
FACULTY OF HEALTH SCIENCES

**PREVALENCE AND FACTORS ASSOCIATED WITH ANXIETY DURING
CLINICAL PRACTICE AMONG NURSING STUDENTS AT MBALE REGIONAL
REFERRAL HOSPITAL**

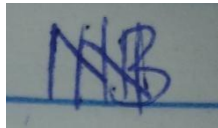
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DECLARATION

I NAKATO BETTY NAKIGOZI a Bachelor's of science in nursing student BUSITEMA UNIVERSITY FACULTY OF HEALTH SCIENCES hereby declare to the best of my knowledge that this research proposal is my original work and has never been submitted previously to any research body for any academic award.

Signature;



Date: 24th June , 2026

DEDICATION

I dedicate this research in a special way to the Lord Almighty for His faithfulness throughout this research.

Secondly, I dedicate this report to my parents, Mr. Lubwama Samuel and Mrs. Lubwama Nowel. Thank you for supporting my career. All my lecturers who through their cordial relationship and support made this report a success. May the work of your hands be blessed.

ACKNOWLEDGEMENT

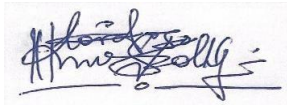
I especially thank God who has carried me throughout my academic journey. Ebenezer!

I would like to recognize the Department of Nursing of Busitema University for their efforts in teaching the nursing students, cohort 2022 to our point of exit from the University.

In a special way, I would like to thank my supervisors, Dr. KIRABIRA JOSEPH and Mr. EPUITAI JOSHUA for their guidance and support through my journey of research.

Approval

This proposal has been developed under my guidance and supervision.



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List of tables

Table 1 KEZKAKK clinical stressor domains.....	28
Table 6 Socio-demographic characteristics	34
Table 7 Anxiety severity	37
Table 8 KEZKAKK 31 item(yes/no distribution)	37
Table 9: KEZKAK Clinical stressor domains (yes/no distribution, n = 320).....	40
Table 10 : Bivariate association between socio-demographic and clinical stressors and clinically significant anxiety	41
Table 11: Modified poisson regression analysis of factors associated with clinically significant anxiety.	45
Table 2 KEZKAKK questionnaire.....	64
Table 3 Beck Anxiety Inventory	66
Table 4 work plan	73
Table 5 BUDGET.....	74

List of abbreviations

1. **MRRH** Mbale Regional Referral Hospital
2. **BUFHSREC** Busitema University Faculty of Health Sciences Research and Ethics Committee
3. **MRRH-REC** Mbale Regional Referral Hospital Research Ethics Committee.
4. **BAI** Beck Anxiety Inventory

TABLE OF CONTENTS

Contents

Approval	5
Abstract.....	11
CHAPTER ONE	12
1. 1 BACKGROUND.....	12
1.2 PROBLEM STATEMENT	14
1.3 Study justification.....	15
1.5 RESEARCH QUESTIONS.....	15
THEORATICAL FRAMEWORK.....	16
CHAPTER TWO: Literature Review	18
2.1 Introduction.....	18
2.2 Prevalence of anxiety among nursing students during clinical practice	18
2.3 Factors associated with clinical practice anxiety among nursing students.....	20
CHAPTER THREE METHODOLOGY.....	24
3.1 Research design.....	24
3.2 Research approach.....	24
3.3 Description of the area of study.....	24
3.4 Description of the population from which samples will be selected, e.g. categorization/demographics of the population.....	24
3.5 Eligibility criteria.....	25
3.6 Sampling framework, strategy and sample size estimation.....	26

3.7	Recruitment plan.....	27
3.8	Data collection methods	27
3.9	Data management.....	30
3.10	Data analysis.....	30
3.11	Ethical considerations	31
3.12	Quality control.....	31
3.15	Dissemination plan.....	32

CHAPTER FOUR: RESULTS 34

4.1	Socio-demographic characteristics	34
4.2	Prevalence of anxiety during clinical practice.	36
4.2.1	Anxiety severity categories.....	37
4.3	Factors associated with anxiety during clinical practice	37

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS..... 48

5.1	Introduction.....	48
5.1.1	Prevalence of anxiety during clinical practice	48
5.1.2	Factors associated with anxiety during clinical practice	49
5.2	Conclusion	51
5.3	Recommendations.....	52
5.4	Limitations of the study	52
5.5	Areas for further research	53
	BUFHSREC approval letter.....	54

REFERENCES 56

APPENDICES..... 61

	APPENDIX 1 : social- demographics QUESTIONNAIRE	61
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APPENDIX 2 :KEZKAK questionnaire.....	64
APPENDIX 3: Beck Anxiety Inventory.....	66
APPENDIX 4 : CONSENT FORM.....	68
APPENDIX 5 : Table 3 WORK PLAN.....	73
APPENDIX 6 :BUDGET	74

Abstract

Background: Anxiety is one of the mental health concerns among nursing students. They experience varying levels of anxiety during their clinical training. Elevated levels of anxiety among nursing students negatively affect their academics, learning and overall well-being. Social-demographic factors and clinical stressors affect levels of anxiety during clinical practice among nursing students. There is limited data on the prevalence and factors associated with anxiety during clinical practice among nursing students in Uganda.

Objectives: The aim of this study was to determine the prevalence and factors associated with clinical practice anxiety among nursing students at MRRH.

Methods: A cross sectional study was carried out among 320 nursing students having their clinical placement at MRRH. Data were collected electronically using a researcher administered questionnaire. Anxiety was assessed using the Beck Anxiety Inventory (BAI). Clinical stressors were assessed using the adapted KEZKAK questionnaire. Socio-demographic data were also captured. The data were exported to STATA for analysis. Descriptive statistics were used to determine the prevalence of anxiety. Bivariate and modified Poisson regression analyses were used to identify factors associated with anxiety.

Results: A total of 320 nursing students participated in the study. The prevalence of clinically significant anxiety ($BAI \geq 8$) was 66.6%. Mild anxiety was observed among 23.3% of participants, moderate anxiety among 18.4%, and severe anxiety among 24.3%. Male students were less likely to experience clinically significant anxiety compared to female students ($aRR = 0.61, 95\%CI: 0.50-0.74$). Nursing students who reported lack of competence were more likely to experience anxiety ($aRR = 1.34, 95\% CI: 1.09-1.65$), while interpersonal relationship stressors were also associated with anxiety ($aRR = 1.18, 95\% CI: 1.00-1.38$).

Conclusion: Anxiety during clinical practice was common among nursing students on placement at MRRH. These findings highlight the need for psychological support and better supervision during clinical placements.

Keywords: Nursing students, clinical practice, anxiety

CHAPTER ONE

1. 1 BACKGROUND

Anxiety is a normal response to daily stresses of life, and only raises concern when it persists over time(Munir et al., 2021). According to the American Psychological Association, anxiety is an emotion characterized by apprehension and somatic symptoms of tension in which an individual anticipates impending danger, catastrophe, or misfortune (American Psychological Association, 2026). Clinical exposure has been linked to heightened anxiety among nursing students(Hlengiwe D Seshabela & Simangele Shakwane, 2024).

Several studies investigated the proportion of nursing students experiencing anxiety. In an umbrella review, anxiety was one of the prevalent mental health issues among nursing students through twenty five meta-analyses(Efstathiou et al., 2025). In a systematic review and meta-analysis, 19%-25% of nursing students had mild to moderate anxiety(Thi Nhi Vo et al., 2023). In United Arab Emirates, 63% of clinical training nursing students had heightened anxiety, while 62% had high trait anxiety(Otim et al., 2021). In South Africa, 75% of nursing students had symptoms of anxiety(Maleke Manana et al., 2023).

Anxiety during clinical practice among nursing students has a number of triggers. Triggers in the clinical environment such as fear of causing injury to the patient, physical environment of the ward(Gebreegziabher et al., 2025), feelings of guilt due to mistakes made in the past(Mofatteh, 2021), and fear of death of patients(Sarhadi & Mazloom, 2024) have been reported. Academic triggers of anxiety during clinical practice include being afraid of poor scores when on being assessed by clinical supervisors(Gebreegziabher et al., 2025). Presence of underlying physical condition among nursing students was a health related trigger of anxiety during clinical practice among nursing students(Mofatteh, 2021).

Some studies have found anxiety to be more prevalent in specific cases for example, female nursing students may have a higher likelihood of experiencing anxiety than their male counterparts(Maleke Manana et al., 2023). There is a notable correlation between stress and anxiety among nursing students(Onieva-Zafra et al., 2020) as well as transition from pre-clinical to clinical part of training(Wu et al., 2021). Mindfulness, meditation and proper orientation on the ward were found to be protective from anxiety among nursing students(Anisi et al., 2025; Stinson et al., 2020).

In Uganda, nursing students often train in busy clinical settings with limited resources and high patient loads. Following the COVID-19 pandemic, concerns regarding mental health among university students have become increasingly recognized, yet mental health support within training institutions remains limited(Kagoya et al., 2023).

Anxiety among nursing students during clinical practice may interfere with the mental health of the future health work force, if it persists into later phases of their careers(Dong et al., 2023). Unmanaged anxiety diminishes nursing students' ability to cope with day to day life stressors(Onieva-Zafra et al., 2020). Also, it diminishes their ability to build good inter professional relationships and health care work teams(Ayuso-Murillo et al., 2020). It can cause

nursing students to adopt destructive coping mechanisms such as self withdrawal(Onieva-Zafra et al., 2020) and distorted perspectives on life(H. D. Seshabela & S. Shakwane, 2024).

Concerns about mental health issues have long been present in universities and other nursing educational institutions, yet they often receive minimal attention from administrators and other stakeholders(Kagoya et al., 2023). Little is known about the current levels of anxiety as well as the specific contributing factors among the nursing students training at Mbale Regional Referral Hospital.

1.2 PROBLEMSTATEMENT

Nursing students often experience high levels of anxiety during the clinical practice(Perng et al., 2020). In environments like MRRH, structural and systemic pressures like limited critical medical equipment(2025), overcrowded wards(2025), inadequate supervision and large numbers of students on clinical placement(Wani et al., 2025) create conditions that may trigger anxiety during clinical practice among nursing students. In 2021 during the COVID-19 lockdown, a staggering 98.4% of nursing students in Ugandan universities had a high amount of anxiety(Najjuka et al., 2021). Nursing students were anxious about ward rounds(26%) and handling traumatic events with patients at the hospital(18%) (Kagoya et al., 2023).There is limited data on the prevalence of anxiety among nursing students during their clinical practice in Uganda. Anxiety during clinical practice can have several detrimental effects on nursing students. Clinical practice anxiety can progress into mental health disorders such as generalized anxiety disorder and depression(García-Velasco et al., 2025; H. D. Seshabela & S. Shakwane, 2024). Severe anxiety affects physical health through headaches and sleep disturbance(García-Velasco et al., 2025; H. D. Seshabela & S. Shakwane, 2024). Heightened anxiety affects cognitive abilities where students have diminished potential to make decisions and acquire skills(García-Velasco et al., 2025). Anxiety among nursing students leads to poor patient outcomes as it increases the likelihood of clinical errors (Aloufi et al., 2021; Gebreegziabher et al., 2025; Yildirim & Dalcali, 2020). However, no study has specifically measured the prevalence of anxiety and its determinants among nursing students during clinical practice at MRRH, creating a gap that requires further exploration.

