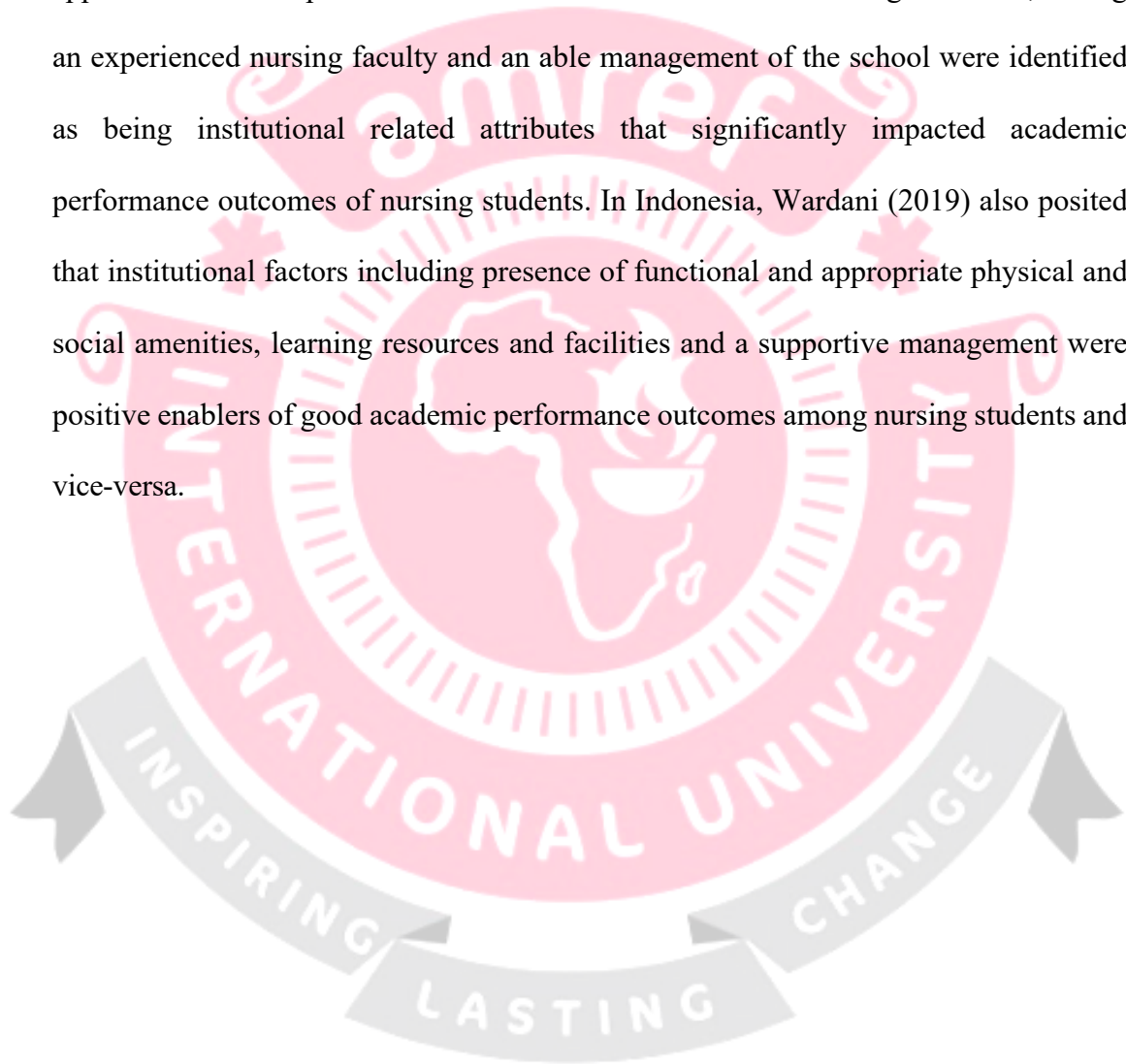
outcomes in institutional examinations in the School. Indeed, the faculty members were categorical that availability of sufficient, diverse and appropriate learning facilities and resources, physical and social amenities and appropriate enabling institutional regulations and policies helped improve the students' academic performance outcomes in institutional examinations and vice-versa. The faculty members also opined that nurse educators provision of high-quality training of nurse students also relied on existing institutional policies and regulations and it was therefore imperative that nursing training institutions had the right institutional policy framework.

