BACCALAUREATE NURSING STUDENTS' PERCEIVED LEARNING USING THE LECTURE AND UNFOLDING CASE STUDY PEDAGOGIES IN PROSTATE CANCER SURGICAL CARE: A COMPARATIVE STUDY CONDUCTED AT UGANDA CHRISTIAN UNIVERSITY, MUKONO

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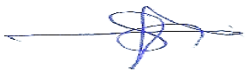
Declaration

I, Immaculate Prosperia Naggulu hereby declare that the work presented in this research report is my personal original work and that it has not been submitted to any other institution of higher learning or university for any academic purposes. To the best of my knowledge, the collaborative contribution of other peoples work has been rightly acknowledged.

Signature:  Date: 14/04/2025

Approval

This dissertation has been completed under supervision. It is submitted to the Directorate of Research and Post graduate Studies for examination with our approval.

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Dedication

I dedicate this dissertation to my beloved son, Barnaby Victor Bwegamo and my husband, Mr. Boaz Buhamizo for cheering me up and being a source of inspiration during this quest. To all nursing educators in my professional support system, thank you for encouraging me to explore alternative pedagogies that can improve nursing education.

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To God be the Glory.

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List of Acronyms

AACN- American Association of Colleges of Nursing

AC- Abstract Conceptualization

AE- Active Experimentation

BHTE- Bachelor of Health Tutor's Education

CBL- Case Based Learning

CE- Concrete Experience

COVID -19- Coronavirus disease of 2019

DRE- Digital Rectal Examination

ELT- Experiential Learning Theory

GMPI- Good Medical Practice Index

IOM- Institute of Medicine

JP- Jackson-Pratt

MoES- Ministry of Education and Sports

MoH- Ministry of Health

NCHE- National Council for Higher Education

NEPI- Nursing Education Partnership Initiative

NLSC- National Lower Secondary Curriculum

PBL- Problem Based Learning

PSA-Prostate Specific Antigen

PEPFAR- President's Emergency Plan for AIDS Relief

REC- Research and Ethics Committee

RO - Reflective Observation

SCD - Sequential Compression Devices

SCL- Student Centered Learning

SPSS- Statistical Package for Social Sciences

SSA- Sub Saharan Africa

TCL- Teacher Centered Learning

UCS- Unfolding Case Study

UCU- Uganda Christian University

UNMC- Uganda Nurses and Midwives Council

Abstract

Background/Purpose: The predominant use of traditional teaching methods, such as lecture, stifles the ability of nursing students to perform better in clinical situations. The study compared the baccalaureate nursing students' perceived learning using the Lecture and Unfolding Case Study (UCS) pedagogies in prostate cancer surgical care at Uganda Christian University, Mukono.

Theoretical/Conceptual Framework: The Kolb's Experiential Learning Theory was used to enable the baccalaureate nursing students learn by guided self-reflection. The student nurses embraced the cyclical learning approach that improved their perception of learning and ability to integrate theoretical concepts into practice.

Methodology: 30 baccalaureate nursing students participated in a quantitative comparative study. Students' opinions were examined using a quasi-quantitative analysis.

Results: Perceived learning scored higher in UCS (Mean 3.44, SD = 0.78) versus Lecture (Mean 3.23, SD =1.04). Wilcoxon Signed-Rank test $z= 2.445$, $r= 0.454$, $p = 0.015 < 0.05$. Satisfaction scored higher in UCS (Mean 8.22, SD= 0.91) versus Lecture (Mean 7.70, SD= 0.84). Wilcoxon Signed-Rank test $z= 2.577$, $r= 0.591$, $p = 0.010 < 0.05$.

Conclusion: UCS is a more effective pedagogy in equipping nursing students with the necessary knowledge and skills to provide quality patient care.

Recommendations: Nursing educators should utilize the UCS pedagogy to enhance students' learning and develop their capacity to apply their skill set in clinical settings.

Keywords: Lecture Pedagogy, Unfolding Case Study Pedagogy, Prostate Cancer Surgical Care, Comparative Study, Baccalaureate Nursing Students.

Chapter One: Introduction

The clinical demands of patients in the modern healthcare milieu call for baccalaureate nursing students to gain effective nursing skills to offer excellent comprehensive health care services. Predominant utilization of teacher centered learning (TCL) pedagogies in schools of nursing still remains as one of the significant global challenges. As a result, nursing students have major gaps in critical thinking, clinical reasoning and making the best decisions in nursing care. In Uganda, studies from various nursing institutions and universities have shown the predominant use of TCL pedagogies (Atwebembeire & Malunda, 2019; Drateru, 2016).

Student centered learning (SCL) pedagogies have been found effective in developing and enhancing critical thinking in under graduate nursing students (Kaddoura,Van-Dyke, & Yang, 2016). One important SCL pedagogy is the unfolding case study (UCS), a low-tech simulation strategy that enables nursing students to acquire excellent critical reflective thinking and analytical skills needed for quality nursing care. In Uganda, while some research has been done to determine the utilization of TCL and SCL pedagogies in nursing institutions, no study has been carried out to explore the nursing students' views and experiences of how they perceived their learning, thus the need of carrying out this study. The study sought to establish if there are existing differences in the baccalaureate nursing students' perceived learning using the lecture and UCS pedagogies in prostate cancer surgical care at Uganda Christian University, Mukono.

Background of the Study

Globally, one of the main problems in institutions of nursing is the dominant utilization of conventional pedagogies which hinder acquisition of clinical decision and problem-solving skills. According to Atanga, Abgor, and Ayangwo (2015), the lecture pedagogy continues to be used in universities and is the most common pedagogy in adult education all over the world. Global and African studies have revealed that nurse educators continue to utilize outdated didactic teaching methods in spite of technological advancement (Subhan, 2014). In Sub Saharan Africa, the dominant use of the lecture pedagogy was noted to be prevalent in nursing institutions in Cameroon and Kwazulu, Natal (Atanga et al., 2015). In Uganda, a study conducted by Drateru (2016) showed that majority of educators (89%) in 4 Ugandan nursing institutions use the lecture method. Similarly, responses from educators of 4 private chartered Universities in Uganda showed that (46.4%) preferred using the lecture method for instructing undergraduates as compared to (29.3%) who used learner based pedagogy (Atwebembeire & Malunda, 2019).

Nursing students are not at the core of the education process thus being bound to superficial and rote learning (Bijani, et al., 2019). This leads to inadequate preparation of learners and compromises their capability to employ the abstract academic knowledge in professional nursing practice. In East Africa, a survey revealed disturbing facts of graduates' performance abilities being low and hence unfit for jobs with the worst records in Uganda (Mohamedbhai, 2014). The balance between theory and practice has been questioned by employers of graduates who are not so confident and competent in

the clinical area. Muganga and Ssenkusu (2019) emphasizes a persistent skills mismatch in new graduates due to clinging to the traditional pedagogies that do not offer authentic learning. Nursing educators should assist students to obtain knowledge and skills that will competently empower them to work in demanding and complex clinical environments. Therefore, there is a great need for educators to strengthen the educational preparation of the newly graduated nurse as her/his clinical performance has a strong connection with client health outcomes, morbidity and mortality rates (Institute of Medicine [IOM], 2011).

Teaching and learning have developed progressively as nurse education experts search for better strategies of imparting knowledge, attitudes and skills to the diverse nursing student population. In the past, there was significant concentration on utilization of TCL pedagogies through formal lectures where the educator was the master of knowledge and the students passively received the information. The teaching pedagogies currently employed by nursing institutions are derived from the behaviorism approach which focuses on imparting knowledge to the learners, testing and observing student learning outcomes (Brandon & All, 2010). However, constructivists advocated for student centered teaching strategies in order to allow learners to construct meaning of the new knowledge gained through personal discovery and creative thinking (Brandon & All). In modern higher education and standard based education, SCL pedagogy is favored over the traditional lecture method, and educators are encouraged to relinquish control over students and serve as guides and coaches rather than being the sole information providers (Gborgblorvor, 2016). To respond to the current demands in nursing education,

there is need for educators to vary teaching pedagogies and utilize more of the modern innovative pedagogies which encourage active learning.

Globally and in Uganda, nurse educators have been trained to vary teaching methods and utilize SCL pedagogies (Drateru, 2016; Muganga & Ssenkusu, 2019). Evidence from educational research studies has revealed many benefits of SCL and these occur in various situations and settings. In European and Jordanian universities, it was found that the majority of the faculty applauded SCL and showed a willingness for its implementation since it enhances student engagement and promotes learning (Gborgblorvor, 2016; Hasheesh, Al-Mostafa, & Obedait, 2011; Todorovski, Nordal, & Isoski, 2015). In Africa, nursing educators have also gradually employed some SCL pedagogies and incorporated them in the curricula (Gborgblorvor; Harerimana & de Beer, 2013). In Uganda**,** the Ministry of Education and Sports (MoES) through the Health Tutors College, Mulago (Makerere University), has equipped nursing educators with innovative teaching skills to train nurses in theoretical and practical aspects. Literature has further shown that nursing educators in Uganda have knowledge on SCL approaches; however, their attitude is still negative towards its utilization (Drateru; Muganga & Ssenkusu).

Whereas nurse educators are well prepared in various educational pedagogies, the majority have dominantly used TCL pedagogies which they are more familiar with than SCL pedagogies. It is noted that nursing students in universities have been previously and predominantly been taught using TCL pedagogies with a limited mixture of SCL pedagogies, thus they presume that teaching and learning is meant to be conducted the

same way as it is done in high school. While teaching nursing students, educators should appreciate the fundamental importance of adopting learner centered approaches that focus on cooperative learning. SCL is effective in stimulating students' interest in learning, enhances autonomous learning, increases independent thinking, improves clinical thinking ability and strengthens student engagement and dialogue in the teaching and learning environment. In order to achieve excellence in higher education, SCL innovative pedagogies namely: problem based learning (Yew & Goh, 2016), concept mapping (Jaafapour, 2015), portfolios (Culha, 2019), group discussions (Flosason, 2010), simulation (Xu, 2016), role plays (Vizeshfar, Dehgharad, Mahboobeh & Sobhani, 2016), projects (Caliskan & Kuru Gonen, 2018), case-based learning (Kaddoura et al., 2016) and UCS (Carr, 2015; Day, 2011; Hong & Yu, 2017) can be utilized. Low fidelity simulation like the UCS pedagogy is one of the most effective strategies that facilitate analytical thinking and clinical reasoning (Carr). According to Carr, utilization of the UCS promotes transition of nursing and midwifery education from rote learning to experiential learning thus strengthening critical thinking and clinical judgment. Carr further notes that the UCS is practice based and simulates a prevailing clinical condition which progressively unfolds. The UCS pedagogy is a flexible approach to teaching and calls for ingenuity of the faculty in the preparation and delivery process. Above all the UCS pedagogy can be easily amalgamated into classroom experiences, blended discussion forums and clinical teaching (Carr). Use of the UCS also exposes the students to complex, typical or rare clinical situations and assists students to develop a situational

cognitive model which guides their clinical imagination and decision making in managing the case (Carr).

This comparative study covered the pre- and post-operative surgical care of prostate cancer patients. Globally, prostate cancer accounts for 1.3 million new cases and is ranked the second predominant cancer in males with a high mortality rate; as evidenced by an occurrence of 358,989 deaths in 2018 (Owoo, Ninnoni, Ampofo, & Seidu, 2020). In Uganda, there is an estimated 5.2% annual increase in the incidence rate which causes a health concern of the escalating numbers of prostate cancer cases (Okuku et al., 2016). Many patients with cancer of the prostate report with advanced disease and the delay in diagnosis is partly ascribed to knowledge deficit on prostate cancer information, benefits of early screening and failure to seek oncology medical care timely (Jatho et al., 2021). According to Owoo et al. in a study conducted in Ghana that aimed to understand the difficulties that care givers face in the care of patients with prostate cancer, it was noted that nurses did not disseminate the necessary basic knowledge about prostate cancer and its management.

Surgical management of patients with prostate cancer is usually a difficult topic for student nurses because they often face intricacies in interpreting histology results, clarifying evidence supporting the selected treatment options, offering post- operative bladder care, health education and sexuality counseling. Study findings in Duke University School of Nursing, North Carolina and Bennet College for Women showed that undergraduate nursing students had a knowledge deficit in prostate cancer care and needed mentorship (Price, 2008; Price 2010). Globally and in Uganda, nurse educators

have dominantly used the lecture and demonstration methods in teaching prostate cancer surgical nursing in the classroom and skills laboratory which methods do not invoke critical thinking. Building the capacity of nurse students and graduates by use of innovative pedagogies in teaching urological surgical care may solve the challenges that the students encounter while caring for prostate cancer patients. The incidence of prostate cancer cases, lack of knowledge by nurses and caregivers, and the challenges experienced in nursing patients with prostate cancer is a clear justification of the need to revise the educational preparation of baccalaureate student nurses on prostate cancer surgical care.

The nursing profession requires student nurses to actively participate in continuous nursing education, become lifelong learners and possess the required skills for practice (The Future of Nursing Report (IOM), 2010). This requires nurse educators to shift from using the conventional teaching pedagogies to utilizing the innovative SCL pedagogies that promote active and self-regulated learning. This quality teaching will enable student nurses to compete favorably in the dynamic and challenging clinical environment. Researchers in higher education appreciate the importance of assessing quality through inquiry of how students perceive their learning experiences (Tadesse, Manathunga, & Gillies, 2020). Quality assurance emphasizes more on monitoring and evaluation of educational processes than addressing the existing quality improvement needs of students, thus the students' perspectives are completely neglected (Tadesse et al., 2020). Exploring the nursing students' perceived learning would enable the nurse educators to be able to engage in critical review of the effect of their educational

practices on students learning, and to refine their teaching pedagogies. Whereas there is available literature on the nurse educators' experiences in the use of SCL, the nursing students' opinions have not been explored (Oyelana, 2016; Pivač, Skela-Savič, Jović, Avdci, & Kalender- Smajlovic', 2021). Although SCL is increasingly accepted in nursing education, there is no known study that has compared the nursing students' perceived learning using the lecture and UCS pedagogies in Uganda. This study sought to determine the difference in the baccalaureate nursing students' perceived learning using the lecture and UCS pedagogies in prostate cancer surgical care at Uganda Christian University, Mukono in order to identify the learning strategy that promotes students' learning.