1.3 Study justification

There is limited information on the subject of anxiety during clinical practice among nursing students in Uganda. This study is meant to provide local data in the Ugandan context as a low resource setting. This study aims to investigate the prevalence and factors associated with anxiety during clinical practice among nursing students at MRRH. This information is required for development of appropriate interventions to tackle this problem.

1.4 Study significance

The findings from this study will guide nurse educators and clinical instructors on what aspects of clinical practice may trigger anxiety among nursing students.

For university and nursing school administrators, the findings will inform the development of structured clinical orientation packages and student support programs to reduce anxiety during placements.

For MRRH management, the results will support the establishment or strengthening of student mental health support systems and improvement of the clinical learning environment.

For clinical instructors and ward supervisors, the study will guide adjustments in supervision approaches

OBJECTIVES OF THE STUDY

1.4.1 Main objective

To determine the prevalence and factors associated with anxiety among nursing students during clinical practice at MRRH

1.4.2 Specific objectives

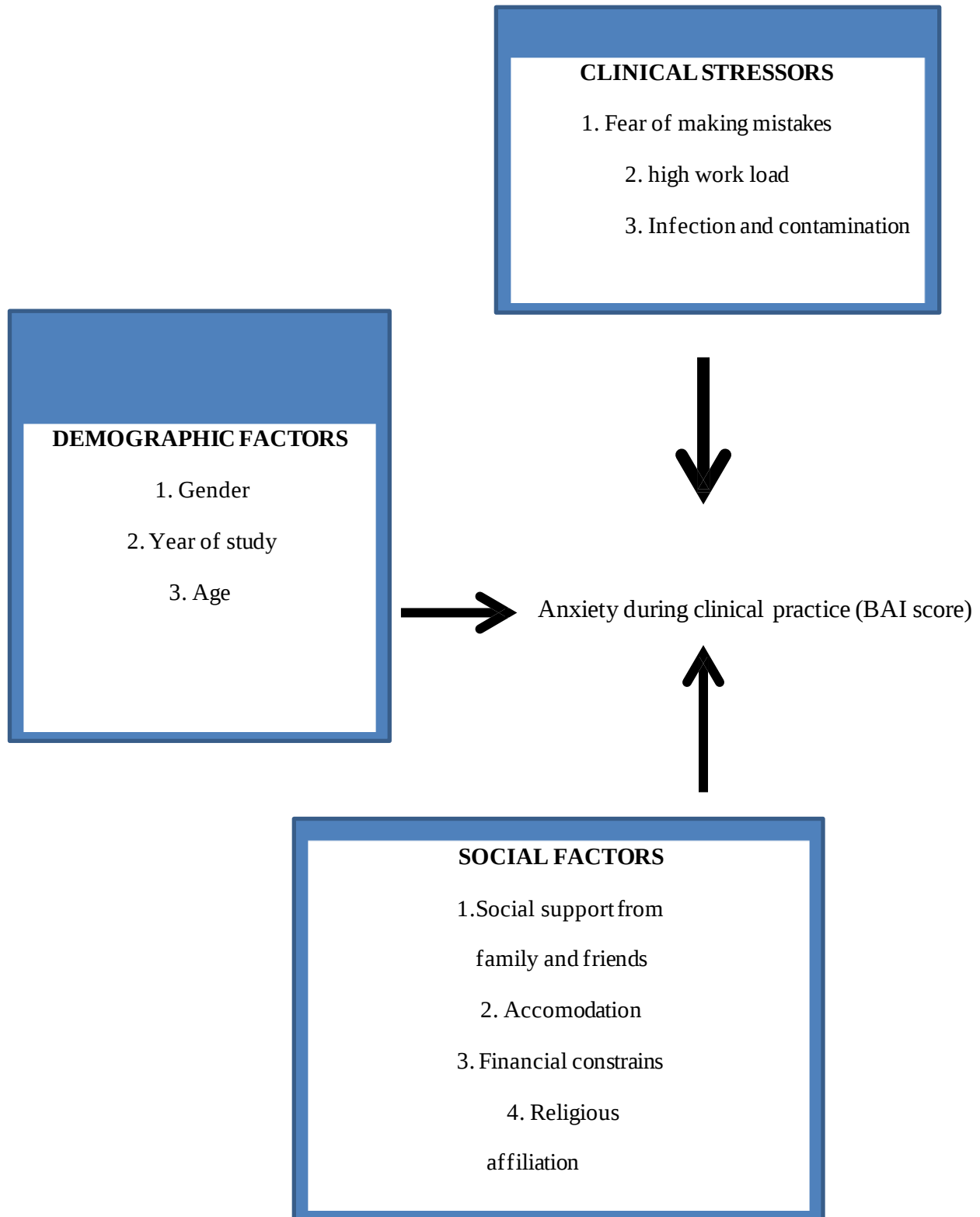
1. To determine the prevalence of anxiety among nursing students during clinical practice at MRRH.
2. To identify the factors associated with anxiety among nursing students during clinical practice at MRRH.

1.5 RESEARCH QUESTIONS

1. What is the prevalence of anxiety among nursing students during clinical practice at MRRH?
2. Which factors are associated with anxiety among nursing students during clinical practice at MRRH?

THEORATICAL FRAMEWORK

Theoretical framework showing the relationship between demographic characteristics, social factors, clinical stressors and anxiety during clinical practice among nursing students.



1.5.1 NARRATIVE FOR THEORATICAL FRAMEWORK

This study is informed by the Stress and Coping Theory by Lazarus and Folkman, which explains that individuals experience stress when they perceive environmental demands to exceed their coping abilities. According to this theory, personal characteristics and environmental stressors influence psychological outcomes such as anxiety.

The dependent variable of this study is anxiety during clinical practice among nursing students. This anxiety arises through an interplay among social factors, clinical stressors and demographic characteristics. Demographic characteristics of nursing students such as age, gender, academic year and marital status are treated as confounders during multivariate analysis. These characteristics inform how nursing students view stress and how they manage it. Age,(Solomon et al., 2025), gender(Kagoya et al., 2023), academic year(Maleke Manana et al., 2023)and marital status(Maleke Manana et al., 2023) have been shown to influence anxiety.

Nursing students face various stressors in the clinical area which trigger clinical practice anxiety. These stressors include clinical environment, unfriendly clinical tutors, multiple expectations from clinical staff at placement, gaps between what is taught in clinical theory and what is done practically at the placement(Dias et al., 2024). Caring for dying patients(Nabirye et al., 2024), overcrowding and inadequate clinical materials (Ayalew, 2025) are stressors in the clinical area.

Social factors play a role in shaping nursing students' experiences in clinical practice. Relationship with peers, social support network(Loureiro et al., 2024), financial constraints and familial expectations to perform well may increase vulnerability to anxiety in clinical practice.

The interplay of social, demographic and clinical stressors contributes to anxiety in the clinical placement. This conceptual framework will inform how this study will group the independent variables into three categories; demographic characteristics, clinical stressors and social factors to examine their association with anxiety during clinical practice among nursing students at MRRH.

CHAPTER TWO: Literature Review

2.1 Introduction

Several studies have shown that nursing students experience varying levels of anxiety during their clinical training (T. N. Vo et al., 2023). It is essential to review the available studies on the subject of clinical practice anxiety among nursing students.

2.2 Prevalence of anxiety among nursing students during clinical practice

An umbrella review by (Efstathiou et al., 2025) which evaluated several reviews and meta-analyses on mental health of nursing students found that anxiety was very commonly reported among nursing students during their clinical training. This umbrella review gave an aggregate estimate of anxiety to be on a spectrum ranging from mild to severe anxiety depending on the tools used and other factors. Overall prevalences of anxiety from the meta-analyses were rather inconsistent, so figure was calculated in this umbrella analysis. In the same vein, a systematic review that was done earlier (Aloufi et al., 2021) established that clinical practice was associated with anxiety among nursing students with a prevalence of 19-25%.

The umbrella review by (Efstathiou et al., 2025) being a review of reviews underpins the global consensus that nursing students are more likely to develop anxiety during their clinical training. Both (Efstathiou et al., 2025) and (Aloufi et al., 2021) synthesized studies from diverse populations and countries with differing nursing education approaches. Their findings therefore suggest that clinical practice anxiety is a common occurrence and not an isolated challenge specific to any given part of the world. The systematic review by (Aloufi et al., 2021) included a small range of high quality studies while (Efstathiou et al., 2025) synthesized a wide base of observational meta-analyses which boosts generalizability for both studies.

The umbrella review by (Efstathiou et al., 2025) faces a risk of bias as there may be an overlap in samples which may distort prevalence estimates. Furthermore, many of the primary studies in the umbrella review recruited mostly female participants so findings may not apply across genders. The systematic review by (Aloufi et al., 2021) synthesized studies published (2008-2018) in English which leaves out non-English speaking settings thereby limiting generalizability.

During the COVID-19 pandemic, a study in Nepal (Banstola et al., 2021) reported that 19% of nursing students under clinical training had moderate anxiety. This finding is significantly smaller than the 43% moderate anxiety found in Israel during the COVID-19 pandemic as well (Savitsky et al., 2020). These findings shed light into what anxiety levels could be in especially stressful times such as the pandemic. Both studies (Banstola et al., 2021) and (Savitsky et al., 2020) were done during the COVID-19 pandemic, an exceptionally stressful period and so the levels of anxiety reported may be specific to that situation and not so reflective of anxiety levels during normal clinical practice.

The study by Banstola et al employed a verified tool, the Beck Anxiety Inventory to assess for anxiety among the nursing students (Banstola et al., 2021). In Turkey, (Yazici & Ökten, 2022) also used the Beck Anxiety Inventory to assess for anxiety and found a mean anxiety score of 15

which denotes mild anxiety. This shows a discrepancy between the findings of mild and then moderate anxiety among nursing students. All participants in the study by (Banstola et al., 2021) were female which suggests a bias in sampling.

A study in Spain found the State-Trait Anxiety Inventory (STAI) score of nursing students at 2.37 ± 0.21 points at the beginning of their clinical placement and 2.23 ± 0.21 points at the end of their clinical placement. This finding shows that anxiety may abide among nursing students regardless of how much time is spent on the ward (García-Velasco et al., 2025). The findings from the study by (García-Velasco et al., 2025) are not consistent with those from the study by (Galán et al., 2025) which had a mean anxiety level at 23.75 points still using the State-Trait Anxiety Inventory (STAI). Whereas both studies used STAI to assess for anxiety, (Galán et al., 2025) reported mean scores while (Galán et al., 2025) reported a total mean score of 23.75 points. This inconsistency in reporting limits direct comparability of results even when the same tool was used. There is need for a standard reporting method for the STAI scores. Since STAI is a self-report tool, it might be subjected to a reporting bias.

Several studies have been conducted in Africa, most of them reporting even higher levels of anxiety among nursing students as compared to studies done outside of Africa. Most studies in Africa used cross sectional designs which limit the ability to ascertain whether anxiety is short lived or it persists throughout clinical training. In South Africa, a study that used GAD-7 found that 19% of nursing students had severe anxiety (M. Manana et al., 2023), which is higher than the 13% found in Spain, still using GAD-7 to have severe anxiety (Martínez-Vázquez et al., 2022). A study in Ethiopia found that 46% of nursing students had perceived anxiety during their clinical practice (Ayush Gebreegziabher et al., 2025). They found moderate to high levels of anxiety whereas a study from South Africa had a 74% prevalence of anxiety symptoms encompassing both clinical and academic aspects of anxiety (Maleke Manana et al., 2023). This combination probably inflated the estimates of prevalence of anxiety when compared to other studies that focused on anxiety in clinical practice which had lower estimates of anxiety (Gebreegziabher et al., 2025).