This signified that institutional related factors, particularly those related to availability of adequate and appropriate learning facilities, learning resources and social amenities, institutional policies around academic studies and examinations and an effective management running the nurses training institution were significant contributors to academic performance outcomes in institutional examinations among the surveyed nursing students. It was apparent from the findings that institutional factors played a critical role in students' academic performance outcomes as students can only excel academically if they are provided with the right environment to learn in. such an environment is no doubt characterized by presence of appropriate learning facilities and resources, social and physical amenities, and clear institutional policies and processes. The implication of the findings is that the institutional management of KNH School of Nursing has a responsibility of ensuring that nursing students have a conducive learning environment which is supported by adequate supply of appropriate learning facilities and resources, appropriate physical and social amenities, and appropriate institutional policies, guidelines and processes.

Similar observations were made by Sharma et al. (2020) who in a study carried out in India identified presence of a well-equipped school library, availability of adequate and relevant learning materials, availability of suitable learning facilities and existence of strictly applied institutional policies on student academic outcomes as leading institutional related factors that had notable influence on surveyed nursing students' performance academically. Equally, in another Indian study, Ravi and Flinsi (2019) also identified several institutional based attributes that had significant influence on the academic performance outcomes in institutional assessments among nursing students which included whether an institution had a well-equipped library, whether it had adequate, appropriate and relevant learning facilities and materials, presence of a conducive learning setting, whether it had good recreational facilities and whether it had suitable accommodation facilities. In an empirical investigation performed in Pakistan, Mushtaq et al. (2019) also identified availability of appropriate learning facilities, the learning facilities being in good condition, a strict class attendance policy, access to internet in the library and availability of appropriate physical and social amenities within the institution as some of the institutional related attributes with consequential influence on how well nursing students performed in their studies including in institutional examinations.

In a cross-sectional study carried out in South Africa, it was apparent that nursing students' performance in their studies was also curtailed by several institutional related factors including the institutions lacking appropriate learning facilities and materials, lacking appropriate physical and social amenities, and ineffective Institutional management processes and policies as espoused by Mhlongo and Masango (2020). Similar observations were made by Alshammari et al. (2017) who in a study conducted in Saudi Arabia observed that availability of appropriate learning facilities and

materials, availability of appropriate physical & social amenities, and effective institutional management processes and policies helped enhance academic performance outcomes of nursing students. Similarly, in studies by Okanga et al. (2017) and Alshammari et al. (2017), existence of necessary learning resources and facilities, existence of appropriate physical and social amenities in the school, robust and strictly applied institutional policies on class attendance and around learning outcomes, having an experienced nursing faculty and an able management of the school were identified as being institutional related attributes that significantly impacted academic performance outcomes of nursing students. In Indonesia, Wardani (2019) also posited that institutional factors including presence of functional and appropriate physical and social amenities, learning resources and facilities and a supportive management were positive enablers of good academic performance outcomes among nursing students and vice-versa.



## **CHAPTER 6: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 Introduction**

This chapter outlines the conclusions and recommendations of the study based on the study findings. The study explored factors contributing to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing.

### **6.2 Conclusions**

Based on the findings of the study, the researcher drew the following conclusions:

The nursing students' level of class attendance, time spent on personal studies, mental preparedness for an examination, amount of time spent in revision for an examination and active participation in class work were the individual related factors that contributed to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the KNH School of Nursing.

Lecturers' demonstration of mastery of the subjects they taught; kinds and diversity of teaching methods used by the lecturers; nature of assessment methods used by the lecturers; nature of student - lecturer interactions and engagement during their teaching; a stimulating and active learning environment; communication skills of the lecturers; level of support received from the lecturers in the course of the learning process/activities and nature and diversity of learning activities used by the lecturers were the nurse educators related factors that contributed to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the KNH School of Nursing.

Availability of appropriate learning facilities such as the library among others; availability of appropriate learning materials/resources; a conducive learning environment; availability of appropriate physical and social amenities in the School; institutional student academic and examination policies or guidelines and institutional management processes were the institutional related factors that contributed to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the KNH School of Nursing.

### **6.3 Recommendations**

#### ***6.3.1 Recommendations from the Study***

To the nursing students, there is need for them to exert more personal effort in their studies, to attend and actively participate in class work and to ensure that they adequately prepare for all institutional examinations. The nursing students should also strive to positively harness the support of close social networks such as family and peers in advancing positive learning outcomes.

To the faculty members, there is need to integrate alternative innovative teaching and assessment methodologies to support effective learning among the learners such as online learning, blended learning, student-centered learning and experiential learning. The faculty members should also foster a stimulating and active learning environment characterized by constructive interactions and engagements with their students.