Problem Statement

There is a predominate use of TCL pedagogies by nurse educators in nursing institutions globally and in Uganda. TCL pedagogies do not invoke critical thinking and clinical reasoning. SCL pedagogies that promote in depth learning and competences are gradually being employed by nurse educators in Sub-Saharan Africa (SSA). In Uganda, nurse educators have been prepared to vary teaching methods. Nurse educators must use SCL pedagogies that promote active learning. Unfortunately, evidence shows that nurse educators in Uganda rely heavily on the lecture pedagogy. Global studies have shown that SCL pedagogies like the UCS enhance self-efficacy, promote lifelong learning, and sharpen critical thinking and clinical judgment. Imbalanced use of TCL over SCL pedagogies can translate into a theory practice gap. Exploring students perceived learning benefits the educators in refining their teaching pedagogies to meet the students'

educational needs which may improve the quality of education. In Uganda, there is no published study to compare the nursing students' perceived learning using the TCL and SCL pedagogies. Therefore, there was need to study the baccalaureate nursing students' perceived learning using the lecture and UCS pedagogies in prostate cancer surgical care at Uganda Christian University, Mukono.

Study Purpose

The study purpose was to determine the difference between the baccalaureate nursing students' perceived learning using the lecture and UCS pedagogies in prostate cancer surgical care at Uganda Christian University, Mukono.

Research Question

What is the difference between the baccalaureate nursing students' perceived learning using the lecture and UCS pedagogies in prostate cancer surgical care at Uganda Christian University, Mukono?

Objectives

1. To describe the baccalaureate nursing students' perceived learning using the lecture pedagogy in prostate cancer surgical care at Uganda Christian University, Mukono.
2. To describe the baccalaureate nursing students' perceived learning using the UCS pedagogy in prostate cancer surgical care at Uganda Christian University, Mukono.

3. To compare the baccalaureate nursing students' perceived learning using the lecture and UCS pedagogies in prostate cancer surgical care at Uganda Christian University, Mukono.

Significance of the Study to Nursing Education

Nurse educators may benefit by attaining explicit awareness of student perceptions and anticipations pertaining to the utilization of different teaching pedagogies. They may appreciate that teaching and learning are a shared responsibility between the students and educators. There is anticipation that this research may contribute to a body of knowledge of nursing education, thus enhance the education process. The merits derived from utilization of a range of classroom instruction methods may enable the nurse educators to realize the existing gap caused by the dominant use of traditional teaching methods and may help them to vary their teaching strategies hence adopt the use of SCL pedagogies as highly effective teaching methods that advance students' critical thinking.

Theoretical Framework

Background on development of Kolb's theoretical framework.

Kolb's Experiential Learning Theory (ELT) (1984) is best aligned to my research concepts and questions. The ELT model explained the process through which the baccalaureate nursing students acquired and appreciated the knowledge on prostate cancer surgical care. David Kolb's ELT model was built from the efforts of John Dewey (1938) an architect of experimental learning and also from Jean Piaget (1936) and Kurt Lewin (1947) (Murray, 2018). The ELT model is an important and sound model that

suits simulation in nursing education (Murray). The ELT model also puts emphasis on learning through experience (Murray). Kolb (1984) noted that construction of knowledge is a result of discovery and consolidation of prior meaningful experience (Murray). According to David Kolb (1984) learning is defined as the process whereby knowledge is created through the transformation of relevant experience (Murray).

Kolb's ELT model is based on Lewin's graphics and consists of a learning cycle involving four modes of adaptive learning stages (Schenck & Cruickshank, 2015). Kolb's ELT model has four constructs which are: concrete experience, reflective observation, abstract conceptualization and active experimentation (Schenck & Cruickshank). Kolb believed that learning follows a four-stage spiral learning cycle in which the learners critically make contact with each cycle resulting in transformation of their experiences into knowledge (Schenck & Cruickshank).

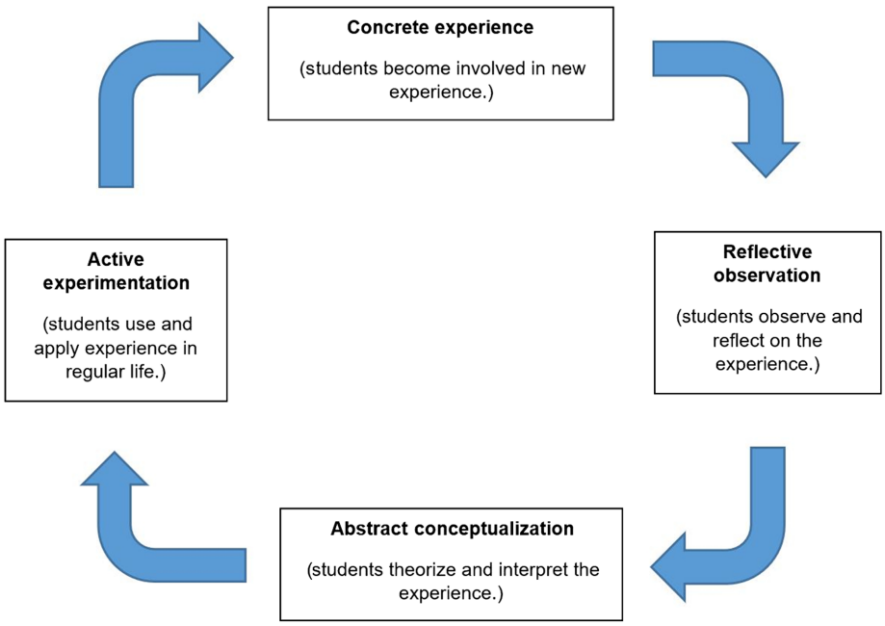

***Figure 1*. Kolb's (1984) Experiential Learning Theory (Croft, Miller, & Stokowski, 2021, p.128). Used by permission (Appendix A).**

Concrete experience (CE).

The first stage of Kolb's learning cycle is concrete experience which may either be an initial experience or a prior reinterpreted experience (Croft, Miller, & Stokowski, 2021; Kurt, 2020; McLeod, 2017). In a concrete experience, the learner gets involved in a prevailing experience in pursuit to learn (Croft et al.; Kurt; McLeod). According to Kolb, active participation is fundamental to learning. A meaningful concrete learning experience requires learners to get actively engaged in an assignment other than being passive observers, therefore CE promotes successful learning (Croft et al.; Kurt; McLeod). CE comes with new experiences and this enables the learner to integrate new observations with their existing understanding in order to make meaning of the experience and develop new concepts. (Croft et al.; Kurt; McLeod).

Reflective observation (RO).

The second stage consists of the period in which the learners deeply reflect on the new concrete experience and process the information in a logical form to derive meaning (Croft et al., 2021; Kurt, 2020; McLeod, 2017). Learners then review their performance in order to discuss any difficulties, successes, discrepancies and feelings towards the experience (Croft, et al.; Kurt; McLeod). Good communication skills, debrief and use of enlightening questions is vital in ensuring that learners openly discuss about the experience in a supportive environment (Croft, et al.; Kurt; McLeod).

Abstract conceptualization (AC).

The third stage involves the learners' ability to generate new ideas from the reflection so that their learning can be translated in potential future educational

experiences (Croft et al., 2021; Kurt, 2020; McLeod, 2017). At this stage, learners may benefit from a debrief session in which they will be empowered to connect the reflective observations with the academic classroom content (Croft, et al.; Kurt; McLeod). Learners will then be empowered to adjust on their contemplation about abstract concepts and thus make relevant conclusions about the experience. In the phase of AC, the learners can translate the knowledge into relevant theories that can be applied flexibly in various educational and life situations (Croft, et al.; Kurt; McLeod).

Active experimentation (AE).

The fourth stage is when the learner applies what he has learnt theoretically, transforms the acquired concepts and tests the conclusions by trying out new strategies (Croft et al., 2021; Kurt, 2020; McLeod, 2017). AE promotes retention of knowledge and enables learners to test the theories and utilize them for future problem-solving in the clinical environment. The experiences in AC may then trigger a new cycle thus transforming into new concrete experiences (Croft, et al.; Kurt; McLeod).

Kolb (1984) explained: “Learners must be able to involve themselves fully, openly, and without bias in new experiences (CE). They must be able to reflect on and observe their experiences from many perspectives (RO). They must be able to create concepts that integrate their observations into logically sound theories (AC), and they must be able to use these theories to make decisions and solve problems (AE).” (Murray, 2018). Most of Kolb’s ELT addresses the learner’s internal cognitive processes and emphasizes the need of each individual learner to complete all the four stages of the learning cycle in order to enable full transformation of experiences to occur so that

knowledge is attained. According to Kolb (1984), experiences are integral for change to occur (Murray).

Operationalization of Kolb's Theoretical Framework to this Study

Kolb's theoretical framework is useful in this study because it helped to explain how nursing students learnt through participation using the lecture and UCS pedagogies. Kolb's ELT addressed all the concepts in both the lecture and UCS pedagogies as it is applicable in both pedagogies. The constructs include: concrete experience, reflective observation, abstract conceptualization and active experimentation.

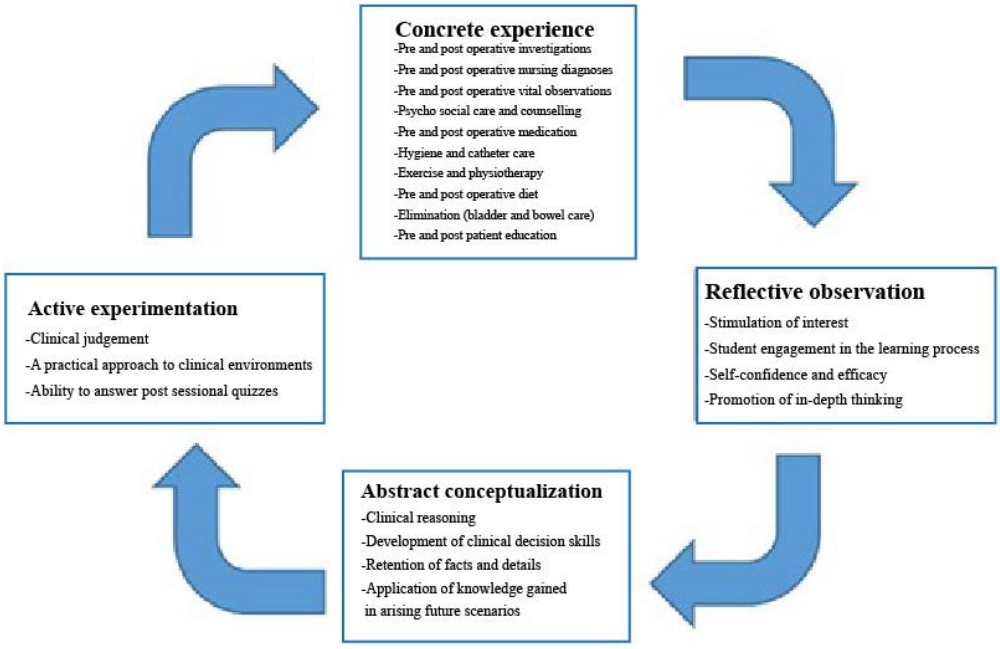

Figure 2. Kolb's (1984) Experiential Theoretical Framework applied to this study.

Concrete experience.

In the concrete experience stage, the baccalaureate nursing students were exposed to four (4) sessions of theoretical lectures in pre-operative prostate cancer surgical care and four (4) series of UCS scenarios of post-operative prostate cancer surgical care. The theoretical lecture information and scenarios were developed at the baccalaureate nursing students' level of learning according to the surgical nursing curriculum. The scenarios replicated real surgical clinical practice activities that would happen while nursing a patient with prostate cancer. The case scenarios had content that allowed the students to comprehend concepts from the simplest to the more advanced form. Knowledge on pre-operative prostate cancer surgical care about understanding of investigative components, clinical features of prostate cancer, interpretation of diagnostic investigations, priority nursing diagnoses, vital signs, psychosocial care including counseling on treatment options, patient shared decisions and generation of informed consent, pre-operative medication, hygiene, exercises, diet, elimination and offering patient education was taught using the lecture pedagogy. In the lecture session, the researcher was in charge of delivering the content to the baccalaureate nursing students using the current lecture delivery modality.

Knowledge on post-operative prostate cancer surgical care about the investigation components including periodical prostate specific antigen (PSA) assessments after discharge, urinalysis and blood assays, post-operative priority nursing diagnoses, vital observations and physical assessment, psychosocial therapy including counseling on side effects of prostatectomy (erectile dysfunction, periodical urinary incontinence, and

urosepsis), post-operative exercises and physiotherapy, post-operative medication, hygiene including wound and drain care, post-operative diet, maintaining input output chart, elimination- bladder and bowel care, patient education, discharge planning and instructions was taught using the UCS pedagogy. In the UCS, the baccalaureate nursing students were enabled to employ independent thinking, initiative, and problem-solving skills and discover the required information in the case scenario using their analytical skills, hence taking ownership of their learning. The researcher used small group discussions, played the facilitator's role at each stage of the lesson and gave prompt feedback to the students. Students built on their existing basic knowledge in anatomy, physiology and nursing foundations.

Reflective observation.

Using the theoretical lecture and UCS scenarios knowledge, the baccalaureate nursing students combined their acquired knowledge and previous practical encounters to reflect on their experiences and commenced anticipating the needs of the prostate cancer surgical patient in order to guide their choice of decisions. Learners reflected on the acquired lecture information and each scenario comprehensively and guided by critical thinking and deep analysis of the best nursing care to offer, they made the best treatment options for the patient. The baccalaureate nursing students began to identify the pedagogy that promotes engagement in the learning process and helped them gain more confidence and efficacy in management of the prostate cancer surgical patient.