During the COVID-19 lockdown, a study in Uganda found a high level of anxiety among University students (Najjuka et al., 2021). Similarly, a study by (Kagoya et al., 2023) found anxiety as a major mental health concern among University students in Mbale and Busia. In both studies, no quantified severity findings were reported. None of these studies focused on anxiety during clinical practice, which makes findings less applicable as many other factors outside of clinical stressors may account for the reports of anxiety made.

A study by (Naswiibah & Muhindo, 2025) found high levels of anxiety among health science students in Uganda, focusing on both academic pressure and clinical placement. This study assessed general psychological distress (Naswiibah & Muhindo, 2025) which affects precision of prevalence estimates for anxiety during clinical practice. Another study that focused on the emotional experiences of nursing students found that caring for dying patients triggered anxiety and emotional distress (Nabirye et al., 2024). The qualitative approach employed by (Nabirye et al., 2024) while rich in experiential data limits quantification of anxiety prevalence and so limits comparability to quantitative studies.

2.3 Factors associated with clinical practice anxiety among nursing students.

A meta-analysis by (Thi Nhi Vo et al., 2023) found that exposure to the clinical area, academic year of study and quality of supervision were associated with anxiety among nursing students as per numerous articles synthesized. This finding correlates with that of (Efstathiou et al., 2025) which reported that stressors in clinical practice and inadequate social support were predictors of anxiety among nursing students. Most studies included in the meta-analysis by (Efstathiou et al., 2025) employed cross-sectional designs which limit the ability to draw causality between identified factors and prevalence estimates reported. For both (Efstathiou et al., 2025) and (Thi Nhi Vo et al., 2023), most studies synthesized were done in high and middle income countries which makes findings less generalizable for low resource settings.

A study by (Yazici & Ökten, 2022) found that fear of getting COVID-19 was associated with the measured anxiety levels among nursing students on placement during COVID-19. This finding highlights a pandemic specific clinical stressor which may not still be present in current clinical practice of nursing students. This limits generalizability to other clinical environments.

A study in Spain found that having religious belief increased likelihood of nursing students to have anxiety while being deeply satisfied with teaching staff was associated with low anxiety (Martínez-Vázquez et al., 2022). However, prior history of anxiety was linked to a greater likelihood of anxiety symptoms. A similar finding was reported in a study by (Solomon et al., 2025) where pre-existing anxiety impacts the learning experience in both the theoretical and clinical environments.

In the study by (Martínez-Vázquez et al., 2022), how religious belief is linked to anxiety wasn't fully explained, which limits interpretability of that finding. Both studies (Martínez-Vázquez et al., 2022) and (Solomon et al., 2025) emphasize prior history of anxiety as a predictor for anxiety during clinical practice. Satisfaction with clinical teaching staff is subjective from institution to institution, which makes comparison to other studies challenging.

In Saudi Arabia, low satisfaction with the clinical learning environment in terms of poor orientation and overcrowding was cited as a major link to high anxiety among nursing students (Ahmed et al., 2023). In UAE, another study reported perceived lack of clinical preparedness to be related with higher generalized anxiety (Otim et al., 2021). This study emphasizes self-efficacy and skill confidence as important determinants of anxiety during clinical practice. For both studies, low satisfaction and perceived preparedness are subjective, variable from student to student. This calls for use of objective measures to assess for factors associated with anxiety during clinical practice.

During the COVID-19 pandemic, (Banstola et al., 2021) and (Briones et al., 2024) highlighted fear of contracting corona virus, shortage of Personal Protective Equipment and alteration in the clinical routines to greatly increase anxiety among nursing students on clinical placement. A study by (Savitsky et al., 2020) found that during the COVID-19 pandemic, ineffective coping methods and weak support from administration increased anxiety among nursing students. These studies highlight pandemic specific factors, while (Savitsky et al., 2020) also brings out how both individual and organizational factors play into anxiety during clinical practice.

A study by (Juan et al., 2023) found that strict behavior and disparity in feedback from clinical instructors triggered anxiety among nursing students. A studies by (Perng et al., 2020), (Yildirim & Dalcali, 2020) found that low interest in clinical practicum, ambiguity of roles and problems found in the clinical environment negatively affect nursing students' motivation and measure of anxiety. These studies were cross-sectional or descriptive, which limits ability to establish causality between instructor behavior, role ambiguity and anxiety during clinical practice. Use of self-report questionnaires may introduce a response bias. Strict behavior and role ambiguity are subjective and vary from student to student across institutions, cultures and clinical settings which affects comparability. Several studies have pointed out factors that counter anxiety.

A study by (García-Velasco et al., 2025) reported that use of teaching methods like visual learning materials before nursing students are put on clinical placement can reduce their anxiety and stress levels and also improve their academic performance. A systematic review with meta - analysis by (Labrague et al., 2019) found that high fidelity simulations reduced anxiety. A quantitative systematic review by (Aloufi et al., 2021) reported that mindfulness based interventions were associated with decrease in anxiety of nursing students. Systematic reviews and meta –analyses(Labrague et al., 2019) may provide robust evidence however some studies that used quasi-experimental designs may be prone to selection bias, lacking randomization.

A study by (Dong et al., 2023) reported that pre-internship stress was associated with post internship anxiety among nursing students. This finding correlates with (García-Velasco et al., 2025)who found that anxiety among nursing students was greater initially and gradually reduced towards the end of the clinical placement(García-Velasco et al., 2025). Both studies used longitudinal designs which are stronger than cross sectional study designs to observe changes over time. A strong positive correlation was found between academic burnout and anxiety among nursing students in South Korea ($r = 0.50$, $p < 0.001$) (Hwang et al., 2021). Another study however cited stress and depression as the strong predictors of academic burnout, and reported that anxiety showed no significant effect on levels of burnout among nursing students(Sarfika et al., 2025). This finding is inconsistent with (Hwang et al., 2021) showing that anxiety has no significant effect on academic burnout. Both studies used cross-sectional designs which limits ability to infer causal relationships between anxiety and academic burnout.

In South Africa, being in the fourth academic year, substance abuse and financial constraint were associated with a greater likelihood of anxiety (Maleke Manana et al., 2023), whereas clinical requirements, workload and fear of errors were the main contributors to anxiety among nursing students(Maleke Manana et al., 2023). A study by (Hlengiwe D Seshabela & Simangele Shakwane, 2024) found clinical environment to be one of the anxiety related conditions for nursing students. These studies relied on self-reported questionnaires which may introduce response bias especially with topics like substance abuse. These findings suggest that demographic, personal, academic and clinical factors interact to influence anxiety.

A study in Addis Ababa found that nursing students' perception on how prepared their clinical instructors were during their clinical placements and their belief that hospitals being understaffed affected their clinical learning (Gebreegziabher et al., 2025). In this study, self -confidence was inversely proportional to levels of anxiety. This study a multi-centre study involving multiple nursing colleges in Addis Ababa, which improves generalizability, however cross-sectional

design limits causal inference between self-confidence and anxiety.

A study by (Ireen et al., 2025) found that older age was associated with 0.83 times decrease in levels of anxiety among diploma nursing students whereas familial history of mental health illness had no association with anxiety of students. However, negative thought patterns increased a nursing student's risk for high anxiety score. This study highlights age as a demographic factor associated with anxiety

A study at Mulago Hospital found that inadequate training for end-of-life care and the emotional toll of patient suffering were associated with anxiety among nursing students caring for dying patients (Nabirye et al., 2024). In another study, exposure to the clinical area during the COVID-19 pandemic and limited mental health support were major contributing factors to anxiety (Najjuka et al., 2021). Similarly, a study by (Naswiibah & Muhindo, 2025) reported clinical exposure and academic pressure as major drivers of psychological distress among health science students. A study by (Murokole et al., 2025) found that during transition of newly qualified nurses into the workspace, a supportive mentorship counters anxiety.

The study by (Nabirye et al., 2024) focused on nursing students and used a phenomenological approach which is appropriate for lived experiences however the small number of participants (15) limits generalizability of findings. The study setting at Mulago Hospital being a National referral may not reflect experiences of nursing students at other, lower facilities. The study by (Najjuka et al., 2021) used a quantitative cross-sectional survey with a larger sample size (321) giving the study more strength. The study by (Najjuka et al., 2021) involved use of a self-report questionnaire DASS-21 which may attract a self-report bias.

2.4 Summary and Knowledge Gap

The reviewed literature shows that anxiety among nursing students during clinical practice is a common phenomenon reported across different regions of the world. Studies conducted in Europe, Asia and Africa have consistently demonstrated varying levels of anxiety ranging from mild to severe anxiety among nursing students. Clinical stressors such as fear of making mistakes, inadequate supervision and workload were repeatedly identified as factors associated with anxiety.

Although several international studies and systematic reviews have examined anxiety among nursing students, most were conducted in high and middle income countries with different educational systems and clinical settings from those in Uganda. In Uganda, available studies have mainly focused on general psychological distress or anxiety among university students and were not specific to anxiety experience during clinical practice among nursing students.

Furthermore, no published study has specifically assessed the prevalence of anxiety and its associated factors among nursing students during clinical practice at MRRH. Therefore, there is limited context-specific evidence to guide interventions aimed at improving the psychological well-being and clinical learning experiences of nursing students at MRRH. This study was therefore conducted to address this knowledge gap.

CHAPTER THREE METHODOLOGY

3.1 Research design

A cross sectional design was employed to determine the prevalence and factors associated with anxiety during clinical practice among nursing students at MRRH. Cross sectional design is favorable because it allowed the investigator to collect data at only one point in time efficiently with regard to time, cost and other logistics involved in doing research. However, because exposure and outcome were measured at the same point in time, the cross-sectional design does not permit establishment of causal relationships between the identified factors and anxiety among nursing students.

3.2 Research approach

This study employed a quantitative approach.

3.3 Description of the area of study

The study was done in Eastern Uganda, Mbale city at MRRH which is found at coordinates 01004'36" N, 34010'35" E. Mbale Regional Referral Hospital receives patients from surrounding districts such as Tororo, Budaka, Kapchorwa, Busia, Manafwa, Bukwo, Pallisa, Sironko. It offers general and specialized medical and surgical services and it received a total of about 180,000 patients in the last financial year (July 2024-June 2025), with 126,000 outpatients and 54,000 inpatients

MRRH is a main teaching facility for nursing students and other health science students from various tertiary institutions in Eastern Uganda. These include: Busitema University, Islamic University in Uganda, Mt. Elgon School of Nursing and Midwifery, Salem School of Nursing And Midwifery, Mbale School of Nursing and Midwifery, Iganga School of Nursing and Midwifery.

MRRH receives about 60 students doing bachelor of science in nursing, 100 students doing a diploma in registered nursing and 340 students doing a certificate in enrolled nursing which comes to a total of 500 nursing students per semester.

Nursing students are allocated to different wards for clinical attachment at Mbale Regional Referral Hospital. These include: Casualty/emergency ward, family planning ward, antenatal ward, immunization ward, ear nose and throat ward, major and minor theatre, medical ward, surgical ward, orthopedic ward, pediatric ward, maternity ward, post-natal ward, high dependency ward, psych ward and labor suit.