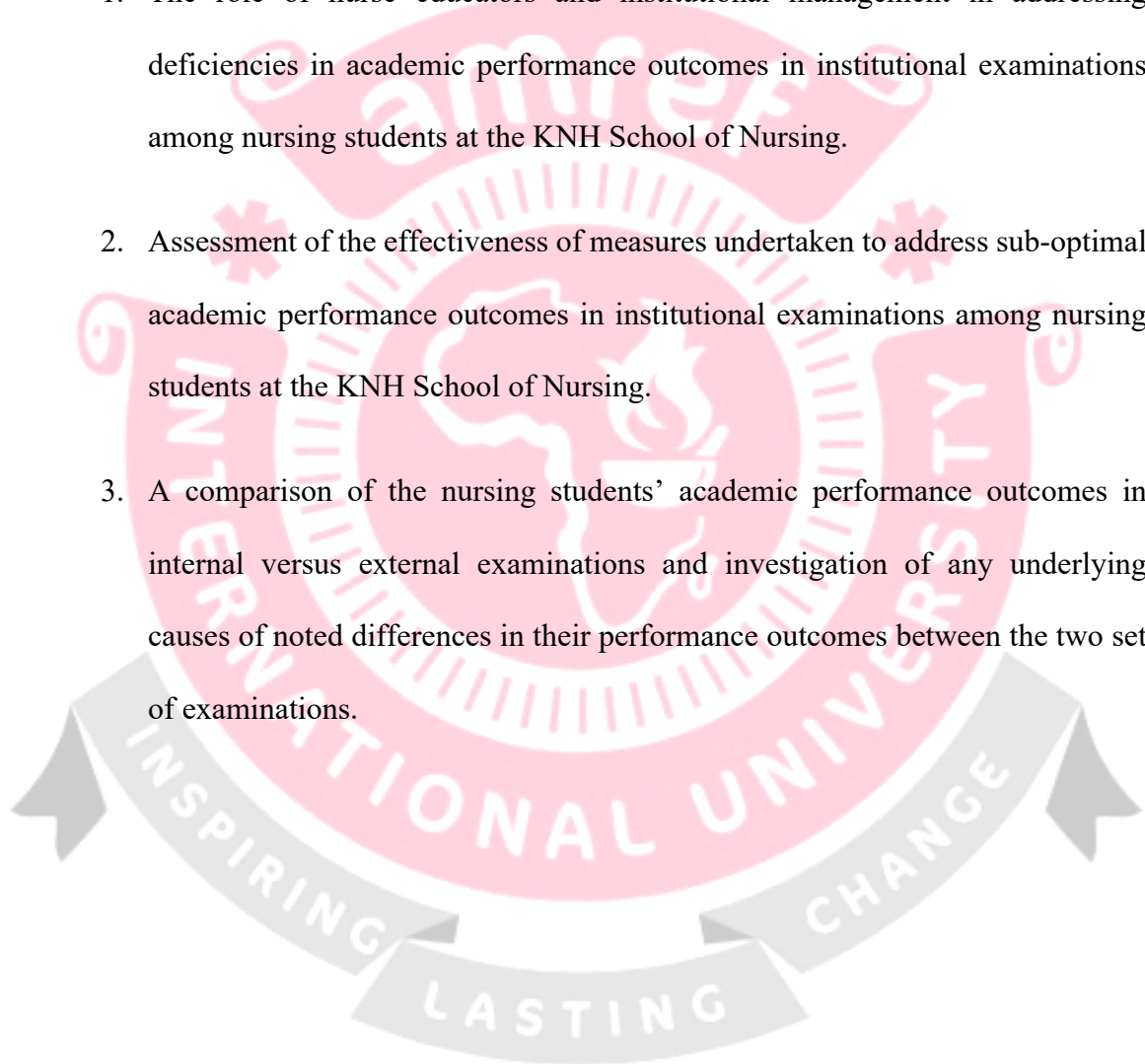
To the institutional management, there is need for it to provide for the nurse educators access to professional development workshops focusing on alternative innovative teaching and assessment methods used in institutions of higher learning. The

management should also ensure that available learning facilities, resources as well as physical and social amenities adequately support the learning needs of the students.

### ***6.3.2 Recommendations for Further Research***

Other suggested research areas that could be looked into include;

1. The role of nurse educators and institutional management in addressing deficiencies in academic performance outcomes in institutional examinations among nursing students at the KNH School of Nursing.
2. Assessment of the effectiveness of measures undertaken to address sub-optimal academic performance outcomes in institutional examinations among nursing students at the KNH School of Nursing.
3. A comparison of the nursing students' academic performance outcomes in internal versus external examinations and investigation of any underlying causes of noted differences in their performance outcomes between the two set of examinations.