Abstract conceptualization.

After purposive reflection, the baccalaureate nursing students would then use the acquired information and clinical decision skills to relate with past experiences thus draw conclusion on the right pre and post-operative nursing care to offer to the prostate cancer surgical patients in similar circumstances in future practice. The researcher applied debriefing to help students synthesize and modify what they had learnt from the experience and reflect deeply about their perceived learning using the lecture and UCS pedagogies.

Active experimentation.

The baccalaureate nursing students then confidently made rational decisions and clinical judgment as they correctly selected the best treatment options to answer ten multiple choice quiz questions related to the care for the prostate cancer patient after the lecture and UCS interventions respectively. According to Kolb (2015), formative assessments in form of assignments are suitable strategies in achieving active experimentation. Other researchers are also in agreement that assignments are among the applicable and convenient strategies that are used in experiential learning to assess active experimentation (Chiu, 2019; Hawk & Shah, 2007; & Mobbs, 2003).Whereas the students were subjected to this short quiz after the lecture and UCS sessions, the results of the quizzes were solely intended to inform the researcher if learning occurred. The baccalaureate nursing students were then to utilize the acquired knowledge for the current and future nursing practice in various urological clinical settings.

Study Variables

The independent variables are the lecture and UCS pedagogies because they cannot be changed by other variables in the study. The dependent variable is perceived learning of prostate cancer surgical care because this is the effect that resulted depending on the use of the lecture and the UCS pedagogies. It was anticipated that utilization of the lecture and UCS pedagogies in teaching the baccalaureate nursing students resulted in a given perception of learning of prostate cancer surgical care. Appreciation of a given pedagogy in enhancing learning is a significant predictor that determines students' motivation to learn and subsequently self-efficacy and competence in practice.

Additional Definition of Concepts

The key concepts in this study include: baccalaureate nursing students, perceived learning, lecture pedagogy, unfolding case study pedagogy, prostate cancer surgical care, and comparative study. The concepts are defined in details below.

Baccalaureate nursing students.

Baccalaureate nursing students are undergraduate students undertaking an accredited university program where the preparation is intended to lead to the attainment of a professional nurse licensure by the Uganda Nurses and Midwives Council (UNMC). In this study baccalaureate nursing students' are the participants in the comparative pedagogical study who are direct from secondary school and are undertaking the undergraduate nursing program.

Perceived learning of prostate cancer surgical care.

Perceived learning is defined as the learners existing feelings and beliefs in regard to the learning that has transpired in the teaching and learning environment (Caspi & Blau, 2008). In this study perceived learning refers to the awareness, judgment and views that the baccalaureate nursing students shall have generated from the experience of being taught prostate cancer surgical care using the lecture and UCS pedagogies. In addition, perceived learning includes an element of perceived learning satisfaction.

Lecture pedagogy in prostate cancer surgical care.

Lecture pedagogy is a conventional teaching strategy in which there is limited or no student interaction in class but more of a verbal factual presentation of academic concepts by the educator (Kaur, 2011). In this study, lecture pedagogy is defined as the traditional theoretical didactic teaching method that was used by the researcher as a method of teaching pre-operative prostate cancer surgical care to the baccalaureate nursing students.

UCS pedagogy in prostate cancer surgical care.

An unfolding case study is an interactive teaching strategy in which the educator introduces a typical clinical situation in form of an evolving case that progresses gradually with a goal of students committing to the actions based on the provided data (Day, 2011; Hong & Yu, 2017; Lloyd, 2020). In this study, the UCS pedagogy is defined as an active collaborative classroom low fidelity simulation teaching method that was used by the researcher as a teaching method of post-operative prostate cancer surgical care to the baccalaureate nursing students to enable them to be independent learners,

learn to solve client's real life problems that occur in the clinical area and be able to link theory to practice.

Prostate cancer surgical care.

Prostate cancer surgical care is defined as the operative care given to a patient with prostate cancer in the pre and post-operative period and involves making an informed consent for surgery and having successful recovery from the operation sequel (Ignatavicius, Workman, Rebar, & Heimgartner, 2018). In this study, prostate cancer surgical care is the topic of reference which the researcher used to teach the baccalaureate nursing students using the lecture and UCS pedagogies.

Comparative study of lecture and UCS pedagogies in prostate cancer surgical care.

A comparative study is defined as a study in which two or more cases or groups are investigated in a considerable period of time to determine any existing similarities or differences with a goal of drawing statistical conclusions. In this comparative research, differences of the baccalaureate nursing students' perceived learning in prostate cancer surgical care using the lecture and UCS pedagogies were generated in view of drawing conclusions on the preferred pedagogy that enhances learning.

Summary

This chapter has discussed the introduction, background of the study, the problem statement, and purpose of the study, the significance of the study, the research question, study objectives, conceptual framework and theoretical framework, and its application to this study. Chapter Two presents the review of literature about SCL and TCL

pedagogies. In Chapter Three, the details of the research methodology will be discussed. The data collected will be analyzed in Chapter Four and comprehensively discussed in Chapter Five.

Chapter Two: Review of Literature

This chapter presents an extensive review of literature on SCL and TCL pedagogies with emphasis on lecture and UCS pedagogies. The literature review is presented under four main topics that guide this study. It includes literature describing the way in which SCL pedagogies promote active learning. There is a discussion that shows evidence that nurse educators have been prepared to utilize various SCL pedagogies. Literature also shows that there is still a predominant use of TCL pedagogies which creates a theory practice gap. Finally the chapter demonstrates that nursing students' perceived learning using TCL and SCL pedagogies has not been studied in Uganda hence the need of this comparative study.

SCL Pedagogies Promote Active Learning

In recent decades, the discipline of education worldwide has observed a progressive shift from TCL to SCL teaching and assessment strategies (Muganga & Senkusu, 2019). This is due to the benefits realized such as promotion of lifelong learning, increased self-efficacy and competency levels. Today's complex healthcare setting calls for teaching strategies that require students to think critically and problem-solve (Kotsch, 2021). Educators are challenged to successfully bring real world experiences into the classroom setting for successful transformation from student nurse to a qualified practicing nurse (Kotsch, 2021). While pondering on the various instructional approaches to use in the education process, nurse educators are always in search of strategies that create meaningful learning opportunities for their students (Amtamwa, Gatere, & Mutinda, 2019). Since the nursing profession involves learning by

practice, it necessitates active engagement of students during the course of teaching and learning. SCL is a modern innovative teaching pedagogy that promotes active learning and better learning outcomes.

SCL pedagogies promote educator student interaction, critical thinking, and reflection about content thus enhancing the learners understanding (Gborgblorvor, 2016). In order to uplift the standards of educational instruction in the classroom, nursing students need to be taught using innovative strategies to enable them to develop logical clinical reasoning and judgment skills which are essential for safe nursing practice. In contemporary times, nursing education needs pedagogies that promote cooperative inquiry, experiential learning, lifelong learning and support for the attainment of competences required to give excellent nursing care (Satoh, Fujimura, & Sato, 2020). According to Gborgblorvor (2016), SCL was found to be a highly effective pedagogy for mastery of knowledge, enhancing clinical reasoning and critical decision-making skills in the undergraduate nursing students. Multiple studies show that the use of SCL pedagogies enhance active learning, critical thinking and clinical judgment (Afrasiabifar & Asadolah, 2019; Bijani, et al., 2019; Bryant, 2016; Gborgblorvor, 2016; Jamshidi, Hemmati Maslakpak, & Parizad, 2021; Mc Cormick, deSlavy, & Fuller, 2013; Sudarmika, Santyasa, & Divayama, 2020; Taradi & Taradi, 2016; Vizeshfar, et al., 2016). Available evidence strongly suggests that active learning enhances students' in-depth learning, reflective practice, and problem-solving skills and promotes lifelong learning (Todorovski, et al., 2015). Students in active learning classrooms exhibit great motivation and contentment in learning have better critical thinking and problem-solving

skills and can retain information longer. In the social sphere, learners have shown better collaboration, risk taking, and professional communication skills. Contemporary students appreciate and are motivated to learn in an environment with varied teaching methods. Students in active learning classrooms are more confident in learning and can favorably adjust to different learning environments (Peng, Jin, Deng, & Gong, 2022). Compared to TCL, SCL promotes reflective practice, critical analysis, decision making, and problem-solving skills. In the following literature, SCL pedagogies such as concept mapping, problem-based learning, debate, storytelling, web-based teaching, portfolios, small group discussions, flipped classroom, project-based learning and simulation including role play, case-based learning and UCS shall be discussed accompanied with results depicting successful utilization.

Concept mapping.

Concept mapping is a strategy in which students make meaningful connections of different ideas into integrated patterns (Amtamwa et al., 2019). Concept mapping is a graphical illustration describing a concept and related premises which is organized in a sequential format with the aim of interlinking concepts from a broad perspective to concrete examples (Jaafapour, 2015). Concept maps are useful in developing critical reasoning in nursing education in both classroom and clinical settings. The principal goal is to empower students to use their meta-cognitive skills to deepen their comprehension in processing complex and large amounts of information. The discussion and questioning that occurs during concept mapping demands students to apply critical analysis, synthesis and evaluation skills thus advancing their critical thinking skills (Jaafapour).

A concept-based teaching approach addresses challenges associated with content saturation, prepares students to practice safely in the clinical setting, and develops conceptual thinking skills necessary for good clinical reasoning, clinical judgment and collaboration (Kotsch, 2021). Concept mapping is desirable in nursing education as it is a good method of clinical teaching which can help the students have a clear imagination of the clients' subjective and objective data and grasp the technique of making appropriate nursing care plans without necessarily duplicating information from nursing textbooks (Xu, 2016).

Problem-based learning.

Problem-based learning (PBL) is a SCL pedagogy that enables students to work together in groups and use reflective practice to solve existing meaningful problems. PBL enables students to acquire independent learning principles as they deal with complex realistic circumstances (Yew & Goh, 2016). In PBL, a prevailing impetus emerging from a challenging problem generates discussion by students who are organized to work in small cooperative groups to find a resolution. While using the PBL approach, the teacher mediates the learning session and with curiosity helps the students understand the problem in depth instead of directly providing knowledge (Yew & Goh). A problem embedded in real life context in form of a role play or a case study is presented to the students so that they brainstorm and lay strategies to solve it (Amtamwa et al., 2019).

PBL was initiated in 1960's at McMaster University Medical School in Canada in regard to the identified gaps in failure to link theoretical information to practice by

medical students due to over utilization of lectures in classroom teaching. Since then, PBL is currently being embraced by the nursing profession and other professions (Ku & Ha, 2016). PBL encourages learners to be able to practice self- regulated learning to become lifelong learners with a view of promoting critical thinking, mastery of the subject matter and retention of knowledge as opposed to rote learning (Gholami, et al., 2016; Zhang, 2014). According to Xu (2016), PBL encourages the learners to be accountable for their own academic development and improve their clinical reasoning skills. In PBL, the instructor is a facilitator and works collaboratively with the students as a co-learner and co-evaluator to achieve the objectives (Xu).

Debate.

Debate is a pedagogy in which learners are organized into the proposing and opposing groups where both sides exchange different perspectives about a topic or issue. Debating encourages students to sharpen their collaborative, communication and critical analytical skills for effective learning (Amtamwa et al., 2019). According to Xu (2016), debating enables students to learn how to reason, analyze, synthesize and evaluate arguments from various viewpoints. Debate can be used to teach controversial issues in nursing and ethical dilemmas (Amtamwa et al.). During debate, student nurses can exchange views on benefits versus risks of prevailing ethical issues such as when religious beliefs conflict with empirical nursing knowledge as may be seen in situations where a Jehovah's Witness patient refuses blood transfusion. This can enhance the students' competencies in critical thinking skills and also enables them to exchange ideas in a non-threatening teaching and learning environment.

Storytelling.

Storytelling is a pedagogy that facilitates learning by using a recount of past events in a comprehensible narrative way putting in mind the existence of an audience. The pedagogy helps learners to reflect on past experiences, be responsive to people's cultural values, improve on emotional intelligence, build their self-esteem, and respect ethical values (Mangol, 2016). Findings of a study that was performed at the University of George Mason to explore the nurse educators' perception on utilization of storytelling pedagogy indicated various benefits for students, among which include; increased memory retention, increased proficiency in verbal and written communication, cooperation and bonding of learners, invokes critical thinking, builds self-confidence, improves imagination skills and makes the subject "alive and real" for the learners (Houston, 2015, p.104).

Web-based teaching.

Web-based teaching is a cognitively oriented pedagogy that uses the internet as the main channel for information and knowledge delivery for individuals or institutions (Soussi, 2020). Web-based teaching technologies include audio visual streaming, webinars, forums and instant messaging. Web-based teaching involves utilization of computers and internet for information retrieval, correspondence using electronic mail and use of instructional video clips to explain certain ideas. According to Dinc (2017), activities of web-based learning are categorized as those supported by the web, complemented by the web, empowered by the web and distributed by the web and these are either conducted singly online, or with a face-to-face approach merged with online

delivery and internet sources. Web-based teaching can be integrated into a curriculum that turns into a complete course or as a supplement to traditional courses. Research that was done at the University of Alexandria to establish the effect of teaching human anatomy and physiology using video-based lectures in comparison to traditional lectures noted that the performance was higher in video-based lectures than the traditional lecture (El-Sayed & El-Hoseiny, 2013). The students also appreciated the video-based lectures as a teaching strategy that impacted on their imaginative and critical thinking skills.

Portfolios.