MRRH is an appropriate and important study site for this research because it is the most logistically feasible site for the principal investigator and it also has a variety of nursing students of different cadres in large enough numbers to hit the desired study participant size.

3.4 Description of the population from which samples will be selected, e.g. categorization/demographics of the population

The study population was made up of nursing students that were on clinical placement at

MRRH. Enrolled (certificate) nursing students from year one and two, registered (diploma) nursing students from years one, two and three and undergraduate (bachelor's degree) nursing students from year three & four took part in the study.

Definition of study population

For purposes of this study, a nursing student is a person who is pursuing nursing education (certificate, diploma or bachelor's degree) at an institution that participates in clinical placement at MRRH.

3.4.1 Study population

The study population comprised of nursing students who were in the clinical part of their training attached to MRRH.

3.4.2 Target population

Nursing students who were allocated to the different wards at MRRH.

3.4.3 Accessible population

Nursing students who were physically present at the different wards at Mbale Regional Referral Hospital during the time when the study was conducted, that is, in April and May 2026.

3.4.4 Study participants

The nursing students who participated in the study were selected through randomized stratified sampling to take part in the study, who consented and completed the questionnaire.

3.5 Eligibility criteria

3.5.1 Inclusion:

1. Nursing students aged 18 years or older that are admitted to tertiary institutions affiliated to Mbale Regional Referral Hospital, undertaking clinical placement at the hospital.
2. Students doing Bachelor of Science in nursing, diploma in registered nursing and certificate in enrolled nursing will be included in the study.
3. Students who were physically present at the various wards at Mbale Regional Referral Hospital during the study and consented to take part in the study.

3.5.2 Exclusion:

1. Nursing students having a pre-existing diagnosis of an anxiety disorder before starting their clinical rotations.
2. Nursing students having an emergency medical condition that makes them unable to participate in the study.

3. Nursing students who were not be able to complete filling the data collection tools.

3.6 Sampling framework, strategy and sample size estimation

3.6.1 Sampling framework

The sampling framework for this research is the list of all nursing students on clinical practice at MRRH during the time of data collection

3.6.2 Sample size determination

Kish formula (1965) was used for sample size estimation. $n = [z^2Pq]/d^2$ where N is the sample size estimate, Z is a standard figure which is 1.96. A study on the prevalence and risk factors for anxiety symptoms among nursing students found a prevalence of 74.7 % (Maleke Manana et al., 2023). Using a P value of 0.747, Q =(1-P) which is 0.253 ,margin of error d is 0.05. The estimated sample size using the Kish Leslie formula is $n = [1.96^2 \times 0.747 \times 0.253 / 0.05^2] = 290$.

Since the source population was less than 10,000(N=500), finite population correction was applied using: $nf = n / [1 + (n/N)]$ where: nf = corrected sample size, n= initial sample size(290), N = source population(500). $nf = 290 / [1 + (290/500)] = 183$ participants.

Adding the 10% non- response, $183 + (10/100 \times 183) = 201$ participants.

However, a larger sample size of 320 participants was maintained to increase the power and precision of the study.

3.6.3 Sampling strategy

Stratified sampling was employed because three categories of nursing students took part in the study. Mbale Regional Referral Hospital receives about 60 students doing Bachelor of Science in nursing, 100 students doing a diploma in registered nursing and 340 students doing a certificate in enrolled nursing which comes to a total of 500 nursing students per semester.

The following formula was used to obtain proportional numbers of participants from each of the 3 categories of nursing students.

Number of participants for each stratum, $nh = (Nh/N) \times n$ where N is the total number of nursing students received in a semester at MRRH, n is the total number of participants in the study, Nh is the population size for a specific stratum, nh is the sample size for that specific stratum.

For certificate nursing students,

$$nh = 340/500 \times 320 = 218 \text{ participants}$$

For diploma nursing students,

$$nh = 100/500 \times 320 = 64 \text{ participants}$$

For degree nursing students,

$$nh = 60/500 \times 320 = 38 \text{ participants}$$

218 students doing a certificate in nursing, 64 students doing a diploma in nursing and 38 students doing Bachelor of Science in nursing were included in the study to make a total of 320 participants.

3.7 Recruitment plan

Individual students were approached while at their clinical placements on various wards. The principal investigator introduced themselves, created rapport and gave a general discussion on the study to the students. The students who showed interest were given more information on the study and its purpose. Consent was obtained via a signed consent form.

3.8 Data collection methods

The Beck Anxiety Inventory (BAI) questionnaire was used to assess for anxiety among nursing students. BAI is a validated tool for assessing symptoms of anxiety experienced during the previous week. It is a twenty one item tool, each item with a 4 point Likert scale (0 = not at all, 1 = Mildly, but it didn't bother me much, 2 = Moderately – it wasn't pleasant at times and 3 = Severely – it bothered me a lot) which gives a total of 0 to 63. A score of 0-21 denotes low anxiety, a score of 22-35 denotes moderate anxiety and a score of 36 and above is potentially concerning levels of anxiety (Kuru Alici & Ozturk Copur, 2022).

Clinical stressors were assessed using the adapted version of the KEZKAK questionnaire which was originally developed to assess intensity of stress experienced by nursing students during clinical practice. The KEZKAKK questionnaire has Likert scale with scores from 0 to 3 where 0 corresponds to no concern, 1 to little, 2 to much and 3 to very much concern (Boostel et al., 2018).

In this study, the KEZKAKK questionnaire was modified from its original likert type response format to a binary response format (yes/no). This adaptation allowed the evaluation of nursing students' exposure to various clinical stressors rather than the intensity of stress. Each item was coded as 1 = yes (clinical stressor experienced) and 0 = no (stressor not experienced). The 31 items of the KEZKAKK questionnaire were grouped into 8 stressors based on the original KEZKAKK framework namely; lack of competence, contact with suffering, relationship with tutors and colleagues, impotence and uncertainty, not controlling the relationship with the patient and overload. The KezkakK tool has Cronbach's alpha 0.95 (García-Velasco et al., 2025)

Table 1 KEZKAKK clinical stressor domains

Lack of competence	02. Doing my work badly and harming the patient
	03. Feeling like I cannot help the patient
	04. Causing psychological damage to the patient
	05. Not knowing how to answer the patient's expectations
	06. Causing bodily harm to the patient
emotional involvement	08. That the patient's emotions will affect me
	09. Talking to the patient about his/her suffering
	16. Seeing a patient die
	19. Getting emotionally involved with the patient
infection and contamination	11. Being infected by the patient
	13. Being infected with a contaminated needle
	12. That the patient who was getting better starts getting worse
	14. Confusing the medication
uncertainty and fear of mistakes	15. Fear of making mistakes
	18. Coming across a situation without knowing what to do
	24. Being in an urgent situation
Interpersonal relationships with tutors, hospital staff and classmates	01. Not feeling integrated into the team work
	10. The relationship with healthcare professionals
	17. The relationship with the professor
	22. The relationship with the clinical practice nurse advisor
	23. The relationship with colleagues (nursing students)
patient contact stressors	7. Not knowing how to answer the patient

	20. The importance of my responsibility in caring for the patient 21. That the patient will not respect me 25. Being in an urgent situation 26. Performing procedures that cause pain to the patient 27. Not knowing how to finish the dialogue with the patient 31. Meeting a terminal patient
work overload	28. Work overload
	29. Receiving conflicting orders 30. Not finding the doctor when the situation requires his/her presence

Using KoboToolbox, the principal researcher developed a three- fold researcher- administered questionnaire containing a section to collect the nursing students' demographic data and social factors, another section with Beck Anxiety Inventory and one with the Kezkakk questionnaire. The questionnaire was uploaded into KoBoCollect application and administered in soft copy using a smartphone or tablet.

Once consent is obtained, the principal investigator together with two trained research assistants read out each question of the researcher- administered questionnaire to the research participants. The responses of the participants were recorded directly into the KoboToolbox form on a smartphone or tablet. Data were anonymously collected during breaks from clinical placement. Data were collected electronically using soft copies of all the data collection tools.

3.9 Data management

All responses to the questionnaire were sent to a secure KoboToolbox server which was to curb risk of physical loss, errors in data entry and unauthorized access. All fully filed questionnaires were synced to the KoboToolbox cloud. The devices that were used to collect data had passwords to further protect the data. Only the principal investigator had full access to download the dataset. There was back up storage of the collected data on a password protected Google Drive folder in case of loss.

The dataset was exported from KoboToolbox into Microsoft Excel for data initial data cleaning. The dataset was examined for any errors or invalid responses. Then the data was fed into STATA for analysis.

Only fully completed Beck Anxiety Inventory data were analyzed. There was descriptive analysis to obtain mean, median and standard deviation of all the Beck Anxiety Inventory scores. The data was categorized. Data from the questionnaire was fed into a Microsoft excel and then into Stata software for analysis.

3.10 Data analysis

The dataset was exported from KoboToolbox into Microsoft Excel for data initial data cleaning. The dataset was examined for any errors or invalid responses. Then the data was fed into STATA 15 for analysis.

3.10.1 To determine the prevalence of anxiety among nursing students during clinical practice at MRRH

The 21 items of Beck Anxiety Inventory questionnaire were entered into STATA from bai1 to bai21, each scored from 0 to 3. Then data was checked for missing data and the total Beck Anxiety Inventory scores were computed ranging from 0 to 53. Levels of anxiety will be categorized into none/minimal(0-7), mild(8-15), moderate(16-25) and severe anxiety(26-63). Then Cronbach's alpha 0.91 was obtained. Descriptive statistics was done to summarize the

data set in tables.

3.10.2 To identify the factors associated with anxiety among nursing students during clinical practice at MRRH.

Demographic, social and clinical variables were summarized using frequencies and percentages for categorical variables and mean, median for continuous variables. KEZKAKK scores were summed up per domain. That is lack of competence, emotional involvement, infection and contamination, uncertainty and fear of mistakes, interpersonal relationships with tutors, hospital staff and classmates, patient contact stressors, and work overload.

Bivariate analysis; The association between each independent variable and Beck Anxiety Inventory scores were examined. **Statistical significance was < 0.05.** The variables with p-values < 0.20 at bivariate analysis together with conceptually important variables identified from literature were entered unto the multivariable model.

Multivariable analysis; modified Poisson regression was used to identify independent predictors of anxiety. Adjusted Risk Ratios (aRR), 95% confidence intervals and p-values were reported.

Modified Poisson regression with robust standard errors was used because the outcome variable (clinically significant anxiety) was common in the study population. In such situations, logistic regression may overestimate associations through odds ratios. Modified Poisson regression directly estimates risk ratios, which are easier to interpret in cross-sectional studies with common outcomes.

3.11 Ethical considerations

The researcher obtained approval of the research proposal by the Busitema University Faculty of Health Sciences Research Ethics Committee (BUFHS-2026-658) and then progressed to the Mbale Regional Referral Hospital administration to obtain administrative clearance. The researcher provided information about the study and obtained signed informed consent after which data were collected. To ensure confidentiality and anonymity, students' demographic data were collected excluding names and student identification numbers. Because Beck Anxiety Inventory screens for anxiety, nursing students who scored Beck Anxiety Inventory > 26 (severe anxiety) were given a brief counselling session. Thereafter, they were referred for mental health service at Mbale Regional Referral Hospital psychiatry department. The participants were informed how findings from the study will be used, that only statistical summaries will be accessible to the general public and not their raw information. The participants were reliably informed that they reserve their right to drop out of the study at any stage.