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## APPENDICES

### Appendix 1: Informed Consent Form for the Critical Care and Nephrology Nursing Students

**Title of study:** Factors contributing to academic performance in institutional examinations among Critical Care and Nephrology students at the Kenyatta National Hospital School of Nursing

**Principal investigator and institutional affiliation:** Maywaka Margaret Loice, Student, Amref International University

**Supervisors:** Dr. Solomon Kilaha, Amref International University

Dr. MaryJoy Kaimuri, Meru University of Science and Technology

#### **Introduction**

My name is Margaret Loice Maywaka. I am pursuing a Master of Science Degree in Health Professions Education at the Amref International University. I am carrying out a research study entitled: *Factors contributing to academic performance in institutional examinations among Critical Care and Nephrology students at the Kenyatta National Hospital School of Nursing.*

#### **Purpose of the study**

The purpose of this study is to evaluate the factors contributing to academic performance in institutional examinations among Critical care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing.

#### **Description of the research**

I am hereby inviting you to participate in this research study that seeks to evaluate factors contributing to academic performance in institutional examinations among Critical care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing. This will be through giving your views and opinions about the research subject through responding to the study stool. If you consent to participate, the researcher will request you to respond to a series of questions based on the research objectives.

## Selection criteria

The study will include all April and September 2022 higher diploma Critical Care and Nephrology nursing students and all the faculty members at the KNH School of Nursing who will voluntarily agree to & part of the study. However, nursing students undertaking other specialty courses or programs other than Critical Care nursing and Nephrology nursing will be excluded from the study.

## Confidentiality

All information provided will be handled and processed with utmost confidentiality. All information given herein will only be used for purposes of the research study. Your name or anything else that may identify you will not appear anywhere.

## Voluntary participation

Your participation in this study is voluntary i.e., on your own free will and without any coercion.

## Right of withdrawal and withdrawal procedures

Should you feel/wish to terminate your participation in this study, you have the right to do so at any time without facing any consequences/punishments.

Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue your participation at any time without penalty or loss of benefits, to which you are otherwise entitled. Your intention to withdraw from the study or to withdraw any data already offered should be communicated to the researcher in writing or verbally. In such a case, the already collected data will be withdrawn too and will therefore not be used in the study.

## Study duration

This study takes place over a duration of eleven (11) months.

## Benefits

This research work is for academic purposes only and if you agree to participate, the information that you will provide will be of great importance in informing

development of necessary strategies and interventions to improve the performance of Critical care and Hepatology nursing students in institutional examinations at the Kenyatta National Hospital School of Nursing.

There is no any intended health risk or any other harm to you for participating in this study. However, in the event that you suffer emotional or psychological distress for participating in this study, you will be referred to a counselor for appropriate help.

#### Study results dissemination

The study findings will be shared via presenting a final draft of the thesis to Amref International University and the EH School of Nursing. The study findings will also be presented at organized workshops and conventions. The research work will also be published in a relevant peer-reviewed journal.

#### Compensation

Please note that there will be no monetary gain or any other form of payment to you for participating in this study.

#### Contacts

For any queries regarding this research study, kindly contact the principal researcher, Dr. Loice Mlaywaka on Cell: 0722 645 219, email: [mlaisemaywaka@yahoo.com](mailto:mlaisemaywaka@yahoo.com)

In case you have questions regarding your rights as a participant in this study, you may also contact:

The Secretary ESRC  
Africa in Kenya  
Wilson Airport, Lang'ata Road  
Office Tel: +254 20 994000  
Mobile No: 0795740777  
Fax: +254 20 606340  
P.O Box 30125-Ottili  
Nairobi, Kenya

*Do you have any questions at this time?*

**Respondent's declaration**

I have been fully informed about the nature of the study, I know the benefits, and understand that there are no risks involved. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to participate in this study.

Signature of participant ..... Date .....

**Researcher's declaration**

I have fully disclosed all the relevant information concerning this study to the study respondent/participant.

I confirm that the study respondent was given an opportunity to ask questions about the study, and all the questions asked by the study subject have been answered correctly and to the best of my ability. I confirm that the respondent has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Signature of researcher ..... Date .....



## Appendix 2: Informed Consent Form for the Faculty Members

Title of study: Factors contributing to academic performance in institutional examinations among Critical Care and Nephrology students at the Kenyatta National Hospital School of Nursing

**Principal Investigator and Institution:** Margaret Loice, student at Amref International University

**Supervisors:** Dr. Solonxin Kilaha, Amref International University  
Dr. MaryJoy Kaimuri, Mem University of Science and Technology

### Introduction

My name is Margaret Loice Maywaka. I am pursuing a Master of Science Degree in Health Professions Education at the Amref International University. I am carrying out a research study entitled: *Factors contributing to academic performance in institutional examinations among Critical Care and Nephrology students at the Kenyatta National Hospital School of Nursing.*

The purpose of this study is to evaluate the factors contributing to academic performance in institutional examinations among critical care and nephrology nursing students at the Kenyatta National Hospital School of Nursing.