A portfolio is a purposeful documentation or profile of an individual's work experiences showing her efforts and achievements and can be kept in form of a journal (Mosol, Obwoge, & Tecla, 2016). The portfolio is a useful and effective strategy in nursing education as it fosters reflective learning and accountability. While using the portfolio, the student demonstrates her progress by showing the tasks done which may include the learning objectives, content and goals. Globally, it is a requirement by professional regulating councils for nurses to keep portfolios in order to track their practical competencies, develop their reflective skills and for advocacy in pursuit of higher job positions in nursing (Mosol et al., 2016). Portfolios for students are classified according to the purpose that they are intended to serve, thus they can either be career portfolios, assessment portfolios, or developmental portfolios. Career portfolios document the knowledge and skills gained by the student and show the potential of the student while searching for a job or applying for higher studies. Assessment portfolios are used to test students' achievement in certain academic areas, while development

portfolios are important for reflection of students experience and skills (Mosol et al.). The advantages of portfolios in the teaching and learning environment are that they foster independent learning, individualized assessments, enhance motivation as students can evaluate their strengths accomplishments and weaknesses, and allow them to develop their professional skills for future application.

Nurse educators approve the use of portfolios in nursing education because there is shared effort in assessment and instruction of students, thus promoting student engagement and learning (Mosol, et al., 2016). Portfolios are beneficial in promoting a meaningful instructor-student professional relationship, background education, independent learning, self-reflection, formative evaluation and clinical case management (Culha, 2019; Nielsen, Pedersen, & Helms, 2015). The portfolio strategy has been found useful in clinical teaching, promotes critical thinking and improves confidence and decision-making skills of the students (Culha). The portfolio strategy is helpful in equipping learners with lifelong learning skills and also acts as a theory-practice bridge (Mosol, et al., 2016). According to Malmir, Zare, Sarikhani, Mansouri, and Salari (2016), in a study that was performed to establish the outcome of utilization of e-portfolio in a physiology nursing module in comparison with the traditional lecture with text books, results demonstrated that using e-portfolios increased the amount of learning of the student nurses in the cohort that studied using e-portfolio than those who were taught by the lecture with text books method.

Small group discussion.

This is a dynamic pedagogy which enables the learners under the supervision of the educator to deliberate on prevailing issues in small groups so that a mutual opinion is generated (Amtamwa et al., 2019). A small group discussion requires an average number of six people for effective delivery and differs from conducting a lecture to a small class. For learning to be realized while using small group discussions, the following three fundamental aspects should be observed**:** learner interface, team cohesiveness and active participation (Burgess, Van Diggele, Roberts, & Mellis, 2020). When offered professionally, small group discussions are advantageous in that they promote students self-directed learning, enhance critical thinking abilities, build communication skills, develop team work, creates an opportunity for sharing opinions with peers and fosters decision making skills (Burgess et al.). In a study that sought to explore the impact created on the civility of nursing students after using group discussions and self-directed learning, the discussion group yielded significantly higher results than the self-learning group, thus rendering small group discussions an appropriate strategy for promoting academic civility (Abedini & Parvizy, 2019). In a study that sought to understand the effectiveness of shifting traditional lectures to interactive lecture with small group discussion in teaching nursing students, it was noted that students satisfaction markedly increased in the interactive lecture with small group discussion method compared to the traditional lecture method (Afrasiabifar & Asadolah, 2019).

Flipped classroom.

Flipped classroom is a SCL pedagogy that has its main focus on enabling the learner to acquire new knowledge individually at home or outside class in order to utilize class time for contextualization of knowledge and clarification on the concepts by guidance of faculty (Culha, 2019). The pedagogy is applied in such a way that learners are given the course content that is supposed to be learnt in class before the class session begins through videos uploaded on various student platforms or by doing homework using other instructional aids that can be availed outside the classroom setting. The faculty later engages the learners to reinforce what was learnt and support the learners to master difficult concepts in the classroom session. Faculty engagement of the learners in the classroom is in form of small group discussions, problem solving, debates and simulations such as use of scenarios (Culha).

Flipped classroom promotes students' higher order thinking, confidence, engagement with peers, sharpens communication and enables them to take control of their learning (Youhasan, Chen, Lyndon, & Henning, 2021). In a study that sought to compare teaching using group discussion flipped classrooms and lectures on nursing students' achievement and character, marked differences were noted in students character achievements in the group that had discussion flipped classrooms compared to lectures only group. It was noted that group discussion flipped classrooms can motivate and build a character of learning in student nurses (Sudarmika, et al., 2020).

Project-based learning.

Project-based learning is a pedagogy which encourages learners to autonomously find solutions to authentic problems by use of imaginative knowledge and constructive investigations to develop realistic products (Amtamwa et al., 2019). In this method, the students are required to build their cognition about concepts and use problem solving and decision making skills to resolve an existing issue. According to Culha (2019), the results of project-based learning are assessed by students' self-reflection, use of portfolios, clinical logs, peer assessment, case-based assessments and observational research. The project-based teaching strategy fosters team work, independent thinking, and critical analysis of problems; builds communication skills, time management skills, communication and technology literacy skills, self-control and efficacy skills. For successful implementation of project-based learning, there should be an enthusiastic group of learners, authentic problem identification, clear set goals and objectives, available sources of literature for reference, current data, acceptable evidence and skills in project evaluation.

According to Culha (2019), it has been observed that project-based learning poses some challenges to students; however, it promotes deeper student engagement, high order thinking and analytical skills. In studies conducted in Thailand that explored nursing students' reflective thinking using project-based learning, there was a profound increase in the students' critical reasoning and reflective abilities (Wanchai, Kaewsasri, Kuljoo, & Vichitkaew, 2018). In a study that was conducted to explore perceived learning and satisfaction of undergraduate Iranian midwifery students in the use of

project-based learning and lecture method, it was noted that project-based learning enhanced the learners' skills of translating theoretical knowledge into clinical practice, increased classroom engagement and motivation to learn. The majority of learners (81.8%) rated project-based learning as an efficient method for instruction than the lecture pedagogy (Sangestani & Khatiban, 2013). In another study carried out to determine the tutors' perspectives on the effects of project-based learning and lecture based learning in developing critical thinking skills among students in higher basic district science schools in Jordan, most tutors agreed that project-based learning has significant positive effects on students' critical thinking ability and classroom performance than lecture based learning (Issa & Khataibeh, 2021). In a study that sought to understand if project-based learning improves knowledge, attitude and perception towards patient safety among nursing students, results indicated better outcome in the project-based learning group of nursing students than the lecture group (Jamshidi et al., 2021).

Simulation.

Simulation is a pedagogical experiential approach which replaces and amplifies existing typical patient situations in a safe and controlled interactive manner (Campain, et al., 2018). In the educational context, simulation supports the learner with opportunities to interact with authentic objects that mimic real life situations (Campain, et al.). Simulation is rooted from the Latin word 'similis' denoting 'resembling or being similar' (Amtamwa et al., 2019, p.18). Simulation can either be low-fidelity or high-fidelity simulation. According to Rajesh (2017), simulation involves the learners'

interaction with a person, device, real or virtual object and involves application of critical reasoning skills to manage a given situation. He further notes that interactions may take the form of low-fidelity methods like role plays, use of manikins, standardized patients and UCS but may also extend to high-fidelity methods like virtual reality and computer simulations. Simulation allows the learner to practice and refine the required skills until mastery of the procedure is achieved. Simulation requires consolidation of the learners' knowledge, skills, attitudes, and critical analysis skills.

High-fidelity has been demonstrated as a valuable method in clinical teaching as it promotes diverse learning in a risk free environment, enhances collaboration, provides immediate participative feedback, promotes critical thinking, mastery of skills and clinical reasoning (Xu, 2016). A study that was performed at the West England University to establish the effect of the simulation strategy on nursing students' professional skills noted that simulation had greatly improved their knowledge, competencies and critical thinking ability (Berragan, 2013). Another study that was done to compare the nursing students' competencies in mechanical ventilation using the online simulator and lecture pedagogy, results showed that student nurses in the online simulator group realized excellent performance and satisfaction scores than those in the lecture group (Sajjadi, Soltani, Moghaddam, & Moghbel, 2020). Related research performed to understand the impact of simulation on the student nurses' knowledge, clinical reasoning and self-confidence in gastric intestinal bleed simulation, it was noted that there were high results scores in cognitive and clinical reasoning skills in the simulation group compared to the lecture group (Vizeshfar, et al., 2016).

Low-fidelity simulation is an instruction strategy that has been utilized in the teaching and learning environment as a solution to the prevailing increasing limited opportunities of achieving cognitive and clinical nursing competencies that occur due to the limited clinical practicum sites and encounters. According to Campain et al. (2018), low-fidelity simulation strategies can suitably be implemented in developing countries, such as SSA including Uganda. Use of low-fidelity simulation is appropriate in Uganda's educational setting because it's feasible. There are several types of low-fidelity simulations which can be used in teaching and learning such as role play, case-based teaching and the UCS and each is discussed below.

Role play.

This is a sensational pedagogy that involves imitation of an incident or event through acting (Xu, 2016). Role plays can either portray scenarios depicting best practices, controversial or difficult situations, thus students learn how to apply their personal feelings towards colleagues and the clients. The students interact with each other in a professional meaningful way to solve a problem using different perspectives. Role plays are effectively planned by introducing pre-arranged study instructions that are initially facilitated by the educator. Role plays introduce students to complex, controversial and unfamiliar situations which entail critical thinking and application of emotional intelligence skills. After the role play, it is important that educators engage the students in a debriefing session in order to review role performance and help students learn from their experiences (Xu). Role play can be used to teach various nursing skills; such as communication skills where one student assumes the role of an interviewee while

the other acts as the interviewer. It's advantageous in that students are able to gain meaningful experience and relate the acquired knowledge and skills with real career related situations (Amtamwa et al., 2019). In studies conducted in Iran and Hong Kong that explored the impact that role playing, and the lecture method had on the learning and critical thinking of student nurses, results showed that role playing improves students learning, helps in mastery of communication skills, promotes critical thinking and creativity more than lecture method (Vizeshfar, et al., 2016). Similar research conducted to evaluate the effect of role-play pedagogy on student nurses' learning outcomes in comparison with the lecture method, high performance was realized in the role play group than in the lecture group. Thus, role plays increased nursing students' learning more than the lecture method (Dorri, Farahani, Maserat, & Haghani, 2019).

Case-based teaching.

Case-based teaching is an inquiry-based instruction method that involves a clinical case scenario, accompanied by a problem and requires the learner to use analytical thinking and reflective judgment to solve the problem and have a measured outcome. The role of the nurse educator is to give a detailed account of an authentic clinical presentation of an illness and the learners are tasked to analyze and manage the medical condition accordingly. Case-based learning helps to integrate theory into practice and helps students to apply and synthesize knowledge gained from the classroom into practical possible solutions (Xu, 2016). Case-based learning enables learners to engage in deeper self-directed learning, improve on the critical thinking, decision making and communication skills to solve clinical problems. Research that was done at

Dammam University in Saudi Arabia to establish the effectiveness of case-based learning in comparison to the lecture method, the students rated case-based learning as the better pedagogy that helped them comprehend the topic than lectures (Majeed, 2013).

In a study that was performed to establish whether teaching using case-based learning was more efficacious compared to the lecture method pertaining to the nursing students' ability to make cardiac dysrhythmias diagnosis, case-based learning was rated as an effective pedagogy by 88.3% of the students over the lecture method (Bijani et al., 2019). In yet another study that sought to understand the nursing students' opinions on perceived learning using case-based learning and lectures, it was evident that case-based learning increased their self-confidence and comprehension skills, with an overall of 81.3% of students stating that they achieved satisfaction using case-based learning compared to lectures. In conclusion the viewpoint of the nursing students was that case-based teaching method is more efficacious than the lecture method (Shohani, Bastami, Gheshlaghi & Nasrollahi, 2023). Related research was performed to establish whether the mobile phone-assisted case-based method influenced the medical students' perceived learning and memory retention of concepts in physiology compared to the lecture method. Results showed that the mobile phone-assisted case-based method was rated significantly high in performance scores compared with the lecture method (Taradi & Taradi, 2016).

UCS pedagogy.

UCS are educational pedagogies that simulate clinical experience and enables students to develop clinical reasoning skills in a safe learning environment (Peele, 2015).

An UCS is an adaptation of a standard case study but is not static; it goes a step further to change as the patients' situation evolves and new information of the situation is provided, creating an unpredictable situation that drives the learner to think critically before taking a clinical decision. According to Carr (2015), UCS can safely be used in the classroom setting, practical room, and ward setting. Students are exposed to complex clinical situations using progressive scenarios that occur in multiple encounters. Carr further notes that for the UCS to be effective, the content should be closely aligned to the actual clinical experience and be authentic. Since the UCS is a low fidelity strategy, it has been selected to be used for this research because it can be conveniently conducted in a classroom setting, is user friendly and does not require sophisticated technology.

According to Hobbs (2018), the UCS is presented as a patient scenario that progresses in sequential steps; in which an authentic case is stated, students are given time to comprehend the concepts, evaluate the situation, and respond appropriately before getting the next information. As the patient's health condition changes, the students are compelled to use their deep analytical skills and clinical judgment to select the best nursing options for the client's concerns. According to Bryant (2016), the final stage of the UCS is characterized by the learners' reflection on their experiences and conducting a faculty led debriefing session in which constructive feedback is given about their nursing care. An UCS has the ability to link theoretical to practical concepts thus helping to narrow the theory practice gap. According to Peele (2015), learners of the digital age prefer active teaching and learning pedagogies that promote flexible, authentic, independent and collaborative learning which helps them to strengthen their

clinical reasoning and decision-making skills which they can apply in future clinical nursing engagements. According to Bryant, UCS supports the learner by building onto the existing knowledge and cultural encounters, promotes self-reflection through timely feedback and peer review and encourages students to work in a risk free classroom environment. Utilization of UCS permits learners to relate prior experiences with clinical encounters and develop a deeper understanding of clinical concepts (Bryant). Use of UCS in a classroom setting may lessen the alarming increase in nursing clinical errors and help in integration of safety principles. Use of UCS may help to solve clinical challenges which include restrictions to learning due to the limited patients available for a huge student population. According to Carr (2015), the use of UCS creates a fundamental shift from conventional lecture pedagogies that are fact based to innovative cooperative pedagogies that are dynamic, solution based and promote clinical imagination. The UCS pedagogy empowers learners to think using an integrative approach and draw their decisions from a wider perspective rather than having only one specific right solution to a given problem.