3.12 Quality control

Training of assistants

Research assistants were trained before data collection. The training included; the study objectives, data collection process, eligibility criteria, ethical considerations, use of KoBoToolbox. Standardized instructions were provided to all participants to ensure uniform administration of questionnaires.

Supervision

The principal investigator closely worked with all the research assistants and supervised them throughout the data collection period.

Completeness checks

To ensure data completeness, questionnaires were fed into KoBoToolbox with all required fields to minimize missing data. Completed questionnaires were reviewed for missing responses after data collection.

Pilot testing

A pilot study was conducted among 10% of the sample size (32 nursing students) at Namatala HC IV but they were not included in the final study. No major revisions were required following feedback obtained during the pilot study before actual collection of data started.

3.13 Study limitations and delimitations

Since a cross-sectional design was used, it was hard to determine causal effect between factors identified and anxiety. The findings of the study were interpreted as associations and not causes of the anxiety found among nursing students. To minimize variations, data collection was done over a defined period of time, approximately five weeks so that participants experienced similar clinical conditions. The study participants might have had a recall bias, or report exaggerated responses or water-down responses due to social desirability bias. To minimize this, the study participants were assured of confidentiality and that their responses are anonymous and standardized validated tools were used.

Because the study only included nursing students that were in active clinical practice at MRRH, findings may not be generalizable to pre-clinical students. However, this was intentional because the study focused specifically on anxiety during clinical practice.

3.15 Dissemination plan

The findings from this study will be disseminated to the nursing department of Busitema University, the Research and Ethics Committee, Busitema University, Faculty of Health Sciences and Mbale Regional Referral Hospital Research Ethics Committee (MRRH-REC).

The researcher plans to submit a manuscript to be published.

A summary of the findings from the study will be shared to the nursing students who participated through their class Whatsapp groups.

The findings of this study will also be presented at conferences on nursing and mental health
The findings will also be shared with the Uganda Nursing and Midwives Council.

CHAPTER FOUR: RESULTS

A total of 320 students were approached and 320 consented and completed the study, giving a response rate of 100%.

4.1 Socio-demographic characteristics

The socio-demographic characteristics of the study participants are presented in Table 1. The median age was 23 years (IQR: 21-25). Female participants constituted nearly two-thirds of the sample (64.7%), while most respondents were single (84.7%).

The majority were enrolled in the certificate nursing programme (67.5%). Most students resided in college dormitories (69.0%), were not currently employed (88.1%), and had no prior nursing experience before joining the nursing programme (80.3%).

Socio-demographic characteristics of nursing students (N = 320)

Table 2 Socio-demographic characteristics

Characteristic	Frequency (n)	Percentage (%)
Age (years) Median 23(21-25)		
Age:		
18–24	219	68.7
25–34	86	27.0
35+	14	4.4
Sex		
Female	207	64.7
Male	113	35.3
Marital status		
Single	271	84.7
Married/ Divorced/Separated	49	15.3
Course		
Certificate	216	67.5
Diploma	65	20.3
Degree	39	12.1
Academic year		

Year 1	125	39.0
Year 2	147	45.9
Year 3	26	8.1
Year 4	22	6.9
Residence		
College dormitory	221	69.0
Rental house	65	20.3
With relatives	17	5.3
Own home	17	5.3
Currently employed		
No	282	88.1
yes	38	11.9
Prior nursing experience		
No	257	80.3
yes	63	19.7
Financial difficulty		
No	113	35.31
Yes	207	64.69
Social support		
Yes	265	82.8
No	55	17.19
Religion		
christian	217	67.7
moslem	86	27.0
Other*/none	17	5.3

*Religion other(8): ATS, Abaikiriza

4.2 Prevalence of anxiety during clinical practice.

Anxiety among nursing students was assessed using the Beck Anxiety Inventory (BAI), a validated 21-item self-report scale with scores ranging from 0 to 63. The instrument demonstrated excellent internal consistency in this study population (Cronbach's $\alpha = 0.91$).

The mean BAI score was 16.0 (SD = 12.01), with observed scores ranging from 0 to 53. Clinically significant anxiety was defined as a BAI score of ≥ 8 . The prevalence was 66.6% (213/320; 95% CI: 61.2%-71.5%). This implies that two out of every three nursing students experienced at least mild anxiety during clinical practice.

Figure 2: Prevalence of anxiety during clinical practice among nursing students (N=320)

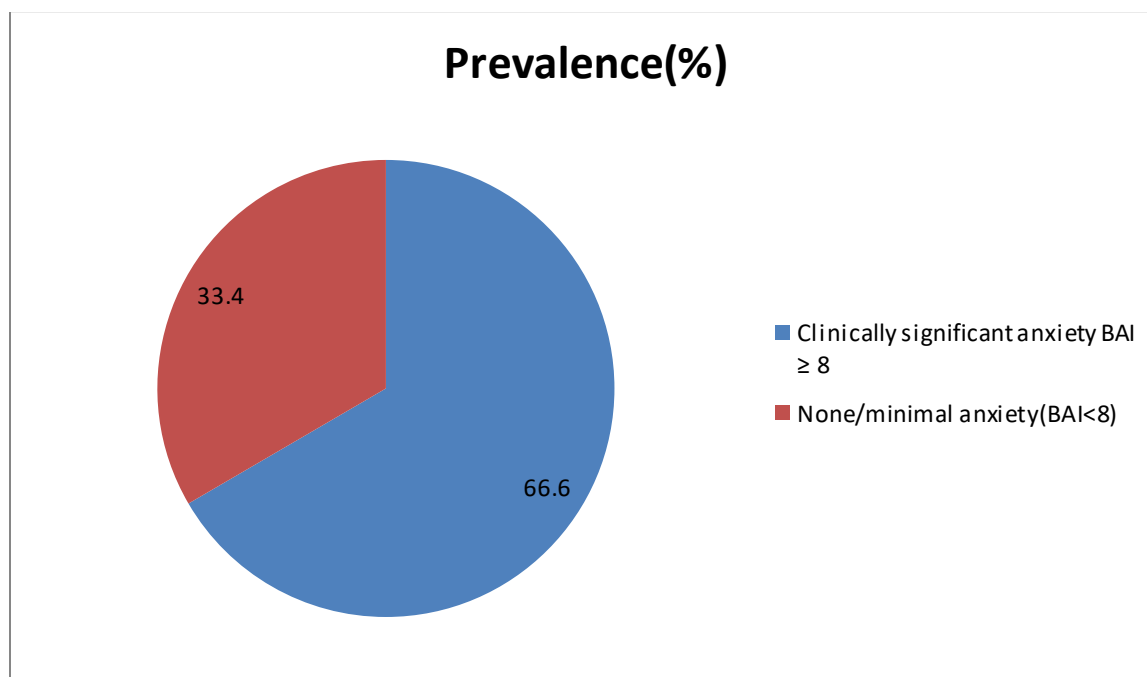


Table 3 Distribution of clinically significant anxiety across nursing courses

Course	No clinically significant anxiety(BAI< 8) n(%)	Clinically significant anxiety(BAI $\geq$ 8) n(%)
Degree in nursing	9(23.1%)	30(76.9%)
Certificate in nursing	66(30.6%)	150(69.4%)
Diploma in nursing	32(49.2%)	213(50.8%)

Students doing a Degree in nursing experienced the highest prevalence of clinically significant anxiety, affecting 76.9%, closely followed by Certificate in nursing at 69.4%. Conversely, students doing Diploma in nursing reported the lowest rate of clinically significant anxiety(50.8%).

4.2.1 Anxiety severity categories

Participants were categorized into four levels of anxiety severity based on standard Beck cut-off scores. None/minimal anxiety was the most observed category (33.4%), followed by severe anxiety (24.3%). Mild anxiety was reported by 23.3% of respondents, while only 18.4% had mild anxiety symptoms.

Overall, more than half of the participants experienced mild to severe anxiety during clinical practice.

Table 8 Anxiety severity

Anxiety category	Frequency (n)	Percentage (%)
None/minimal anxiety (0–7)	107	33.4
Mild anxiety (8–15)	76	23.3
Moderate anxiety (16–25)	59	18.4
Severe anxiety (26–63)	78	24.3

4.3 Factors associated with anxiety during clinical practice

Clinical environment related factors associated with anxiety were assessed using the adapted KEZKAKK questionnaire. The distribution of students reporting exposure to the 31 clinical stressors is presented in Table 3.

Table 4 KEZKAKK 31 item(yes/no distribution)

Item		Yes n(%)	no n(%)
01	Not feeling integrated into the team work	94 (29.4)	226 (70.6)
02	Doing my work badly and harming the patient	128 (40.0)	192 (60.0)
03	Feeling like I cannot help the patient	116 (36.3)	204 (63.8)

04	Causing psychological damage to the patient	107 (33.4)	213 (66.6)
05	Not knowing how to answer the patient's expectations	125 (39.1)	195 (60.9)
06	Causing bodily harm to the patient	83 (25.9)	237 (74.1)
07	Not knowing how to answer the patient	104 (32.5)	216 (67.5)
08	That the patient's emotions will affect me	89 (27.8)	231 (72.2)
09	Talking to the patient about his/her suffering	93 (29.1)	227 (70.9)
10	The relationship with healthcare professionals	100 (31.3)	220 (68.8)
11	Being infected by the patient	155 (48.4)	165 (51.6)
12	That the patient who was getting better starts getting worse	121 (37.8)	199 (62.2)
13	Being infected with a contaminated needle	152 (47.5)	168 (52.5)
14	Confusing the medication	86 (26.9)	234 (73.1)
15	Fear of making mistakes	161 (50.3)	159 (49.7)
16	Seeing a patient die	144 (45.0)	176 (55.0)
17	The relationship with the professor	59 (18.4)	261 (81.6)
18	Coming across a situation without knowing what to do	135 (42.2)	185 (57.9)
19	Getting emotionally involved with the patient	94 (29.4)	226 (70.6)

20	The importance of my responsibility in caring for the patient	59 (18.4)	261 (81.6)
21	That the patient will not respect me	64 (20.0)	256 (80.0)
22	The relationship with the clinical practice nurse advisor	75 (23.4%)	245 (76.6%)
23	The relationship with colleagues (nursing students)	54 (16.9)	266 (83.1)
24	Being in an urgent situation	107 (33.4)	213 (66.6)
25	Meeting a patient who has difficulty in communicating	119 (37.2)	201 (62.8)
26	Performing procedures that cause pain to the patient	120 (37.5)	200 (62.5)
27	Not knowing how to finish the dialogue with the patient	52 (16.3)	268 (83.8)
28	Work overload	173 (54.1)	147 (45.9)
29	Receiving conflicting orders	112 (35.0)	208 (65.0)
30	Not finding the doctor when the situation requires his/her presence	149 (46.6)	171 (53.4)

31	Meeting a terminal patient	75 (23.4)	245 (76.6)
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The 31 items of the KEZKAKK questionnaire were grouped into seven domains as per the original KEZKAKK framework. The domains are; lack of competence, emotional involvement, infection and contamination, uncertainty and fear of mistakes, interpersonal relationships with tutors, hospital staff and classmates, patient contact stressors, and work overload.