### Description of the research

I am requesting your participation in this study by giving your views and opinions about the research subject through responding to the interview guide. If you consent to participate, the researcher will request you to respond to a series of questions contained in the interview guide which are based on the research objectives. The entire interview session including consenting will be audio-recorded.

The study will include all April and September 2022 higher diploma Critical Care and Nephrology nursing students and all the faculty members at the KNH School of

Nursing who will voluntarily agree to & part of the study. However, nursing students undertaking other specialty courses or programs other than Critical Care nursing and Nephrology nursing will & excluded from the study.

### **Confidentiality**

All information provided will be handled and processed with utmost confidentiality. All information given herein will only be used for purposes of the research study. Your name or anything else that may identify you will not appear anywhere in the study.

### **Voluntary participation**

Your participation in this study is voluntary i.e., on your own free will and without any coercion.

### **Right of withdrawal and withdrawal procedures**

Should you feel/wish to terminate your participation in this study, you have the right to do so at any time without facing any consequences/penalties.

Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue your participation at any time without penalty or loss of benefits, to which you are otherwise entitled. Your intention to withdraw from the study or to withdraw any data already offered should be communicated to the researcher in writing or verbally. In such a case, the already collected data will be withdrawn and will therefore not be used in the study.

### **Study duration**

This study takes place over a duration of eleven (11) months.

### **Benefits**

This research work is for academic purposes only and if you agree to participate, the information that you will provide will be of great importance in informing development of necessary strategies and interventions to improve the performance of

Critical care and Nephrology nursing students in institutional examinations at the Kenyatta National Hospital School of Nursing.

There is no any intended health risk or any other harm to you for participating in this study. However, in the event that you suffer emotional or psychological distress for participating in this study, you will be referred to a counselor for appropriate help.

#### Study results dissemination

The study findings will be shared via presenting a final draft of the thesis to Amref International University and the KNH School of Nursing. The study findings will also be presented in organized workshops and conventions. The research work will also be published in a relevant peer-reviewed journal.

#### Compensation

Kindly note that there will be no monetary gains or any other form of payment to you for participating in this study.

#### Contacts

For any queries regarding this research study, kindly contact the principal researcher, Margaret Loice Maywaka on Cell: 0722 645 219, email: [lmloisemaywaka@amref.com](mailto:lmloisemaywaka@amref.com)

In case you have questions regarding your rights as a participant in this study, you may also contact;

The Secretary ESRC  
Amref Health Africa in Kenya  
Wilson Airport, Lang'ata Road  
Office Tel: +254 20 6994000

Mobile No: 0795746777

Fax: +254 20 006340

P.O Box 30125-001 Nairobi

Nairobi Kenya

*Do you have any questions at this time?*

**Respondent's declaration**

I have been fully informed about the nature of the study, I know the benefits, and understand that there are no risks involved. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to participate in this study.

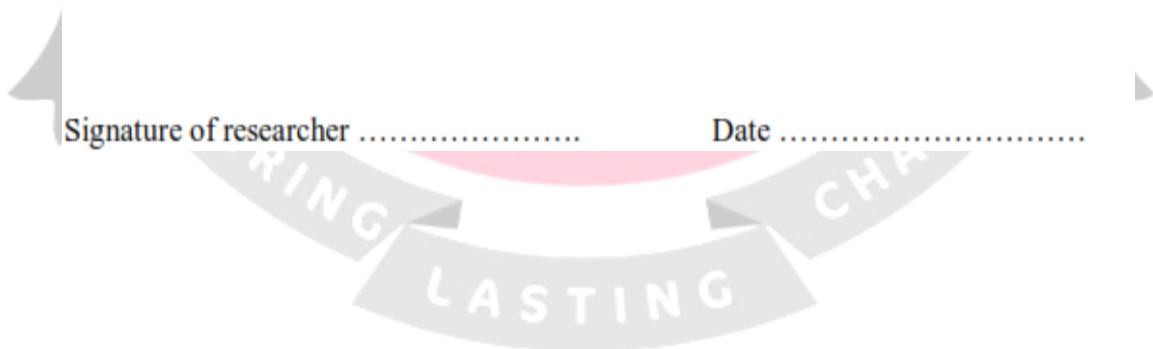
Signature of participant ..... Date .....

**Researcher's declaration**

I have fully disclosed all the relevant information concerning this study to the study respondent/participant.