A study carried out to establish the best pedagogy between the UCS and TCL instructional strategies that enhanced student nurses' learning about Parkinson's disease, the pre- and post-interventional scores were remarkably higher in the UCS pedagogy than for the TCL pedagogy. There was increased knowledge and ability to analyze complex information using the UCS pedagogy (Mc Cormick, et al., 2013). In another study that sought to understand if obstetric simulation using UCS was effective in improving obstetric care, findings indicated marked improvement in communication

during change of shifts as well as enhanced self-efficacy in management of difficult obstetric conditions (Guimond, Foreman, & Werb, 2019). In yet another study that was conducted to ascertain the effect of utilizing a video UCS and a typical written case study on a cardiac procedure to determine the knowledge acquisition, self-confidence and contentment of nursing students, results indicated that there was significant improvement in critical thinking, knowledge acquisition and motivation to learn (Herrona, Powers, Mullen, & Burkhart, 2019).

In summary, there are a variety of SCL pedagogies that nurse educators can utilize in the teaching and learning process. SCL pedagogies promote active learning and create a platform for students to learn to translate theoretical knowledge into clinical practice. SCL enhances critical thinking skills and help in development of self-efficacy in nursing students. Adopting SCL pedagogies leads to active learning environments that improve learners' performance.

Nurse Educators have been Prepared to Use SCL Pedagogies

The current advancement of the nursing education curricula and modules in higher educational institutions calls for rapid modification of the conventional teaching approaches to SCL pedagogies in which students become key players in their education and acquire critical thinking, problem solving and reflective skills (Onurkan & Ozer, 2017). Educating learners using innovative pedagogies is considered a fundamental skill for nurse educators during their education in their curriculum across the world. Nurse educators are encouraged to embrace utilization of SCL strategies into the students' educational preparation after completion of the nursing education course.

In a study that assessed utilization of SCL pedagogies in European universities, 49% of respondents agreed that there are teacher development programs in modules of higher education training that focus on developing innovative teaching methods that enhance quality teaching (Todorovski, et al., 2015). In a study that sought to understand teaching effectiveness in nursing colleges at Jordanian Universities, findings showed that role plays and case study pedagogies were effective innovative teaching methods in increasing nursing students' achievement such as higher order thinking and problem solving (Hasheesh, et al., 2011). More so, available literature on the experiences of teachers when implementing learner centered instruction has indicated that teachers felt delighted to act as agents of change to learners, to build conducive learning environments for learners and to facilitate knowledge construction (Matewere, 2021). In Sub Saharan Africa (SSA), introduction of a partnership with the advocacy agency in nursing education initiatives has promoted cooperation between the health ministries and nursing education tertiary institutions/ universities and has spearheaded introduction of SCL strategies in the nursing educators' preparation (President's Emergency Plan for AIDS Relief (PEPFAR) - Nursing Education Partnership Initiative (NEPI), 2012-2016).The significant achievement of the advocacy agency is that the nursing school faculty learnt how to conduct the outcome-based curricula using SCL approaches, such as simulation, PBL, CBL, use of portfolios and blended e-education. Additionally, the advocacy agency was at the fore front in pioneering the simulation-based nursing pedagogical approach in nursing educator institutions in Sub Saharan countries (PEPFAR- NEPI).

According to Matewere (2021), the nursing and midwifery technician curriculum recommends utilization of learner centered teaching methods and almost all the tutors at Holy Family College of Nursing and Midwifery in Malawi have been trained in principles and practice of education in their undergraduate studies. Furthermore, some tutors have also been trained in teaching methods at Malawi Institute of Education as a post-graduate course. Therefore, most of the tutors at the institution have knowledge on SCL methods. According to Gborgblorvor (2016), the nursing curriculum in Ghana implicitly incorporated SCL pedagogy such as case-based learning, PBL, projects and low fidelity simulation such as the UCS pedagogy in order to enhance nurse educators teaching competences.

According to Amtamwa et al. (2019), the following innovative teaching strategies were recommended to be integrated in the Kenyan Nursing curriculum since they were regarded as more effective in invoking critical thinking than the widely used lecture method: concept mapping, simulation, PBL, role plays, games, debates, and case-based teaching, web-based teaching, small group discussions and storytelling.

In a study carried out at Holy Family College of Nursing and Midwifery in Malawi that sought to find out the perceptions of nurse educators in using SCL in nursing and midwifery teaching, findings of the study showed that the nurse educators were motivated to continue utilizing learner-centered teaching methods because they were beneficial in bridging the theory practice gap, promoting critical thinking, and deep life-long learning, in spite of the challenges like scarcity of information resources and insufficient time for preparation (Matewere, 2021). The study further found out that the

nurse educators perceived that utilizing learner-centered teaching methods helped learners to take responsibility for their own learning.

In line with the goals of the Global Medical Educators' Federation and WHO, the Ugandan government acknowledges the requisite to adequately prepare medical educators with educational skills that ensure learners are educated in ways that promote relevant learning experiences for excellent health care service delivery (Lubanga, 2010). Medical educators are taught SCL pedagogies in the General Methods of Teaching Module (BHTE, 2102) a core pedagogical subject as stipulated in the Bachelor in Medical Education curriculum (Lubanga). Different approaches to classroom and clinical teaching using SCL strategies are exhibited during supervised school practice 1(Bachelor of Health Tutors' Education [BHTE] 1301), school practice 11 (BHTE 2301) and school practice 111 (BHTE 3201) respectively in various nursing and medical colleges across Uganda (Lubanga).The medical educators are taught how to use problem-based learning, project-based teaching, self-directed learning, small group discussions, role play, portfolios and case studies alongside the lecture and demonstration methods (Lubanga).

In summary, it is evident that nursing educators' curricula globally and in Uganda clearly focuses on teaching nurse educators SCL pedagogies during their nursing education course. It is also noted that nurse educators have found SCL effective in sharpening the learners' critical thinking skills and promoting active and lifelong learning.

Predominant Use of TCL Pedagogies Creates a Theory Practice Gap

TCL pedagogies are traditional strategies that are generally teacher directed in which the teacher is the expert of transmitting all knowledge that students study through direct instruction. TCL strategies consist of traditional lectures and demonstration methods. Traditional teaching is instruction involving lecturers and the students interacting in a face-to-face manner in the classroom and focus exclusively on content in textbooks and using lecture strategy to give notes where students receive the information passively. Many teachers are still teaching their students in the same manner as they were taught (Gandhi, Mythili & Thirumoothy, 2015).

Lecture strategy.

According to Kapur (2020), the lecture strategy is the oldest method of teaching where the teacher uses verbal messages to communicate the content of instruction to the learners in a one-way communication approach from the teacher to the student. The advantages of the lecture pedagogy are that it is economical for students in terms of time as they get more information and is useful in teaching a large group of students. The disadvantages of lecture are that it tends to make learners passive and hence may lead to limited learning. Lectures are also not effective in promoting learning complex skills and higher cognitive learning, hence are not suited for teaching critical thinking and clinical judgment. Furthermore, lectures are not regarded as worthwhile for imparting motor skills and influencing attitudes and values (Kapur). In their study, Baghcheghi, Koohestani, and Rezaei (2011) found that those learners who were exposed to the traditional classroom lecture, were silent listeners who play an inactive role in the

learning process and advocated for nurse lecturers to adopt a more learner centered teaching approach.

Demonstration strategy.

Demonstration is a traditional teaching strategy where the teacher shows the learners how to perform a procedure or technique. The learner is expected to perform the skill or task exactly as demonstrated through a return demonstration. Demonstration has the advantage of making learners motivated and interested in learning, however it's disadvantageous in that it makes the learners passive. The teacher supervises the student doing the skill and gives instructions during the procedure (Mbirimtengerenji & Adejumo, 2015). This teacher centered strategy does not provide the student with critical thinking skills and merely gives recall of information (Rajesh, 2017).

While developed nations have made rapid strides in embracing SCL methods at all education levels, most of the developing nations have continued to utilize TCL methods especially in most SSA countries (Muganga & Senkusu, 2019). Despite new trends and signs of a shift from TCL to SCL pedagogies, lectures remain absolutely the most typical way of teaching at universities in Europe, appearing in 100% of participants' responses (Todorovski et al., 2015). In Italy, Pagnucci et al. (2015) in a study that examined opportunities and constraints towards using effective pedagogy in nursing education noted that the traditional lecture was the most commonly used pedagogy. SCL turned out to be less frequently adopted than TCL.

According to Akyeampong (2017), instruction in most Ghananian nursing schools is still teacher-centered. Akyeampong indicated that preconceptions of lecturers on what

teaching is, what learning is and how learners learn influenced the readiness and extent to which the lecturers used learner-centered teaching methods. In Malawi, anecdotal records as well as observation of classroom teaching demonstrated that tutors at Holy Family College of Nursing and Midwifery still dominantly use traditional teacher-centered teaching methods rather than innovative learner-centered teaching methods (Matewere, 2021).

In Kwazulu Natal College of Nursing campuses, a study done to evaluate pedagogical strategies showed that the lecture method was widely used at 63.2% (Subhan, 2014). In Kenya, Amtamwa et al. (2019) noted dominant use of the lecture method at (90%) as compared to other SCL pedagogies. According to Lateef and Mhlongo (2019), the conventional didactic strategies are the dominant pedagogical approaches used in Southwest Nigerian schools of nursing. Study results showed that 67% of the nurse educators had misjudgments about SCL methods that incidentally made them choose to concentrate more on utilization of the traditional pedagogy. In Cameroon 64.2% of nurse educators were aware of the criticisms of dominant use of the lecture method yet they continued to predominantly use it in nursing training schools in Bamenda (Atanga et al., 2015). In a study carried out in an Ethiopian University at the College of Natural Sciences to assess educator utilization of various teaching pedagogies, it was noted that there was relative high utilization of the lecture method at 88.76% (Tadesse et al., 2020).

A study conducted by Drateru (2016) showed that majority of educators (89%) in 4 Ugandan nursing institutions use the lecture method in student instruction compared to

other SCL methods. Similarly, responses from educators of 4 private chartered universities in Uganda showed that majority of faculty preferred using the lecture method for instructing undergraduates (Atwebembeire & Malunda, 2019). Overall, the predominant standards at Makerere University still accentuate utilization of TCL methods that promote rote learning, faculty dominance and student's conformity to the faculty's set standards. In a study carried out among the finalist students pursuing medical education at Makerere university among whom are nurse educators, the following view point generated from a focus group discussion was notable,

"*Teachers use the lecture method to cover a lot of content and they are specialists in transmitting factual details covered on course outlines. So, they give handouts, some of which have not been updated since 1993. Our teachers are always engaged in lecturing. Here, one just lectures and goes away. It appears to be stress-free as it puts fewer obligations on the lecturer. Even the set exams show that what they are aiming at is how best we can pass exams. The exams are not provoking us to think but to reproduce what we have learnt"* (Muganga & Ssenkusu, 2019, pp. 24-25).

In the same study, the lecture method was the dominantly used method as evidenced by a 68% score. A compelling observation that was identified from the students' submissions is that there was low attendance in TCL than SCL sessions, which imply students' preference to SCL strategies (Muganga & Ssenkusu, 2019). A study carried out in Uganda by Thompson (2015) at CURE hospital among newly qualified nurses, identified gaps in their appreciation of the case study method since they were taught by the traditional methods that did not invoke critical thinking. In a study

conducted at Florence Nightingale Nursing School in Uganda, nursing students' views on the most common teaching and learning approaches that faculty and mentors employed to help student nurses apply theoretical knowledge into the clinical practice were demonstration method (29%) and lecture method (11%) as compared to only 9% for reflective journals and discussions (Okuda, 2015). In Uganda, Lovett and Gidman (2011) during their teaching experience study that reflected on the student nurses' prior education exposure, noted that the Ugandan system of nursing education promoted the conventional pedagogic teaching approach in which the tutor acted as an expert, lectured, dictated notes and students wrote them down. This encouraged the students to treat the course content as unrelated by memorizing facts and carrying out procedures routinely without any connection between theory and practice. Students, due to this, experienced difficulty in critical thinking and this promoted learning based on passing examinations.

Theory practice gap.

The theory practice gap is defined as the contradiction or disparity that exists between the theoretical content learnt in the classroom and what is actually experienced in the practicum environment. Use of the memorization system in nursing education leads to a theory practice gap (Safazadeh, Irajpour, Alimohammadi, & Haghani, 2018). Evidence shows that students in the clinical setting often experience challenges in integrating theoretical knowledge into practice, thus are incompetent in provision of the ideal quality nursing care to patients (Hashemiparasta, Negarandeh, & Theofanidis, 2019). In a qualitative study that sought to understand the nursing students' experiences of nursing clinical education, students' viewpoints cited a mismatch of what the students

learn in theory with what they experience in the clinical setting (Bazrafkan & Kalyani, 2018). This is also true at Holy Family College of Nursing and Midwifery in Malawi where the clinical practice of most learners at the college shows that the learners do not link the theoretical knowledge, they acquired in class to the clinical learning practice (Matewele, 2021). Todd, Roder-DeWan, Malata, Ndiaye, and Kruk (2019) conducted a study among new graduates providing basic health care services in developing countries to determine the effect of pre-service nursing education on clinical performance using the good medical practice index (GMPI) tool. The GMPI tool was used to ascertain if the nurse graduates and clinicians successfully completed the important clinical procedures in antenatal, postnatal and pediatric care as recommended in clinical practice. Monitoring was done by direct observations by the researcher and the results of GMPI scores in Haiti and Nepal showed major gaps in clinical training and competence among recently graduate nurses and the deficit was partially attributed to outdated pedagogies and curricula which raises questions about the appropriateness of pedagogies used in clinical education (Todd et al., 2019). According to Feti (2019), nursing students expressed major gaps in perceived learning during the theory practice transition which led to difficulty in applying theoretical knowledge to practical nursing of real patients, stress, anxiety and feeling a desire to quit the profession.