Table 5: KEZKAK Clinical stressor domains (yes/no distribution, n = 320)

subscale	yes n(%)	no n(%)
Lack of competence	250 (78.1)	70 (21.9)
Emotional involvement	238 (74.4)	82 (25.6)
Infection & contamination	258 (80.6)	62 (19.4)
Uncertainty & fear of mistakes	236 (73.8)	84 (26.3)
Interpersonal relationships	215 (67.2)	105 (32.8)
Patient contact stressors	242 (75.6)	78 (24.4)
Work overload	265 (82.8)	55 (17.2)

Among the KEZKAKK clinical stressor domains, work overload was the most frequently reported domain, affecting 265(82.8%) students followed by infection & contamination concerns, reported by 258(80.6%) students. The distribution of students reporting exposure to the clinical stressor domains is presented in Table 4 and was subsequently examined for its association with anxiety during clinical practice.

Table 6: Bivariate association between socio-demographic and clinical stressors and clinically significant anxiety

variable	No clinically significant anxiety n (%)	clinically significant anxiety n (%)	COR(95%CI)	p-value
age				
18-24	69(31.8)	148(68.2)	ref	Ref
25-34	32(36.0)	57(64.0)	0.83 (0.49–1.40)	0.483
≥35	6(42.9)	8(57.1)	0.62 (0.21–1.86)	0.395
social support				
No	15(27.3%)	40(72.7)	ref	Ref
Yes	92(34.7)	173(65.3)	0.71(0.37-1.34)	0.289
marital status				
single	88(32.5)	183(67.5)	ref	Ref
married/divorced/separated	19(38.8)	30(61.2)	0.76(0.41-1.42)	0.390
Sex				
female	48(23.2)	159(76.8)	ref	Ref
Male	59(52.2)	54(47.8)	0.28(0.17-0.45)	<0.001
Course				
degree in nursing	9(23.1)	30(76.9)	ref	Ref
certificate in nursing	66(30.6)	150(69.4)	0.68(0.31-1.52)	0.348
diploma in nursing	32(49.2)	33(50.8)	0.31(0.13-0.75)	0.010
Year				
year1	69(32.8)	148(67.2)	ref	Ref

year2	50(34.3)	96 (65.8)	0.94 (0.56–1.55)	0.802
year3	15 (55.6)	12 (44.4)	0.39 (0.17–0.91)	0.029
year4	1 (4.5)	21 (95.5)	10.25 (1.33–78.87)	0.025
Residence				
rental house	18(27.7)	47(72.3)	ref	Ref
own home	3(17.7)	14(82.4)	1.79(0.46-6.96)	0.403
college dormitory	77(34.8)	144(65.2)	0.72(0.39-1.32)	0.283
living with relatives	9(52.9)	8(47.1)	0.34(0.11-1.02)	0.054
employment				
No	96 (34.0)	186 (66.0)	ref	Ref
Yes	11 (28.9)	27 (71.1)	1.27 (0.60–2.66)	0.533
Experience				
no	79 (30.7)	178 (69.3)	ref	Ref
yes	28 (45.2)	34 (54.8)	0.55 (0.32–0.97)	0.040
financial difficulty				
no	33 (29.2)	80 (70.8)	ref	Ref
yes	74 (35.8)	133 (64.3)	0.74 (0.45–1.22)	0.236
Religion				
christian	83 (38.4)	133 (61.6)	ref	Ref
moslem	19 (22.1)	67 (77.9)	2.20 (1.23–3.92)	0.008
other* /none	5 (29.4)	12 (70.6)	1.50 (0.51–4.40)	0.463
lack of competence				
no	34 (48.6)	36 (51.4)	ref	Ref
yes	73 (29.2)	177 (70.8)	2.29 (1.33–3.94)	0.003

emotional involvement				
no	35 (42.7)	47 (57.3)	ref	Ref
yes	72 (30.3)	166 (69.7)	1.72 (1.02–2.88)	0.041
infection and contamination				
no	22 (35.5)	40 (64.5)	ref	Ref
yes	85 (33.0)	173 (67.1)	1.12 (0.63–2.00)	0.704
Uncertainty & fear of mistakes				
no	37 (44.1)	47 (56.0)	ref	Ref
yes	70 (29.7)	166 (70.3)	1.87 (1.12–3.12)	0.017
Interpersonal relationships				
no	43 (41.0)	62 (59.1)	ref	Ref
yes	64 (29.8)	151 (70.2)	1.64 (1.01–2.66)	0.047
Patient contact stressors				
no	32 (41.0)	46 (59.0)	ref	Ref
yes	75 (31.0)	167 (69.0)	1.55 (0.91–2.62)	0.104
Work overload				
no	29 (52.7)	26 (47.3)	ref	Ref
yes	78 (29.4)	187 (70.6)	2.67 (1.48–4.83)	0.001

religion other*(ATS,Abaikiriza)

Statistically significant associations were considered at $p < 0.05$.

Several factors were significantly associated with clinically significant anxiety at bivariate level. Male students were significantly less likely to report clinically significant anxiety compared to females (COR = 0.28, 95%CI: 0.17-0.45, $p < 0.001$).

Nursing students doing a diploma had lower odds of anxiety compared to those doing a degree in nursing (COR = 0.68, 95%CI: 0.31-1.52, $p = 0.348$).

Year of study showed a significant association, with year three students less likely to experience

clinically significant anxiety compared to year one students(COR=0.39, 95%CI:0.17-0.91, p=0.029), while year four students had significantly higher odds of anxiety compared to year one students (COR=10.25, 95%CI:1.33-78.87, p=0.025). Year two students showed no significant difference (COR=0.94,95%CI: 0.56-1.55, p=0.802.)

Prior clinical experience was significantly associated with reduced odds of anxiety (COR=0.55, 95%CI:0.32-0.97, p=0.040).

Among socio-demographic factors, religion was significantly associated with anxiety, with Muslim students showing higher odds compared to Christians(COR=2.20, 95%CI: 1.23-3.92, p=0.008), while those in other religions plus those with no religious affiliation were not significantly different(COR=1.50, 95%CI:0.51-4.40, p =0.463).

Regarding clinical stressors, lack of competence(COR=2.29, 95%CI:1.33-3.94, p=0.003), emotional involvement(COR=1.72, 95%CI:1.02-2.88, p=0.041), uncertainty and fear of mistakes(COR=1.87,95%CI:1.12-3.12, P=0.017), interpersonal relationship stressors(COR=1.64,95%CI:1.01-2.66, P=0.047) and workload (COR=2.67,95%CI:1.48-4.83, p=0.001)were significantly associated with higher odds of clinically significant anxiety.

Age, social support, marital status, residence, employment status, financial difficulty, infection and contamination stressors, and patient contact stressors were not significantly associated with clinically significant anxiety at bivariate level(p>0.05).

Table 6: Modified poisson regression analysis of factors associated with clinically significant anxiety.

Variable	COR (95% CI)	p-value	Adjusted RR (95% CI)	p-value
Age				
18–24	ref	ref	ref	Ref
25–34	0.83 (0.49–1.40)	0.483	1.05 (0.88–1.25)	0.568
≥35	0.62 (0.21–1.86)	0.395	0.98 (0.60–1.60)	0.932
Sex				
female	ref	ref	ref	Ref
male	0.28 (0.17–0.45)	<0.001	0.61 (0.50–0.74)	<0.001
Course				
degree in nursing	ref	ref	ref	Ref
certificate in nursing	0.68 (0.31–1.52)	0.348	0.80 (0.32–2.02)	0.641
diploma in nursing	0.31 (0.13–0.75)	0.010	0.66 (0.27–1.59)	0.351
Year				
year1	ref	ref	ref	Ref
year2	0.94 (0.56–1.55)	0.802	0.96 (0.82–1.13)	0.662
year3	0.42 (0.18–0.99)	0.046	0.54 (0.24–1.20)	0.128
year 4	10.25 (1.33–78.87)	0.025	0.90 (0.37–2.21)	0.821
residence				
rental house	ref	ref	ref	ref
own home	1.79 (0.46–6.96)	0.403	1.03 (0.74–1.42)	0.882
college dormitory	0.72 (0.39–1.32)	0.283	0.75 (0.56–0.99)	0.044

living with relatives	0.34 (0.11–1.02)	0.054	0.50 (0.37–0.95)	0.029
experience				
no	ref	ref	ref	ref
yes	0.55 (0.32–0.97)	0.040	0.84 (0.64–1.09)	0.188
religion				
christian	ref	ref	ref	ref
muslim	2.20 (1.23–3.92)	0.008	1.27 (1.09–1.49)	0.003
other*/none	1.50 (0.51–4.40)	0.463	1.11 (0.82–1.49)	0.495
lack of competence				
no	ref	ref	ref	ref
yes	2.29 (1.33–3.94)	0.003	1.34 (1.09–1.65)	0.005
emotional involvement				
no	ref	ref	ref	ref
yes	1.72 (1.02–2.88)	0.041	1.15 (0.96–1.38)	0.122
interpersonal relationships				
no	ref	ref	ref	ref
yes	1.64 (1.01–2.66)	0.047	1.18(1.00–1.38)	0.047
uncertainty & fear of mistakes				
no	ref	ref	ref	ref
yes	1.87 (1.12–3.12)	0.017	1.17 (0.96–1.41)	0.120
work overload				
no	ref	ref	ref	ref
yes	2.67 (1.48–4.83)	0.001	1.20 (0.93–1.54)	0.163
patient contact stressors				

no	ref	ref	ref	ref
yes	1.55 (0.91–2.62)	0.104	1.05 (0.87–1.26)	0.621

*Religion other(8): ATS, Abaikiriza

After adjusting for potential confounders, sex, residence, religion, fear of harming patients and interpersonal relationship stressors remained significantly associated with clinically significant anxiety.

Male students were less likely to experience clinically significant anxiety compared to female students(Adjusted RR=0.61, 95%CI: 0.50-0.74, $p<0.001$), indicating a protective effect of male sex. Students living in college dormitories(ARR=0.75, 95CI: 0.56-0.99, $p=0.040$) and those living with relatives(ARR=0.59,95%CI: 0.37-0.95, $p=0.029$) had significantly lower risk of anxiety compared to students living those in rental homes, suggesting that non-rental living arrangements were protective from anxiety.

Religion was significantly associated with anxiety, with Muslim students showing a higher risk of clinically significant anxiety compared to Christian students(ARR=1.27, 95%CI: 1.09-1.49, $p=0.003$).

Lack of competence remained a significant predictor of anxiety(ARR=1.34, 95%CI: 1.09-1.65, $p=0.005$) meaning that nursing students who reported this stressor domain were more likely to develop clinically significant anxiety compared with those who did not report this stressor.

Students experiencing interpersonal relationship stressors was more significantly associated with higher risk of clinically significant anxiety compared with those without such stressors(ARR=1.18, CI:1.00-1.38, $p=0.047$).

Other factors that were significant at bivariate level, including course, year of study, prior clinical experience, emotional involvement, interpersonal relationship stressors, uncertainty and fear of mistakes and work overload were not statistically significant on running modified Poisson regression($p>0.05$).

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The aim of this study was to determine the prevalence and factors associated with anxiety during clinical practice among nursing students at MRRH. The study found a high prevalence of clinically significant anxiety (66.6%).

Male sex, living in college dormitories and living with relatives were found to be protective factors against anxiety during clinical practice, while Muslim religion and lack of competence, interpersonal relationship stressors were found as risk factors for anxiety.

These findings suggest that anxiety among nursing students is rampant and is influenced by both socio-demographic and clinical stressors.