I confirm that the study respondent was given an opportunity to ask questions about the study, and all the questions asked by the study subject have been answered correctly and to the best of my ability. I confirm that the respondent has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Signature of researcher ..... Date .....



**Appendix 3: Questionnaire for Critical Care and Nephrology Nursing Students**

**Course:** Critical Care nursing ( )      Nephrology nursing ( )

**Introduction**

My name is Margaret Loice Maywaka. I am pursuing a Master of Science Degree in Health Professions Education at the Amref International University. I am carrying out a research study entitled: *Factors contributing to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing.*

**Instructions;**

- Do not write your name or any personal identification on the questionnaire.
- Answer all the questions by putting a tick (√) in the preferred space
- Information obtained will be handled and processed in strict confidence.

**Section A: Respondent's demographic characteristics**

1. What is your gender?                      Male                      ( )                      Female                      ( )

2. What is your age (in completed years)?

18-29 years                      ( )                      30-39 years                      ( )

40-49 years                      ( )                      50 years & above                      ( )

3. What is your marital status?

Married                      ( )                      Not married                      ( )

4. How far is your residence from the KNH? .....

Code .....

Date .....

5. What is your religion?

Christianity ( ) Islam ( )

Hindu ( ) None ( )

Others (specify) .....

**Section B: Individual related factors contributing to academic performance outcomes in institutional examinations among the respondents**

6. In your view, which of the following personal related factors influence your academic performance outcomes in institutional examinations? (Kindly tick all that applies to you).

| <b>Personal related factors</b>                                       | <b>Tick here</b> |
|---|------------------|
| Personal and/or familial socio-economic background/status             |                  |
| Level of parental/guardian support and/or involvement in your studies |                  |
| Your level of class attendance  |                  |
| Your entry qualifications for the course                              |                  |
| Time spent on personal studies  |                  |
| Mental preparedness for an exam                                       |                  |
| Amount of time spent in revision for an exam                          |                  |
| Active participation in class work                                    |                  |
| Influence of peer groups  |                  |

7. Which other individual related attributes would you say influence your academic performance outcomes in institutional examinations?

.....  
.....  
.....

**Section C: Nurse educators' related factors contributing to academic performance outcomes in institutional examinations among the respondents**

8. In your view, which of the following nurse educators' related factors influence

your academic performance outcomes in institutional examinations? (Kindly tick all that applies to you).

| <b>Nurse educators related factors</b>  | <b>Tick here</b> |
|---|------------------|
| Your lecturer's demonstration of mastery of the subjects they teach                           |                  |
| Kinds and diversity of teaching methods used by the lecturers                                 |                  |
| Nature of assessment methods used by the lecturers  |                  |
| Nature of student - lecturer interactions and engagement during their teaching                |                  |
| A stimulating and active learning environment   |                  |
| Communication skills of the lecturers   |                  |
| Level of support received from the lecturers in the course of the learning process/activities |                  |
| Nature and diversity of learning activities used by the lecturer                              |                  |

9. Which other nurse educator related attributes would you say influence your academic performance outcomes in institutional examinations?

.....

.....

.....

**Section D: Institutional related factors contributing to academic performance outcomes in institutional examinations among the respondents**

10. In your view, which of the following institutional related factors influence your academic performance outcomes in institutional examinations? (Kindly tick all that applies to you).

| <b>Institutional related factors</b>                                      | <b>Tick here</b> |
|---|------------------|
| Availability of appropriate learning facilities e.g. library among others |                  |
| Availability of appropriate learning materials/resources                  |                  |
| A conducive learning environment  |                  |
| Availability of appropriate physical & social amenities in the School     |                  |
| Institutional student academic and examination policies or guidelines     |                  |
| Institutional management processes  |                  |

11. Which other institutional related attributes would you say influence your

Code .....

Date .....

academic performance outcomes in institutional examinations?

.....  
.....

**Section E: Performance in institutional examinations**

12. How did you fair on in the most recent examination?    Passed ( )    Failed ( )

**Thank you for participating**



Code .....

Date .....

#### Appendix 4: Interview Guide for the Faculty Members

**Study title:** Factors contributing to academic performance outcomes in institutional examinations among Critical Care and Nephrology nursing students at the Kenyatta National Hospital School of Nursing

Code .....

Date .....