A survey by Mohamedbhai (2014) noted disturbing facts of graduates' performance abilities in Africa being low and hence unfit for jobs with the worst records in Uganda and Tanzania. The balance between theory and practice has been questioned by employers of new graduates who are not so confident and competent in the clinical

area (Nganga, 2014). Literature shows that the educational preparation of students in Ugandan universities and tertiary institutions is jeopardized by utilization of poor pedagogical approaches which do not favorably prepare graduates for the competitive world of work (Atwebembeire & Malunda, 2019; Ssentamu, 2014). According to Agaba (2014), the graduates are inadequately prepared for employment as their work output, innovativeness and maturity does not match with the acquired knowledge and grades gained during formal education.

The theory practice gap can be widened by poor clinical judgment in clinical nursing care. Clinical judgment is an important attribute needed by the professional nurse and entails possession of the required values, logic, critical thinking and clinical decision-making skills that are vital for quality patient care (Van Graan, Williams, & Koen, 2016). Several studies that assessed the level of clinical judgment of nursing students and recent graduates have noted that majority of students and new nurse graduates exhibited low levels of critical thinking and clinical judgment for safe patient care thus leading to a theory practice gap. In two studies carried out in Canada, results showed that only 30% of 760 and 76% of 10, 988 new nursing graduates respectively, competently managed to diagnose and offer safe nursing care to patients with common health problems (Del Bueno, 2001). In Pennsylvania, two studies were performed to assess critical thinking and clinical decision abilities of baccalaureate nursing students and new graduates, and results showed that the majority of students had poor skills in clinical judgment especially in using the nursing process to recognize patients' problems,

making sound nursing interventions, documentation of vital clients' data and justification of the selected rationales in patient care (Fero et al., 2010).

According to Kavanagh and Sharpnack (2021), nursing education is grappling with the acceptance of its own product of the qualified nurse due to the alarming decline in initial competencies of the new graduate registered nurses. From 2020 up to date only 8% of new qualified nurses were noted to have acceptable initial novice competencies necessary for patient care while the others exhibited serious inadequacies in recognizing and prioritizing high risk and emergency patient needs. In a similar study that assessed critical thinking and clinical judgment competencies among qualified nurses, Del Bueno (2005), noted that only 35% of the new graduate registered nurses were verified as having the required competencies to offer safe nursing care according to the acceptable nursing standards. Yet in another similar study, a decrease in basic competencies was also realized among new graduate registered nurses with only 9% in the acceptable competency range (Kavanagh & Szweda, 2017). Findings from studies conducted in Iran, South Africa and Malawi also reported that nursing students had weakness in critical thinking and exhibited incompetency in performing basic nursing procedures, which deficits were partially attributed to the dominant use of traditional pedagogies (Van Gran et al., 2016; Kermansaravi, Navidian, Kaykhaei, & Narouie, 2013; Matlhaba, Pienaar, & Sehularo, 2019; Todd et al., 2019).

According to Todd et al. (2019), in a study that assessed the fundamental clinical skills in practice among recently graduated registered nurses providing primary health care in Uganda, nursing practice was found to be sub optimal with a low GMPI score.

The deficiencies were attributed to poor instruction pedagogies, lack of clinical exposure, and failure to emphasize innovative approaches to acquisition of skills. Baccalaureate graduate nurses must be efficiently prepared to transit from the academic environment to be able to offer quality patient care in the various competing practical environments (Institute of Medicine [IOM], 2010). This calls for rapid transformation of the pedagogical practices from TCL to innovative teaching strategies in order to adequately equip the future nursing workforce with the required nursing competences (Kavanagh & Sharpnack, 2021).

In summary, there is predominant use of TCL pedagogies by nurse educators globally. The lecture pedagogy is the prevailing teaching strategy used in nursing education. The lecture pedagogy leads to passive learning, low level thinking and does not offer students chance to apply critical thinking skills. Passive learning has contributed to poor critical thinking and clinical judgment, thus widening the theory practice gap.

Nursing Students' Perceived Learning has not been studied in Uganda

It should be noted that nurse educators ought to understand the motivation factors that are required for undergraduate students to appreciate learning. Among the key factors are but not limited to, self-confidence, educational and psychosocial concerns, pedagogical approaches and the assignments that encourage them to critically think (Amtamwa et al., 2016). According to Amtamwa et al., the nature of educators and teaching strategies are integral components of the learners' capability to attain academic achievement. Consequently, it is crucial to ascertain the views and opinions of students

as regards their potential to have a positive influence on learning. Perception is the meaning derived from the interpretation of sensory impressions after exposure to an experience. Students' perception of their learning experience is beneficial to the educators and the learners as it has both theoretical and practical relevance. According to Bacon (2016), perceived learning refers to a learner's self-declaration of the knowledge achieved arising from self-reflection and contemplation of the educational experience. According to Caspi and Blau (2008), perceived learning possesses a cognitive and socio-emotional origin in which the cognitive aspect addresses the new acquired knowledge and the socio emotional aspect addresses the educator student interaction, learners' experiences and feelings of the educational experience. Research findings have noted that there is a clear difference between learning and perceived learning and have constantly shown that students' reports on perceived learning can be compared to the achievements derived from direct academic assessment (Wendt & Nisbet, 2017).

In a study conducted at a Medical Training College in Nairobi, Kenya which explored the impact that the lecture, demonstration and small group discussion pedagogies has on the student nurses' learning, findings showed that learners held a negative perception as regards to the conventional instructional strategies, thus considered group discussion more effective (Abuga, 2015). Related research performed at the same college that sought to explore nursing students' perceptions on utilization of the simulation pedagogy, results revealed a positive perception and perceived learning using simulation instruction (Nyamu, Gatere & Kithingi, 2018). In Uganda, there is no

known published literature on the baccalaureate nursing students' perceived learning using the lecture and UCS pedagogies.

In summary, there is a growing interest among nurse educators regarding the importance of assessing the quality of education using the students' educational experiences and perceptions. However, current literature shows limited published research that has been done so far in Uganda, in a broader perspective, to explore the utilization of different pedagogical strategies and nursing students' learning experiences in higher education.

Summary

This literature review has discussed four important issues around pedagogical strategies used in the educational preparation of student nurses and their perceived learning. Globally and in Uganda, SCL pedagogies promote participatory learning and develop the learners' critical analysis and clinical judgment competence. This review showed that various SCL strategies promote students' learning and invoke critical and problem-solving skills that are vital for nursing practice. Multiple global studies that have been utilized to determine the effect of various SCL and lecture methods were also discussed. Next, it was noted that globally and in Uganda, nurse educators have been prepared to use SCL pedagogies in classroom and clinical teaching. The predominant use of TCL pedagogies by nurse educators and its potential of creating a theory practice gap was discussed. Furthermore, with minimal literature available, the nursing students' perceptions as regards the SCL and lecture pedagogies have been described. This study therefore explored the Baccalaureate Nursing Students' Perceived Learning using the

Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care conducted at Uganda Christian University, Mukono. This chapter is followed by Chapter Three which describes the methodology that was used in this research including the ethical considerations that were undertaken during data collection and analysis.

Chapter Three: Methodology

This chapter delineates the research methodology that was utilized to carry out the study. This includes the study design, setting where the study was carried out, and the target population, techniques of sampling used, sample size determination, inclusion and exclusion criteria. The chapter further describes the data collection tools that were used, procedure of data collection and data interpretation. In addition, there is a detailed description of the rights of subjects and how ethical implications were handled.

Study Design

The study adopted a quantitative comparative cross over within subject design. This comparative cross over study involved subjecting all the baccalaureate nursing students to the lecture and unfolding case study (UCS) pedagogical sessions without choosing who was exposed to the session. The study involved the use of the lecture pedagogy in teaching the pre-operative prostate cancer surgical care and the UCS pedagogy in teaching the post-operative prostate cancer surgical care to the students. With the use of an adapted researcher modified questionnaire, the baccalaureate nursing students' perceived learning was assessed after each pedagogical session and finally, the results were compared to enable the researcher to determine the pedagogy that was best appreciated by the students.

Study Setting

The study was undertaken at Uganda Christian University (UCU), Mukono which offers baccalaureate nursing education, a program which has the same recognition as many other programs in other universities in Uganda. UCU, Mukono uses a curriculum

accredited and monitored by Uganda National Council for Higher Education (NCHE) as are all baccalaureate nursing curricula in other universities in Uganda. The university had an accessible population of interest of 30 baccalaureate nursing students that comprised of national and international students who had attained the Advanced Certificate of Education or its equivalent. The baccalaureate nursing graduates from UCU, Mukono serve the entire Ugandan and international client population in health settings and are trained to offer preventive, curative, and rehabilitative holistic nursing care to the clients similar to nursing graduates from other universities in Uganda. The graduates from this university are registered for practice by the Uganda Nurses and Midwives Council (UNMC) similar to graduates from other universities in Uganda. Therefore, it provided the best environment for this study in terms of having the desired numbers and characteristics of the study participants and subscribed to the same professional and education regulatory bodies.

Target Population

The target population consisted of all baccalaureate nursing students in Uganda.

Study Population

The study population consisted of all baccalaureate nursing students in the first semester of Year Three at UCU, Mukono.

Study Population Selection

Selection plan.

A complete enumeration of the entire class of 30 baccalaureate nursing students in their first semester of the third year was selected as a census to ensure that every

potential respondent's contribution was noted. Census was used because the available number of respondents was small, met the inclusion criteria and was accessible.

Study population determination.

The researcher aimed to include a population of 30 baccalaureate nursing students or more in the study. Since there was an accessible manageable population size of 30 baccalaureate nursing students in Year 3 Semester 1 at UCU, Mukono at that point in time, a comprehensive census-based approach was adopted, collecting data from every member of the class. Therefore all the 30 baccalaureate nursing students were invited to attend and agreed to participate in the research study.

Inclusion criteria.

The students that were enrolled in this study were all baccalaureate student nurses in their first academic semester of Year Three. Those who were present during the period of study were all invited to participate.

Exclusion criteria.

In this study, the students that ought to be excluded included the baccalaureate nursing students who were retaking the course, but there was none. The justification for the omission was based upon the aspiration of the need to generate more pure data based on baseline performance of students progressing at the same starting level/point. If there had been repeaters, they would have been invited to attend the session for experience.

Bias.

In order to minimize bias, the researcher used the census of all available respondents allowing every possible baccalaureate student nurse in that cohort to be part of the study. The same study population was used for both pedagogical sessions.

Data Collection Tool

There was one adapted researcher-modified tool (Appendix B) that was developed guided by the content from the perceived learning questionnaire utilized by Bijani et al. (2019) in his comparative study that used case study and lecture pedagogies. Permission to utilize Bijani's questionnaire (Appendix C) was granted by Dr Mostafa Bijani. The tool was used three times, labeled version One to Three.

Item analysis of Versions One and Two of the questionnaire.

Version 1 was administered after the lecture pedagogy was completed and Version Two after the UCS pedagogy. The tool consisted of two sections. Section A covered socio-demographic characteristics, and section B covered perceived learning and satisfaction using the pedagogies.

Socio-demographic characteristics.

The socio-demographic section consisted of three items to identify respondents' demographic characteristics of age, gender, and year of study. This generated baseline data for the nursing students in the study. This section only appeared on the very first version (Version One) of the questionnaire and the items were not numbered.

Perceived learning.

The first part of Section B contained 19 (1-19) questions about perceived learning characteristics of the baccalaureate nursing students. The items covered topics of perceived learning characteristics that included: students' motivation to learn, enhancement of clinical decision skills, active participation, bringing learning closer to reality, better comprehension of concepts, boosting self-confidence, enhancement of critical thinking, creation of room to ask and answer questions, facilitation of learning and applicability to course subjects. Perceived learning was rated on a four-point Likert measurement scale as "Undecided", "Strongly disagree", "Disagree", "Agree", and "Strongly agree" and was scored as zero, one, two, three and four respectively. The "Undecided" scores were treated as missing data. The individual means and standard deviations were calculated for each version.

The generated means of the 19 Likert items for the lecture and UCS pedagogies were categorized respectively. Some studies, (Abu Baker & Ismail, 2020; Upara & Chusanachoti, 2023), that have looked at perceived learning have used mean scores ranging from 1.00 –1.74 to be "Very low", 1.75 –2.49 to be "Low", 2.50 –3.24 to be "Moderate", and 3.25 – 4.00 to be "High". In this study, the following perceived learning scores were used; <2.50 was regarded as low perceived learning; scores from 2.50 - 3.24 as moderate perceived learning and scores ≥ 3. 25 as high perceived learning.

Level of satisfaction item.

Section B also included one question (20) that assessed the respondents' level of satisfaction with either the lecture (Version One) or UCS (Version Two) pedagogies and

was scored on a scale of 0-10. The respondents' individual scores were established and categorized. Another study, (Ghafourifard, Haririan, & Aghajanloo, 2013) on students' level of satisfaction with learning pedagogies using a scale of 0-10 have used mean scores of 0-5 to denote "Dissatisfied", 5.1- 8.0 as "Moderately satisfied" and 8.1 to 10 as "Highly satisfied". In this study, scores of perceived learning satisfaction on a scale of 0-10 using the lecture, and UCS pedagogies respectively, also used these same categories.

Item analysis of Version Three of the questionnaire.

The third version was used after completion of both the lecture and UCS pedagogical sessions and immediately after Version Two was completed. The tool consisted of a side-by-side comparison of both pedagogical styles and covered the participants' perceived learning, their satisfaction of learning and one qualitative question about perceived learning.

Perceived learning comparing the lecture and UCS pedagogies.