5.1.1 Prevalence of anxiety during clinical practice

The prevalence of anxiety in this study was (66.6%), indicating that two of every three nursing students experienced clinically significant anxiety during clinical practice. This finding shows that anxiety is a common occurrence among nursing students during clinical training.

The prevalence in this study is comparable to findings from South Africa where anxiety was reported among 74% of nursing students(Maleke Manana et al., 2023).

Some similar studies done among Ugandan university and health sciences students reported high levels of anxiety and psychological distress, suggesting that anxiety is a prevalent among students in Uganda(Najjuka et al., 2021; Naswiibah & Muhindo, 2025). The finding from this study is also consistent with another study from Ethiopia where moderate to high levels of anxiety were reported among nursing students during clinical practice(Gebreegziabher et al., 2025).

However, the prevalence in this study is significantly higher than that reported in many global studies. A systematic review reported anxiety prevalence from as a range from 19% to 25% among nursing students (Aloufi et al., 2021), while another study from Nepal found that 19% of nursing students experienced moderate anxiety during clinical placement(Banstola et al., 2021). Similarly, a study by(Martínez-Vázquez et al., 2023) reported a prevalence of 13% among nursing students in Spain.

The inconsistencies in findings may be explained by several factors. First, this study used the BAI cut-off score of ≥ 8 , which captures mild anxiety together with moderate and severe anxiety. Many of the previous studies used higher cut-off points, and others used different instruments such as the GAD-7 and STAI, resulting in lower prevalence estimates.

The findings of this study support conclusions from the umbrella review by (Efsthathiou et al., 2025), which established that anxiety is one of the most frequently reported mental health problems among nursing students worldwide.

5.1.2 Factors associated with anxiety during clinical practice

Male students were significantly less likely to experience anxiety compared to female students (ARR=0.61, 95%CI: 0.50-0.74, $p<0.001$), indicating that male sex was a protective factor against anxiety. This finding is consistent with studies conducted among nursing students in South Africa and Spain, which reported higher anxiety levels among female nursing students, (Maleke Manana et al., 2023; Martínez-Vázquez et al., 2022). These findings could be due to the fact that females may experience greater emotional responsiveness and perceive stressful situations more intensely compared to their male counterparts. Nursing is also a predominantly female profession, and so females made up a large proportion of the participants for this study. However, some studies show no significant association between gender with anxiety (Haris et al., 2026).

Students living in college dormitories were 25% less likely to experience anxiety compared to those living in rental houses (ARR=0.75, 95%CI: 0.56-0.99, $p=0.044$). Similarly, students living with relatives were 41% less likely to experience anxiety compared to those living in rental houses during the school semester (ARR=0.59, 95%CI: 0.37-0.95, $p=0.029$). Living in college dormitories and living with relatives acted as protective factors against anxiety. This finding could be due to better social support in these living situations which is vital during clinical practice as reported by (Loureiro et al., 2025). Students that reside in college dormitories may benefit from peer support, easier access to academic resources like discussions and stronger social connectedness. These findings are inconsistent with a study by (Ireen et al., 2025) who reported no significant association between living arrangement and anxiety among nursing students.

Students living in rental houses may have additional challenges such as financial pressures to pay rent, transportation difficulties and some sort of social isolation that has been linked to anxiety among nursing students (Albikawi & Abuadas, 2025).

Religion was significantly associated with anxiety in this study. Muslim students had a 27% higher likelihood to experience clinically significant anxiety compared to Christian students (ARR=1.27, 95%CI: 1.09-1.49, $p=0.003$). In contrast, students who reported religions other than Muslim and Christianity or no religious affiliation did not have major differences in anxiety levels compared with Christians (ARR=1.11, 95%CI: 0.82-1.49, $p=0.495$). These findings are inconsistent with studies that report religious affiliation as a protective factor against anxiety (Martínez-Vázquez et al., 2023) as well as those who report nursing students with religiosity having lower anxiety levels (Yousefi Asl et al., 2025). This suggests that the relationship between religion and anxiety could be a complex association as noted by (Rosmarin & Leidl, 2020) that external aspects of religion such as religious affiliation often demonstrate inconsistent associations with anxiety.

However, internal dimensions of religion such as faith, positive religious coping show stronger and more consistent protective effects to anxiety. Therefore the findings of this study do not necessarily imply that being Muslim itself causes anxiety. Muslim students may have faced challenges in maintaining prayer schedules or adhering to dress code requirements during clinical practice, which could have contributed to psychological distress. By contrast, some studies showed no significant association between religion and anxiety (Mi et al., 2025) while a systematic review and meta-analysis by (Forouhari et al., 2019) found only a weak relationship between religion and anxiety among college students. Overall, these findings suggest that the association between religion and anxiety is multifactorial and should be interpreted with caution.

Lack of competence remained a significant predictor of anxiety after adjustment for confounding variables (ARR=1.34, 95% CI: 1.09-1.65, $p=0.005$). Students who perceived themselves as lacking competence had a 34% higher risk of anxiety during clinical practice compared to those who did not report competence related clinical stressors. A study by (García-Velasco et al., 2025) similarly reported lack of competence as a major finding associated with anxiety during clinical practice. This finding is consistent with studies by (Gebreegziabher et al., 2025; Otim et al., 2021) who reported that low self-confidence, inadequate preparedness and poor clinical competence were associated with increased anxiety among nursing students. This finding is consistent with a qualitative study found that unfamiliar nursing procedures and inadequate supervision are a common source of stress (Dias et al., 2024). However, some studies reported no significant association between self-confidence and anxiety (Bibi et al., 2023).

Interpersonal relationship stressors found to be significantly associated with anxiety in this study. Students who reported interpersonal relationship challenges within the clinical environment had an 18% higher risk of clinically significant anxiety compared to those who did not report it (ARR=1.18, 95% CI: 1.00-1.38, $p=0.047$). This finding suggests that difficulties in interactions with healthcare professionals, clinical instructors and fellow nursing students contribute to psychological distress during clinical practice. In the same way, an umbrella review (Labrague, 2024) reported interactions with nursing and faculty staff as a major source of stress among nursing students. This finding is consistent with (Juan et al., 2023) who reported that harsh communication and inconsistent feedback negatively affected nursing students' wellbeing.

Similarly, a study by (Yildirim & Dalcı, 2020) found that poor communication and role ambiguity increased anxiety level. An umbrella review reported that stressful clinical environments are important predictors of anxiety among nursing students (Efstathiou et al., 2025). A study by (García-Velasco et al., 2025) reported relationship with peers and mentors as a significant cause of stress among nursing students. In Uganda, qualitative findings by (Wani et al., 2025) showed that ineffective preceptorship and poor collaboration between students and clinical staff negatively affected learning experiences among health

science students. The association observed in this study may be explained by the fact that nursing students rely heavily on guidance and constructive feedback from clinical instructors, nurses on ward and peers. Negative interactions may contribute to psychological stress, thereby increasing anxiety. A study by (Lepiani-Díaz et al., 2023) reported uncertainty, emotional involvement and patient contact related stressors as significant clinical stressors with interpersonal relationships being insignificant.

Although year of study, previous clinical experience, emotional involvement, uncertainty and fear of mistakes and work over load were significantly associated with anxiety at bivariate analysis, they did not stay significant in the modified Poisson regression analysis. The loss of statistical significance suggests that these factors may influence anxiety indirectly through other pathways yet to be studied further.

The findings of this study support the theoretical framework which proposed that anxiety among nursing students arises from the interaction between socio-demographic characteristics and clinical environment related stressors. In this study, factors such as sex, religion and residence were individual characteristics, while lack of competence and interpersonal relationship stressors reflected clinical environmental influences. These factors together contributed to the occurrence of clinically significant anxiety during clinical practice.

5.2 Conclusion

1. Clinically significant anxiety during clinical practice was highly prevalent among nursing students at MRRH, affecting 66.6% of participants.
2. Work overload and infection related concerns were the most commonly reported clinical stressors among nursing students.
3. Male sex, residence in college dormitories and living with relatives were protective factors against anxiety.
4. Lack of competence and interpersonal relationship stressor domains were significant predictors of anxiety during clinical practice.
5. Anxiety among nursing students is influenced by both socio-demographic characteristics and clinical environment related factors.

5.3 Recommendations

Nursing training institutions

Integrate mental health education, stress management and coping skills into the nursing curriculum.
Formalise mentorship programmes.

Improve access to affordable accommodation services within the school to enhance social support.

MRRH management

Co-ordinate student numbers per ward to avoid overcrowding

Ensure adequate supervision by the hospital clinical staff of the nursing students during clinical placement.

Clinical instructors and ward preceptors

Provide structured orientation to nursing students before or at the start of clinical placement.

Offer regular feedback, periodic debriefing sessions to address challenges encountered during practice.

5.4 Limitations of the study

1. This study being a cross-sectional design has limited ability to establish causal relationships between the identified socio-demographic and clinical stressors and anxiety among nursing students. Therefore, the identified factors should be interpreted as associations rather than causal relationships. To enhance the credibility of the findings, standardized and validated data collection tools were used and appropriate data analyses were done to identify significant associations between variables.
2. The data were collected using researcher administered questionnaires which may have reduced privacy and introduced social desirability and interviewer bias. Participants may have under-reported or over-reported anxiety symptoms and clinical stressors due to the presence of the researcher. Participants were assured of confidentiality and anonymity and that their responses were to be used only for academic purposes.
3. The modification of the KEZKAKK questionnaire from its original Likert scale format to a binary(yes/no) response format reduced the instrument's ability to capture severity of clinical stressors and may limit direct comparison with studies that used the original tool. Despite the modification, the questionnaire retained all the original stressor domains and items of the KEZKAKK questionnaire, ensuring that the major clinical stressors experienced by nursing students were still comprehensively assessed.
4. The use of a BAI cut off score of ≥ 8 although useful for identifying earlier stages or severity of anxiety symptoms, may have produced higher prevalence estimates

compared to studies using higher thresholds or cut offs. The selected cut-off score enabled early identification of students experiencing mild anxiety symptoms and ensured that participants at risk were not overlooked.

5. Since the study was conducted only at MRRH, the findings may not be fully generalizable to nursing students in other hospitals or regions of Uganda. The study included participants from different nursing programs and levels of training undergoing clinical practice at MRRH, which improved the diversity of the sample.

5.5 Areas for further research

1. Further studies should employ longitudinal study designs to establish causal relationships between clinical practice stressors and anxiety among nursing students.
2. Qualitative studies are also recommended to explore nursing students' lived experiences and perceptions regarding anxiety during clinical practice.
3. Multi-center studies involving several teaching hospitals in Uganda should be conducted to improve generalizability of findings.
4. Further research should also evaluate the effectiveness of interventions like simulation-based training, mentorship programs, counseling services and other strategies to curb anxiety during clinical practice.

BUFHSREC approval letter



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FACULTY OF HEALTH SCIENCES' REC

26/03/2026

To: NAKATO BETTYNAKIGOZI
BUSITEMA UNIVERSITY

Review Type: Initial Review



Re: BUFHS-2026-658: PREVALENCE AND FACTORS ASSOCIATED WITH ANXIETY AMONG NURSING STUDENTS DURING CLINICAL PRACTICE AT MBALE REGIONAL REFERRAL HOSPITAL.

I am pleased to inform you that at the 3rd convened meeting on 05/03/2026, the Busitema University Faculty of Health Sciences REC meeting voted to approve the above referenced application.
Approval of the research is for the period of 26/03/2026 to 26/03/2027.