#### Questions and prompts

| Main question  | Prompts   |
|--|---|
| Q1. Are there any nurse-educators related factors that affect the academic performance outcomes of nursing students in institutional examinations? | <ol style="list-style-type: none"><li>1. Would you say, as a nurse educator, you play an important role in the academic performance outcomes of your students in institutional examinations?</li><li>2. If so, what role(s) do you play with regard to enhancing their academic performance outcomes in institutional examinations?</li><li>3. In your view, which nurse educators related factors impact the academic performance outcomes of nursing students in their institutional examinations? Is their influence positive or negative?</li></ol> |

|  |  |
|--|--|
|  | 4. What can be done to enhance the role of nurse educators in supporting academic performance outcomes of nursing students in institutional examinations?  |
| Q2. Are there any institutional related factors that affect the academic performance outcomes of nursing students in institutional examinations? | <p>1. Do institutional factors play an important role in the academic performance outcomes of nursing students in institutional examinations?</p> <p>2. Which institutional related factors impact nursing students' academic performance outcomes in institutional examinations? Is their influence positive or negative?</p> <p>3. Which measures can help strengthen the positive impact of institutional factors on nursing students' academic performance outcomes in institutional examinations?</p> |
| Q3. Is there any other information you would like to add/share?  | If there is none then I would like to appreciate your taking part in this study.   |

**Thank you for participating in this study**

## Appendix 5: Approval Letter from Amref ESRC



Amref Hedl'i Ahka in Ifenya

REF: AMTtEF — FSRC Pt400/2023

Jane 2&, 20z3

**Margaret Maywaka**  
Kenyatta National Hospital School of Nursing  
P.O Box 20760-00202  
Nairobi, Kenya  
Tel: 0722645219  
Email: [ImloisemaywakajBvahoo.com](mailto:ImloisemaywakajBvahoo.com)

Uear Margaret Maywaluu

**RESEAKtH PROTOCOL: FACTORS CONTRIBUTING TO ACADEHIC PERFORMANCE IN INSTITUTIONAL EXAMINATIONS ANIONCI CRITICAL CARE AND NEPHROLOGY**  
**ii'l Utlân'lâ A'l'l'l'lIE K&NYAJ'l'l'A NATIONAL HOSPITAL SCHOOL OF NURSING**

Thank you for submitting your protocol to the Amref Ethics and Scientific Review Committee (ESRC).

This is to inform you that the PSRC has reviewed and approved your protocol. Your application approval number is ESRC P1400/2023. 'l'lie approval period is from June 27, 2023, to June 26, 2024, and is subject to compliance with the following requirements:

- a) Only approved documents (including informed consents, study instruments, advertising materials, materiâi translér agreements, etc.) will he use-d
- b) All changes including (amendments, deviations, vitlations, etc.) are submitted for review and approval by Amref ESkt' before implementation.
- c) Death and life-thrmtcaing problems and serious adverse events (SAEs) or unexpected adverse events whether relatofl or unrelated to the study must be reported to the Amref ESRC within 72 hours of notification.
- d) Any chanb'n, anticipated ur t'herwiso thai may increase the risks or affect sofety or welfare of study participants and others or affect the integrity of tht research must be reported to Amref ESRC within 72 hours.
- e) Clearance for export of biological specimen must be obtained mom the relevant government authorities for each batch of shipment/export.
- f) Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the tenetal.
- g) In cnse of tate renewal, the Amref ESRC shall not be held responsible for any serious adverse events (SAEs) that may occur as a result of research activities that were carried out after ihe expiry of approval.
- L) Submission of an executive summary report within 90 days upnn completion of the study to the Aniref ESRC.
- i) All government regulatitns fir preventitin arid control t'f the spread of COVIU-19 including .uicial distancing, provision of personal protective equipment for participants and research assistants should be adhered In during data collection. All research assistants should & monitored for COVID 19 symptoms and referred for testing in case they present •ith symptoms.

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P.O. Box 30125-00100 Nairobi, Tel: +254 (0)20 699 4000, Fax: +254 (0)20 699 2531. [www.amref.org](http://www.amref.org)

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

Please do not hesitate to contact the ESRC Secretariat ([esrc.kenya@amref.org](mailto:esrc.kenya@amref.org)) for any clarification or query.



Chair, Amref ESRC  
CC: Samuel Muhula, Senior Manager, Learning and Impact Amref Health Africa.