Version Three consisted of the same 19 questions and items covering the same topics of perceived learning characteristics as those that were used in the first two versions. The tool contained a table with two columns [lecture/UCS] arranged side by side that enabled the respondents to tick their responses once again for each pedagogy. Perceived learning was scored on a four-point Likert measurement scale and utilized the same scoring criteria of perceived learning as the one used in Versions One and Two above. The respondents' individual means, standard deviations and categories for the lecture and UCS pedagogies were calculated respectively.

Level of satisfaction comparative item.

Question 20 assessed the respondents' level of satisfaction with the lecture and UCS pedagogies in a comparative format and was scored on a scale of 0-10. Independent scores for the lecture and UCS pedagogies were derived respectively. The scores of each pedagogy were categorized in the same way as those in Versions One and Two above.

Qualitative perceived learning views using the lecture and UCS pedagogies.

Finally, Version Three included one open ended question (21) that generated the nursing students' views in their own words on perceived learning on the use of each of the pedagogies. This qualitative question allowed each student to give four different answers. Scoring of the students' viewpoints was done using the quasi-quantitative analysis approach. Some of the student responses were about each pedagogy independently and others were a comparative comment. Preliminary topics were generated and the four answers coded appropriately under the corresponding characteristic items as per pedagogy. Scores for those who gave viewpoints shared by both the lecture and UCS pedagogies were calculated in a similar way. The frequencies of the answers for each and for both pedagogies were generated. The number of responses were finally converted into percent scores and were calculated based on the number of students who had provided an answer in that topic.

Validity

Validity refers to the level of accuracy of a given measure and ability of the results to represent what they intended to measure (Polit & Beck, 2008). Content validity was specifically considered in this study. The investigator used the validated perceived

learning tool whose items were tested by 20 professors in a recent study that compared the effect of utilizing case-based learning and lectures in promoting the student nurses' competencies in making the cardiac dysrhythmias diagnosis. The 20 professors confirmed the instrument was valid (Bijani, et al., 2019). Two experienced faculty members of UCU, Mukono further reexamined the extent to which the instrument's content adequately captured the construct of the respondents' perceived learning of prostate cancer surgical care using the lecture and UCS pedagogies. Their corrective comments on the questions' clarity was considered.

Reliability

Reliability is defined as the degree of consistency with which a research instrument measures an attribute and produces dependable results in another environment (Polit & Beck, 2008). To ensure reliability, the researcher utilized the perceived learning instrument that was adopted from the study that sought to compare the efficacy of case-based learning and lecturing in promoting the student nurses' competencies in making a cardiac dysrhythmias diagnosis (Bijani et al., 2019). In that research, reexamination of the reliability instrument was done and evaluated using the test-retest method, 30 professors of nursing completed the questionnaire initially and re completed it again after two weeks, and finally, the instrument reliability was validated with a Cronbach's alpha of 0.89 (Bijani, et al.).Test-retest reliability is a measure of reliability that tests consistency of given results when the same test is re administered to the same group of respondents at a different moment (Sharma, 2021).

After proposal approval by the Research and Ethics Committee (REC), the questionnaire was pretested on three baccalaureate nursing students in the first semester of Year 3 (10% of the sample size) at a selected University in Kampala and any ambiguity was rectified. The pre-test university was selected because the baccalaureate nursing students have similar characteristics to those at UCU, Mukono. The duration taken to complete the two questionnaires was assessed to check if it is in alignment with the intended set time frame for filling the questionnaires. It was noted that the allocated time for filling each version of the questionnaires was appropriate. The minor typing errors on the heading of Version Two questionnaire on nursing students' perceived learning using the UCS, and the instruction stem on Version Three questionnaire on responses using the lecture and UCS pedagogies was corrected. There were no other necessary adjustments required. The questionnaires were administered two weeks apart to the same three nursing students of the selected pilot university in order to attain the test-retest reliability. The researcher used Cronbach's alpha to assess the questionnaire reliability. According to Polit and Beck (2008, p. 308), a Cronbach's alpha yielding 0.80 is considered acceptable. In this study, the Cronbach's alpha value of the lecture pedagogy was 0.87, 0.88 for UCS and 0.88 for Version 3 of the questionnaire comparing Lecture and the UCS pedagogies.

Data Collection Process

Data was collected from the baccalaureate nursing students from UCU, Mukono for one week as agreed and guided by the nursing department faculty of the University. The data collection process included: the pre pedagogical meeting phase with the

students, conducting pedagogical sessions and the post pedagogical data collection phase respectively.

Pre pedagogical meeting phase.

This phase consisted of getting permission to enter the university, identification and meeting the students, introduction of the research purpose, obtaining consent and making preliminary agreements with the baccalaureate nursing students.

Permission to enter the university.

An administrative clearance was got from the Dean, Faculty of Public Health, Nursing and Midwifery (Appendix D) which acted as a preliminary approval to allow the submission of the study proposal to the University REC for ethical approval. After REC approval, an administrative letter of assent was received from the Head of Department, Nursing and Midwifery to enable me to enter the Nursing Department and access the baccalaureate nursing students who were the study respondents.

Identification and meeting the students.

After securing permission from the Head of the Nursing and Midwifery Department, a request was made for an appropriate day to formally meet the third- year baccalaureate nursing students and also to be assigned to a faculty who would introduce me to the class leader. All the eligible baccalaureate nursing students were formally invited to voluntarily take part in the research. A face-to-face request to engage in the research was extended to the baccalaureate nursing students a week prior to the study. On that day**,** two hours from 8 am to 10 am were used for the introduction of the research purpose and establishing a climate for the study.

Introduction of the research purpose.

The purpose of the research was explained to the respondents and how the information collected from them would be utilized. The baccalaureate nursing students were assured that the research study was purely academic and that the findings would not be used to determine their university academic formative performance.

Obtaining informed consent.

Consent forms (Appendix E) were given to all eligible participants and those willing to take part in the study. The respondents received thorough explanation of the consent form information which enabled them to comprehend the details there in and to sign it with ease. They were informed that their participation was purely voluntary. Willing respondents signed the consent forms as evidence of their acceptance to participate in the study. The filled consent forms were then placed in envelopes and sealed properly.

Making preliminary agreements with the participants.

Through dialogue and negotiation with the respondents, an agreement was reached at the appropriate time to be available for the study sessions, the lecture venue and data collection procedure. They were given an explanation that they would be expected to sign the class attendance lists during our interface for accountability purposes.

Conducting pedagogical sessions.

The pedagogical sessions involved an overall total of eight study sessions which were spread in the allocated time in the two weeks by faculty. The pedagogical sessions

were conducted for four days as follows: four sessions were conducted using the Lecture and four sessions using the UCS approach of the same group of 30 baccalaureate nursing students. On day one and two, four different topics on pre-operative prostate cancer surgical care were taught using the lecture method for two hours per day, for two days totaling to four hours of the morning shift. As agreed by the respondents, the day's two hours teaching sessions lasted for one hour per session. The pedagogical sessions were conducted from 9.00 to 10.00 am and from 10.30 to 11.30 am on Tuesday and Friday respectively of the first allocated week. On day three and four**,** four different topics on post-operative prostate cancer surgical care were taught using the UCS pedagogy for two hours per day, for two days for a total of four hours in the morning shift. The day's two-hour teaching sessions lasted for one hour per session. The sessions were conducted from 9.00 to 10.00 am and from 10.30 to 11.30 am of the following allocated week on Tuesday and Friday respectively.

While conducting the UCS pedagogy, the 30 students were divided into two small groups of 15 students at the commencement of the session. Learning in small groups using the UCS approach promotes intense students' collaboration and critical thinking. The two small discussion groups were formed by application of the technique of assigning alternate number allocation to the 30 participants by arranging the students who mentioned number one in group one and those who mentioned number two in group two. The participants in their designated two small discussion groups sat in the same lecture hall on opposite sides. The two small discussion groups of baccalaureate nursing students were exposed to each of the same four UCS scenarios for objectivity in session

delivery and need for balanced students' class contribution and reflection. The researcher used an interactive facilitative approach during the session and students identified a volunteer secretary from each group to present the group submissions to the whole class. Constructive feedback, summary of the UCS and debrief was conducted by the researcher. Attendance forms were signed by all the 30 students at the end of the lecture and UCS teaching sessions.

Post pedagogical data collection after the lecture pedagogy.

After the lecture pedagogy, phase one of data collection on students' perceived learning using the lecture pedagogy was done from 12.00 to 12.30 pm. Each respondent was given an envelope countersigned by the researcher containing a small piece of paper with a code and was requested to write the unique code she/he has received in the space provided on the questionnaire. The respondents were requested not to write their names on the questionnaire. Respondents were requested to ensure that the questionnaire was complete and then asked to insert the filled questionnaire containing the unique codes in the envelope provided. The respondents were requested to write their names on the envelopes and finally sealed the envelopes. The sealed envelopes were handed to the researcher for safe custody until the time for collecting the second post-pedagogical session data on UCS. All the filled questionnaires were kept by the researcher under lock and key and were not accessed by any other person.

Post pedagogical data collection after the UCS pedagogy.

After the UCS pedagogy was completed on Day four, phase two of data collection on students' perceived learning using the UCS was done from both groups of

respondents at the same time from 12.00 to 12.30 pm. The researcher returned the sealed envelope bearing the respondents' unique code identifier that they had used in phase one while filling in the post pedagogical lecture questionnaire. Each respondent was requested to identify their envelopes, unseal the envelopes and utilize the unique code therein. This was to ensure that the codes for phase one of the post pedagogical lecture session correspond with that of phase two of the post pedagogical UCS session. The participants were asked to ensure completeness of the questionnaires. The two complete post session questionnaires of each participant were then handed over to the researcher for safe custody until the time of filling Version Three of the questionnaire that happened on the same day at 2.00 pm.

Post pedagogical data collection phase comparing perceived learning after the lecture and UCS pedagogies.

On the last day (day four), the participants also filled Version Three of the questionnaire comparing the baccalaureate nursing perceived learning and satisfaction of their learning using the lecture and UCS pedagogies. This data collection was done soon after collecting data with Version Two of the questionnaire and the exercise took one hour from 2.00 to 3.00 pm. The questionnaire was completed in the same lecture hall that was used for the pre pedagogical meeting and the pedagogical sessions. The respondents were availed with the sealed envelopes containing the unique codes they used in filling Versions One and Two of the questionnaires. The respondents were further encouraged to ensure that the questionnaires were complete, and the researcher checked for their completeness. The three versions, each bearing the same unique code per participant

were then finally inserted and sealed in new envelopes without participants' names and handed over to the researcher. The participants' unique codes and envelopes bearing participants names were destroyed afterwards to deter the researcher from associating the participants with their questionnaire responses. The fully complete questionnaires were then stored in a secure cupboard under lock and key by the researcher. The participants were thanked for their active participation and allowed to leave the hall at leisure.

The lesson plans for the four teaching sessions using the lecture pedagogy (Appendix F) and four sessions using the UCS pedagogy (Appendix G) are attached. Each participant received notes on pre-operative prostate cancer surgical care (Appendix H) and post-operative prostate cancer surgical care (Appendix I) for future reference. In addition, power point presentations that were used while conducting both the lecture and UCS pedagogical sessions are also attached (Appendices J and K respectively). The time allocated for the pre pedagogical meeting phase, pedagogical sessions and post pedagogical sessions for both groups (a total of 12 hours - five days) was strategically calculated by the researcher to enable efficient delivery of the pedagogical sessions and collection of data.

Data Analysis

The researcher used the IBM Statistical Package for Social Sciences (SPSS) software, (version 26) to analyze the data. Data was initially captured using the excel sheets and imported into SPSS for analysis. A code book was instituted to record data for each variable. The coded information was transformed into numbers and entered in different computer files for reference and as a backup. Data analysis for Versions One

and Two of the questionnaires was each done separately. Data analysis for Version Three of the questionnaire that contains the respondents' comparative data was lastly done. Descriptive statistics were used to analyze demographic data, while descriptive and inferential statistics were used for perceived learning and satisfaction with learning. Quasi quantitative analysis of the topics was used for the qualitative question.

Questionnaire Version One

Demographics.

The demographic characteristics of the 30 respondents were analyzed using descriptive statistics. The three demographics included age, gender and year of study. These were analyzed using frequencies and percentages and presented in tables. Demographic data was collected only once in Version One of the questionnaire.

Perceived learning using the lecture pedagogy.

The baccalaureate nursing students' perceived learning using the lecture pedagogy (Version One) was analyzed using the mean, standard deviation and mean categories. Each respondent's mean and standard deviation was calculated and a category assigned. The findings are presented in table format. The group mean and standard deviation were calculated, and the categories were analyzed by looking at the frequency distribution in categories and the mean for each. The means and categories were analyzed using the scale referenced in the item analysis section. The performance of each perceived learning statement was analyzed using the mean and frequency distribution. The highest and lowest score items were established. The highest scores reflected high perception of learning, and lowest scores indicated limited perception of learning.

Satisfaction of perceived learning using the lecture pedagogy.

The baccalaureate nursing students' satisfaction of the lecture pedagogy on a scale of 0-10 was also calculated and assigned a category for each individual. Finally, the overall mean score for the lecture pedagogy was established and categorized using the perceived learning satisfaction scale that was reported in the item analysis section.

Questionnaire Version Two

The baccalaureate nursing students' perceived learning (section B, questions 1-19) using the UCS pedagogy was analyzed with the same procedures as Version One. The baccalaureate nursing students' satisfaction of the UCS pedagogy on a scale of 0-10 was also analyzed using the same procedures as Version One.

Questionnaire Version Three

Perceived learning comparing the lecture and UCS pedagogies.