As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the REC for re-review and approval prior to the activation of the changes.
3. Reports of unanticipated problems involving risks to participants or any new information which could change the risk benefit: ratio must be submitted to the REC.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by participants and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
5. Continuing review application must be submitted to the REC eight weeks prior to the expiration date of 26/03/2027 in order to continue the study beyond the approved period. Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study.
6. The REC application number assigned to the research should be cited in any correspondence with the REC of record.
7. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.

The following is the list of all documents approved in this application by Busitema University Faculty of Health Sciences REC:

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No.	Document Title	Language	Version Number	Version Date
1	informed consent form	English	v1.1	2026-03-06
2	Protocol	English	pdf	2026-03-06
3	informed consent	English	v1.1	2026-03-04
4	Protocol	English	v1.1	2026-04
5	Response to reviewers letter	English	v1.1	2026-03-02
6	Protocol with track changes	English	v1.1	2026-03-02
7	Protocol	English	v1.1	2026-03-02
8	Main Consent forms	English	PDF	2026-02-01
9	Data collection tools	English	PDF	2026-02-01
10	Protocol	English	PDF	2026-02-01

Yours sincerely,

Richard Katuramu



Richard Katuramu

For: Busitema University Faculty of Health Sciences REC

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APPENDICES

APPENDIX 1: social- demographics QUESTIONNAIRE

1. I have understood the study and I consented to participate

- Yes
- No

If no, kindly pause and return the form to the research team.

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

3. Sex

- Male
- Female
- Prefer not to say

4. Marital status

- Single
- Married
- Divorced/separated
- Others (specify)

5. Which course are you doing?

- Certificate(Enrolled nursing)
- Diploma (Registered nursing)
- Bachelor of science in nursing

6. Which academic year are you currently in?

- Year 1
- Year 2
- Year 3
- Year 4

7. Where are do you live during the school semester?

- I live in my own home
- I live in a rental house
- I live at the college dormitory
- I live with relatives

8. Are you under any paid employment at the moment?

- Yes
- No

9. Did you have prior experience in the clinical area before enrolling for your current nursing course?

- Yes
- No

10. I have support in my academic journey from family and friends?

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

11. What is your religious affiliation?

- Christian
- Moslem
- None
- Other(specify).....

12. Do you face financial constraints in your education?

- Strongly agree

- Agree
- Neutral
- Disagree
- Strongly disagree

APPENDIX 2:KEZKAK questionnaire

Below is a list of clinical stressors that commonly experienced by nursing students and may trigger anxiety. Tick all that apply to you.

Table 7 KEZKAKK questionnaire

01	Not feeling integrated into the team work
02	Doing my work badly and harming the patient
03	Feeling like I cannot help the patient
04	Causing psychological damage to the patient
05	Not knowing how to answer the patient's expectations
06	Causing bodily harm to the patient
07	Not knowing how to answer the patient
08	That the patient's emotions will affect me
09	Talking to the patient about his/her suffering
10	The relationship with healthcare professionals
11	Being infected by the patient
12	That the patient who was getting better starts getting worse
13	Being infected with a contaminated needle
14	Confusing the medication
15	Fear of making mistakes
16	Seeing a patient die
17	The relationship with the professor
18	Coming across a situation without knowing what to do
19	Getting emotionally involved with the patient
20	The importance of my responsibility in caring for the patient
21	That the patient will not respect me

22	The relationship with the clinical practice nurse advisor
23	The relationship with colleagues (nursing students)
24	Being in an urgent situation
25	Meeting a patient who has difficulty in communicating
26	Performing procedures that cause pain to the patient
27	Not knowing how to finish the dialogue with the patient
28	Work overload
29	Receiving conflicting orders
30	Not finding the doctor when the situation requires his/her presence
31	Meeting a terminal patient

APPENDIX 3: Beck Anxiety Inventory

Below is a list of common symptoms of anxiety. Please read each item carefully and indicate how much you have been bothered by each of the symptoms during the past week including today while on clinical placement.

Table 8 Beck Anxiety Inventory

	Not at all	Mildly, but it didn't bother me much	Moderately – it wasn't pleasant at times	Severely – it bothered me a lot
1. Numbness or tingling	0	1	2	3
2. Feeling hot	0	1	2	3
3. Wobbliness in legs	0	1	2	3
4. Unable to relax	0	1	2	3
5. Fear of worst happening	0	1	2	3
6. Dizzy or lightheaded	0	1	2	3
7. Heart pounding / racing	0	1	2	3
8. Unsteady	0	1	2	3
9. Terrified or afraid	0	1	2	3
10. Nervous	0	1	2	3
11. Feeling of choking	0	1	2	3

12. Hands trembling	0	1	2	3
13. Shaky / unsteady	0	1	2	3
14. Fear of losing control	0	1	2	3
15. Difficulty in breathing	0	1	2	3
16. Fear of dying	0	1	2	3
17. Scared	0	1	2	3
18. Indigestion	0	1	2	3
19. Faint / lightheaded	0	1	2	3
20. Face flushed	0	1	2	3
21. Hot / cold sweats	0	1	2	3

APPENDIX 4: CONSENT FORM
INFORMED CONSENT FORM

STUDY TITLE

Prevalence and Factors Associated with Anxiety Among Nursing Students During Clinical Practice at Mbale Regional Referral Hospital

PRINCIPAL INVESTIGATOR

Nakato Betty Nakigozi

Bachelor of Science in Nursing Student Busitema University Faculty of Health Sciences

1. PURPOSE

You are invited to participate in a research study. The purpose of this research is to determine the prevalence and factors associated with anxiety among nursing students during clinical practice at Mbale Regional Referral Hospital.

This study is being conducted as part of the academic requirements for partial fulfillment of the Bachelor of Science in nursing degree at Busitema University. The findings of this study may help improve understanding of mental health challenges faced by nursing students during clinical practice and may inform interventions to support student wellbeing.

2. INVESTIGATORS

This is a single-site research study being conducted at Mbale Regional Referral Hospital in Uganda.

The research is being conducted by:

Principal Investigator:

Nakato Betty Nakigozi

Bachelor of Science in Nursing Student Busitema University Faculty of Health Sciences

Sponsor:

This study is student-funded and conducted as an academic requirement for partial fulfillment of the Bachelor of Science in Nursing degree at Busitema University.

POPULATION

You are being invited to participate in this study because you are currently a nursing student undertaking clinical practice at Mbale Regional Referral Hospital and meet the eligibility criteria for this study.

Participants must:

- Be 18 years or older
- Be currently undertaking clinical practice at Mbale Regional Referral Hospital
- Be enrolled in a certificate, diploma, or bachelor's nursing program

Participants will be approached during breaks from their clinical placement and invited to participate voluntarily.

Approximately 320 nursing students will participate in this study.

PERIOD

The entire study is expected to take approximately five weeks to complete.

Your participation in this study will take approximately 30 minutes, during which you will complete a questionnaire.

PROCEDURES

If you agree to participate in this study:

- You will be given a self-administered questionnaire consisting of three sections.
- The questionnaire will collect:
 - ✓ Demographic and social information
 - ✓ Beck Anxiety Inventory (BAI) questions to assess levels of anxiety
 - ✓ Kezkak questionnaire to assess stressors during clinical practice.
- Completing the questionnaire will take approximately 30 minutes.
- Data collection will take place during breaks from your clinical practice in a private setting to ensure privacy and confidentiality.

This study does not involve any drugs, medical procedures, blood samples, or experimental treatments. Your participation will end once you complete the questionnaire.

RISKS

This study involves minimal risk.

Some participants may experience emotional discomfort while answering questions related to anxiety or stress during clinical practice.

To reduce this risk:

- You may skip any question that makes you uncomfortable.
- You may stop participating at any time without penalty.
- If you experience emotional distress during the study, you will be offered brief counseling and referral to the mental health unit for further support if necessary.

There are no expected physical, economic, or legal risks associated with participation in this study.

BENEFIT

You may not receive any direct medical benefit from participating in this study. However, possible benefits include:

- Increased awareness of your mental health and anxiety levels
- Contribution to knowledge about mental health challenges among nursing students
- The study findings may help improve clinical learning environments and student support systems in hospitals and training institutions.

The results of this research may benefit future nursing students, healthcare institutions, policy makers, and academic research.

COSTS

There is no financial cost for participating in this study. Participation will require approximately 30 minutes of your time.

To appreciate your participation and time, you will receive a compensation of 5,000 Uganda Shillings.

PARTICIPANT'S RIGHTS

a) Voluntariness

Your participation in this study is completely voluntary.

You may choose not to participate or withdraw from the study at any time without any penalty or effect on your clinical placement, academic standing, or future opportunities.

b) Alternatives

You may choose not to participate in this study.

There are no penalties or consequences if you decide not to participate.

c) Withdrawal

You may withdraw from the study at any time without penalty.

Your decision to withdraw will not affect your clinical training, academic progress, or future healthcare services.

d) Privacy

e) Your privacy will be respected during data collection.

The questionnaire will be completed in a private setting, and participants will not be asked to provide personal identifying information.

f) Confidentiality

Your responses will be anonymous.

No identifying information such as name, address, contact details, or student number will be collected.

All collected data will be stored in password-protected electronic files accessible only to the research team.

The data will be securely stored for five years and then permanently deleted from electronic storage.

Results from this study may be published or presented, but no information that could identify you personally will be included.

CONTACTS If you have questions about this research study, please contact:

Nakato Betty Nakigozi Principal Investigator Phone: +256 700 907478

Email: nakatobettynakigzi@gmail.com

For questions about participants' rights or ethical issues, please contact:

Dr. Katuramu Richard

Chairperson

Busitema University Faculty of Health Sciences Research Ethics Committee (BUFHSREC) Phone: +256701154444/0787641051 or via email: rkaturamu@gmail.com.

DOCUMENTATION AND AUTHORIZATION OF INFORMED CONSENT

- I have read this consent form and was given enough time to consider the decision to participate in this study.
- This research study has been satisfactorily explained to me, including possible risks and benefits.
- All my questions were satisfactorily answered.
- I understand that participation in this research study is voluntary and that I can withdraw at any time.
- I am signing this consent form prior to participation in any research activities.
- I give voluntarily my permission to participate in this research study.
- I will be provided a copy of the fully signed consent form for my reference.

Participant's Signature..... Date (DD/MM/YYYY)

Name of Investigator/Associate (PRINT): **Nakato Betty Nakigozi**

Signature of Investigator/Associate: _ Date (DD/MM/YYYY): ____

APPENDIX 5: Table 3 WORK PLAN

Table 9 work plan

ACTIVITY	
Proposal writing	September 2025
final proposal writing	December2025-January2026
Proposal submission and approval by REC	April 2026
Data collection	April 2026
Data analysis	May 2026
Report writing, discussion of results and dissemination	June 2026

APPENDIX 6:BUDGET**Table 10 BUDGET**

S/NO	ITEM	QUANTITY	UNIT COST	TOTAL
1	Stationery 1. Pens 2. Envelopes 3. Notebooks 4. highlighters			20,000
2	Printing, binding of consent forms, introductory letters and questionnaires		100,0000	100,000
3	Data for internet connection	80GB	85,000	85,000
4	Ethics committee fee for approval	1	50,000	50,000
5	transport			15,000
6	miscellaneous			50,000
7	Research assistants	2	50,000	100,000
8	Compensation of participants	320	5,000	1,600,000
GRDAND TOTAL				2,020,000