## Appendix 6: Approval Letter from KNH-UoN ERC



UNIVERSITY OF NAIROBI  
FACULTY OF HEALTH SCIENCES  
P O BOX 1H70  
Tel: (254-020) 2726300 Ext 44355

KNH-UoN ERC  
Email: [uonknh\\_erc@uonbi.ac.ke](mailto:uonknh_erc@uonbi.ac.ke)  
Website: <http://www.erc.uonbi.ac.ke>



KEYATTANATIONAL HOSPITAL  
PO BOX 26733  
Tel: 726300-9  
Fax: 725272  
Telegram: BEDSUP, Ndfobl

Ref: KNH-ERG/IN400

21<sup>st</sup> July, 2023

Margaret Loice Mwangi  
Reg No. SHS/NSHPE/54&112021  
School of Public Health  
AMREF International University, Kenya



Dear Margaret,

ETHICAL APPROVAL-RESEARCH PROPOSAL: FACTORS CONTRIBUTING TO ACADEMIC PERFORMANCE OF INTERNATIONAL EMIGRANT STUDENTS AT THE KEKYATTANATIONAL HOSPITAL SCHOOL OF NURSING (P128/02/2023)

This is to inform you that KNH-UoN ERC has reviewed and approved your above research proposal. Your application approval number is P128/02/2023. The approval period is 21<sup>st</sup> July 2023 - 20<sup>th</sup> July 2024.

This approval is subject to compliance with the following requirements;

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

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

Yours sincerely,



**DR. BEATRICE K.M. AMUGUNE**  
**SECRETARY, KNH- UoN ERC**

c.c. The Dean, Faculty of Health Sciences, UoN  
The Senior Director, CS, KNH  
The Chairperson, KNH- UoN ERC  
The Assistant Director, Health Information Dept., KNH  
Supervisors: Dr. Solomon Kilaha, AMREF International University Kenya  
Dr. Mary Joy Kaimuri, School of Nursing, Meru University of Science & Technology



**Appendix 7: Research Permit from NACOSTI**

  
**REPUBLIC OF KENYA**

  
**NATIONAL COMMISSION FOR  
SCIENCE, TECHNOLOGY & INNOVATION**

Ref No: **157413** Date of Issue: **26/July/2023**

**RESEARCH LICENSE**



**This is to Certify that Ms. MARGARET LOISE MAYWAKA of Amref International University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: FACTORS CONTRIBUTING TO ACADEMIC PERFORMANCE IN INSTITUTIONAL EXAMINATIONS AMONG CRITICAL CARE AND NEPHROLOGY STUDENTS AT THE KENYATTA NATIONAL HOSPITAL SCHOOL OF NURSING for the period ending : 26/July/2024.**

License No: **NACOSTI/P/23/27822**

**157413**  
Applicant Identification Number

  
Director General  
**NATIONAL COMMISSION FOR  
SCIENCE, TECHNOLOGY &  
INNOVATION**

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**See overleaf for conditions**

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

#### CONDITIONS OF THE RESEARCH LICENSE

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

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

**Appendix 8: Performance of Students in Critical Care and Nephrology Nursing Courses, 2018 - 2021**

| Year  | Class      | Total number of students | Number that failed the respective examinations |                  |                   |             | Average failure rate (%) |
|---|------------|--------------------------|--|------------------|-------------------|-------------|--------------------------|
|   |            |                          | Midblock exam                                  | First block exam | Second block exam | Third block |                          |
| 2018/2019   | CCN        | 30                       | 6  | 8                | 4                 | 5           | 19.2                     |
|   | Nephrology | 30                       | 5  | 7                | 6                 | 9           | 22.5                     |
| 2019/2020   | CCN        | 30                       | 11   | 6                | 8                 | 8           | 27.5                     |
|   | Nephrology | 30                       | 7  | 7                | 6                 | 6           | 21.7                     |
| 2020/2021   | CCN        | 29                       | 9  | 6                | 7                 | 11          | 28.4                     |
|   | Nephrology | 24                       | 6  | 5                | 6                 | 7           | 25.0                     |
| 2021/2022   | CCN        | 28                       | 10   | 4                | 9                 | 9           | 28.6                     |
|   | Nephrology | 26                       | 5  | 4                | 7                 | 6           | 21.2                     |
| Average failure rate noted over the 4 year period [2018 - 2022] |            |                          | Critical Care nursing (CCN) class              |                  |                   |             | 25.9%                    |
|   |            |                          | Nephrology class                               |                  |                   |             | 22.6%                    |

Source: Examinations Department, KNH School of Nursing (2022)

## Appendix 9: Similarity Index Report

Factors contributing to academic performance in institutional examinations among Critical Care and Nephrology students at Kenyatta National Hospital School of Nursing

ORIGINALITY REPORT



PRIMARY SOURCES



## Appendix 10: Evidence of Publication

Maywaka, M. L., Kilaha, S., & Kaimuri, M. (2024). Institutional Related Factors and Academic Performance in Institutional Examinations Among Critical Care and Nephrology Students at the Kenyatta National Hospital School of Nursing. *International Journal of Research in Engineering, Science and Management*, 7(5), 251-257. <https://doi.org/10.5281/zenodo.11424369>