The baccalaureate nursing students' perceived learning comparing use of the lecture and the UCS pedagogies was analyzed using the mean, standard deviation and mean categories. Each individual respondent's answer was calculated by mean and assigned a category for the lecture and UCS respectively. The overall score for each pedagogy was evaluated by looking at the overall mean and the frequency distribution in categories which was represented by percentages. The overall respondents' means and categories of lecture and UCS were compared using the Wilcoxon signed rank test. The Wilcoxon signed rank test compared the results to find out the p value ($\alpha = 0.05$) and if there was a statistically significant difference in perceived learning using the lecture and UCS respectively. A p- value ≤ 0.05 was considered significant. According to Polit and

Beck (2008,) a significance level of 0.05 indicates a 95% confidence level. The Wilcoxon Signed-Rank Test effect size-r results were interpreted using a Scale Interpretation Grid (0 to 1), where 0 indicates no difference in perceived learning outcomes between lecture and UCS methods, 0.1–0.3 represents a small effect with limited practical significance, 0.3–0.5 denotes a moderate effect with noticeable impact, 0.5–0.8 signifies a large effect with substantial practical implications, and 0.8–1.0 reflects a very large effect, indicating highly impactful practical implications.

The performance of each perceived learning statement of the lecture pedagogy was analyzed using the mean and frequency distribution and compared with that of the UCS pedagogy. The highest and lowest score items of the lecture pedagogy were established and compared with those of the UCS pedagogy. The highest scores reflected high perception of learning and lowest scores indicated limited perception of learning using the lecture and UCS pedagogies accordingly.

Satisfaction of perceived learning comparing the lecture and UCS pedagogies.

The baccalaureate nursing students' satisfaction of the lecture and UCS pedagogies on a scale of 0-10 was also analyzed. Finally, the overall group mean scores were established and categorized using the perceived learning satisfaction scale that was used in Version One & Two of the questionnaire. The satisfaction overall mean for lecture was later compared with the overall mean for the UCS pedagogy using the Wilcoxon signed rank test at significance level ($\alpha = 0.05$) to test if there was a significant difference in means after teaching using lecture and UCS pedagogies. The Wilcoxon

Signed-Rank Test effect size-r results were interpreted using the same grid parameters as presented in the perceived learning comparison above.

Analysis on the qualitative data on respondents' perceived learning views.

The open-ended responses pertaining to the baccalaureate nursing students' views on perceived learning using the lecture and UCS pedagogies were analyzed using the quasi-quantitative analysis method. The data generated from the preliminary topics was analyzed distinctly under the lecture and UCS pedagogies respectively. Scores for those who gave viewpoints shared by both the lecture and UCS pedagogies were calculated in a similar way. The overall views were calculated by frequencies and percentages. The nursing students' views were interpreted accordingly using the highest to lowest percent scores in order to substantiate on the quantitative findings.

Ethical Considerations

Obtaining of ethical permission before data collection.

After administrative clearance, ethical clearance was obtained from the University REC. Upon approval, permission was got from the Nursing and Midwifery Departmental Head of the study site. Finally, the purpose of the study was explained to the baccalaureate nursing students and an informed consent was obtained from all eligible participants before being enrolled in the study.

Rights of participants.

All the eligible students undertaking the baccalaureate nursing program in the first semester of Year three were formally invited to voluntarily take part in the study. A face-to-face invitation to take part in the research was extended to the baccalaureate

nursing students a week prior to the study. The researcher explained to the respondents the need of active participation, respect of confidentiality and freedom to withdraw from the study, when necessary, without penalty until the final data is collected. The respondents were informed that they would not be able to withdraw from the study once they had returned the final questionnaire as it would be impossible for the researcher to identify their questionnaires.

Privacy.

Privacy was ensured by use of unique identification codes for each participant during the three phases of pedagogical data collection sessions and a separate list of codes to name match up was strictly kept by the researcher. After the last phase of data collection, the respondents' unique code numbers and list for code to name match up were destroyed by burning. This prevented the researcher from knowing what participant filled what piece of information. Furthermore, the research setting was not mentioned in the research study.

Confidentiality.

To ensure confidentiality, the researcher was solely in control of the data collection and the questionnaires were safely secured in a designated locker under key and lock when not in use. The questionnaires shall be kept in safe custody until the study has been published. The publication data will be in aggregate form to prevent any possible linkage of data to the respondents. All excel spread sheets containing data were electronically saved on the researcher's computer in a file with a secured strong password. During data analysis, the data was accessed only by the researcher, her

supervisor and statistician but without knowing what participant filled which piece of information.

Benefits.

The respondents may have benefited from the study by having increased knowledge on prostate cancer surgical care and a good clinical picture of how similar patients should be nursed. The experience of being taught using the new UCS pedagogy may have also been interesting.

Social or cultural issues that might require sensitivity.

The researcher being a Master of Nursing Student and a Dean of a nursing and midwifery school, the respondents might not have felt relaxed to participate freely in the study. They may have felt that they had inadequate knowledge due to the educational difference and feared that their classroom performance would be discussed with the faculty. Being aware of those differences, these issues were addressed by reassuring the respondents that as a nurse educator who had equally risen through various nursing academic levels to reach the master's level, I would handle their fears professionally and ensure utmost confidentiality. The researcher also explained emphatically the purpose of the research, using language that they could easily comprehend.

Conflict of interest.

There was no conflict of interest in this study and the study was not funded by any organization.

Summary

Chapter three has described the methodology that was applied in this study. It elaborated on the research design, the setting, and target population, sampling techniques, calculation of the sample size, and inclusion and exclusion criteria of the study participants. It further described the data collection instruments, pedagogical sessions, data collection and data analysis procedures. The protection of patients' rights and ethical issues have also been explained. Chapter four will focus on presentation and analysis of the study results on the baccalaureate nursing students' perceived learning of prostate cancer surgical care using the lecture and UCS pedagogies according to the set objectives.

Chapter Four: Presentation of Results

In this chapter, the results of the study are presented with reference to each study objective. The first objective was to describe the baccalaureate nursing students' perceived learning using the lecture pedagogy in prostate cancer surgical care at Uganda Christian University, Mukono. The second objective was to describe the baccalaureate nursing students' perceived learning using the UCS pedagogy in prostate cancer surgical care at Uganda Christian University, Mukono. The last objective was to compare the baccalaureate nursing students' perceived learning using the lecture and UCS pedagogies in prostate cancer surgical care at Uganda Christian University, Mukono. However, the researcher begins by presenting the demographic characteristics of the baccalaureate nursing students.

Baccalaureate Nursing Students' Socio Demographic Characteristics

The first section of data presentation outlines the socio-demographics of the baccalaureate nursing students. This includes the baccalaureate nursing students' age, gender, and year of study. Thirty baccalaureate nursing students participated in this study. The results of the demographic characteristics of the baccalaureate nursing students are presented in Table 1. All the thirty baccalaureate nursing students' age ranged from 19-26 years old. The majority (83.3%) of the baccalaureate nursing students were female. All thirty (100%) baccalaureate nursing students were in their third year of study.

Table 1

Socio-Demographic Characteristics of the Baccalaureate Nursing Students

Category	Frequency (*f*)	Percentage (%)
Age (Years)		
19-26	30	100
Gender		
Male	5	17
Female	25	83
Years of Study		
Year Three	30	100

Objective 1: Baccalaureate Nursing Students' Perceived Learning Using the Lecture Pedagogy

This section presents findings of the baccalaureate nursing students' perceived learning after the use of the lecture pedagogy on pre-operative prostate cancer surgical care. The section provides descriptive findings that include perceived learning of the baccalaureate nursing students' basing on the characteristics of the lecture pedagogy, categories of the baccalaureate nursing students' perceived learning, additional baccalaureate nursing students' views on perceived learning and satisfaction of the lecture pedagogy. Table 2 shows the details.

Table 2

Baccalaureate Nursing Students' Perceived Learning using the Lecture Pedagogy

Characteristics Items	SD	D	A	SA	M	SD
1. Enables students to attain all objectives effectively	2	3	14	11	3.13	0.86
2. Students find the pedagogy more interesting	0	2	13	15	3.43	0.63
3. Enhances comprehension of the concepts of the topic	0	0	15	15	3.53	0.51
4. Encourages collaboration and teamwork in learning	2	14	13	1	2.43	0.68
5. Helps students develop clinical decision-making skills	0	7	12	11	3.13	0.78
6. Boosts students' motivation to learn and engage in class activities	0	2	17	11	3.30	0.60
7. Enhances students' clinical reasoning skills	1	1	15	13	3.33	0.71
8. Helps students learn, share knowledge, and clinical experiences	0	5	15	10	3.17	0.70
9. Promotes neat, organized information	0	6	9	15	3.30	0.79
10. Promotes better practical learning and clinical imagination	1	6	8	15	3.23	0.90
11. Enhances long- term retention of learned material	0	6	14	9	3.00	0.91

Table 2 Continued

Baccalaureate Nursing Students' Perceived Learning using the Lecture Pedagogy

Characteristics Items	SD	D	A	SA	M	SD
12. Applicable to most nursing topics and subjects	0	1	12	17	3.53	0.57
13. Boosts students' self-confidence in learning	3	3	14	10	3.03	0.93
14. Reduces classroom monotony and made learning enjoyable	1	5	12	11	3.03	1.00
15. Encourages students' in-depth thinking and knowledge integration	1	3	16	10	3.17	0.75
16. Provides more opportunities for questions and discussions	0	1	12	16	3.40	0.86
17. Better preparation for patient care planning in the clinical environment	0	2	18	10	3.27	0.58
18. Allows more objective evaluation of learning outcomes	1	1	18	10	3.23	0.68
19. Simplifies summary of all topics and subject content areas	0	2	14	14	3.40	0.62

An analysis of perceived learning gives the performance of the baccalaureate nursing students on each perceived learning statement using the lecture pedagogy as shown in Table 2. According to the baccalaureate nursing students' performance, the perception item about the pedagogy enhancing the students' comprehension of the

concepts of the topic, had the highest score with a mean of 3.53 (SD=0.51). Similarly, the respondents agreed that the pedagogy applies to most nursing topics and subjects (Mean = 3.53, SD = 0.57). The lowest score was with a mean of 2.43 (SD=0.68) where the baccalaureate nursing students disagreed to the lecture pedagogy's ability to promote active involvement and teamwork with colleagues in the learning process.

An analysis of each individual's perceived learning scores was calculated by mean scores and standard deviation. The detailed baccalaureate nursing students' individual scores of perceived learning using lecture are presented in Appendix L. The mean for perceived learning after the lecture pedagogy was 3.21(SD=0.78). Table 3 presents the baccalaureate nursing students' perceived learning performance in categories after the lecture pedagogy.

Table 3

Baccalaureate Nursing Students' Perceived Learning using Lecture Pedagogy by Category

Category	Frequency (*f*)	Percent (%)
High: ≥ than 3.25	17	57
Moderate: 2.50 ‑3.24	10	33
Low: < 2.50	3	10

After learning using the lecture pedagogy, 57% of the baccalaureate nursing students had high perceived learning, 33% moderate and 10% low perceived learning.

Additional Baccalaureate Nursing Students' Perceived Learning Data using the Lecture Pedagogy

Other than the general characteristics of perceived learning, the baccalaureate nursing students were asked their views on how they perceived their learning using the lecture pedagogy. This was optional and 26 baccalaureate nursing students provided multiple opinions on their perception of learning using the lecture pedagogy. Details are shown in table 4.

Table 4

Baccalaureate Nursing Students' Views on Perception of Learning using the Lecture Pedagogy (n=26)

Characteristics Items	Frequency (*f*)	Percentage (%)
Less engaged in learning using lecture	15	50
Less enhancement of cognitive ability using lecture	3	10
Less ability to link theory to practice	3	10
Lecture pedagogy was boring	4	13
Grasping concepts needed more time using lecture	1	3

Of the baccalaureate nursing students who responded, findings showed that 50% felt less engaged in the lecture learning session; 10% felt it didn't improve cognitive abilities or connect theory to practice, 13% found the pedagogy boring, while 3% felt that more time was needed to grasp concepts using the lecture pedagogy.

Baccalaureate Nursing Students' Perceived Satisfaction of the Lecture Pedagogy

Each baccalaureate nursing students' perceived satisfaction scores were established. The total baccalaureate nursing students' mean scores and standard deviation were calculated. The detailed baccalaureate nursing students' individual scores of perceived satisfaction of learning using lecture are presented in Appendix M. The mean for perceived satisfaction of learning after the lecture pedagogy was 7.52 (SD=0.88).

Table 5 presents the baccalaureate nursing students' perceived satisfaction of learning after the lecture pedagogy in categories. Only thirteen percent (13%) of the baccalaureate nursing students were highly satisfied with the lecture pedagogy.

Table 5

Baccalaureate Nursing Students' Perceived Satisfaction of the Lecture Pedagogy by Category

Category	Frequency (*f*)	Percent (%)
Highly Satisfied: 8.1-10	4	13
Moderately Satisfied: 5.1 to 8.0	26	87

Objective 2: Baccalaureate Nursing Students' Perceived Learning using the UCS Pedagogy

This section presents findings of the baccalaureate nursing students' perceived learning on post-operative prostate cancer surgical care using the UCS pedagogy. Detailed descriptive findings of the baccalaureate nursing students' perception of learning based on the characteristics of the UCS pedagogy, student's additional views of the UCS pedagogy, categories of perception, and the baccalaureate nursing students' perceived satisfaction of the UCS pedagogy are presented in tables 6, 7, 8 and 9 respectively. The detailed baccalaureate nursing students' individual scores of perceived learning are presented in Appendix P. The mean for perceived learning after the UCS pedagogy was 3.50 (SD=0.71).

Table 6 shows that the perception item about the UCS pedagogy promoting active involvement and teamwork with colleagues in the learning process had the highest score with a mean of 3.90 (SD=0.31). This was followed by the characteristic that UCS pedagogy possesses a more practical learning approach that fosters clinical imagination with a mean of 3.90 (SD =0.31). The lowest mean was 3.13 (SD=0.78) where the baccalaureate nursing students disagreed with the characteristic of the UCS having the ability to sum up all the topics and content areas in the subject.

Table 6

Baccalaureate Nursing Students' Perceived Learning using the UCS Pedagogy

Characteristics Items	SD	D	A	SA	M	SD
1. Enables students to attain all objectives effectively	0	3	7	20	3.57	0.68
2. Students find the pedagogy more interesting	0	2	5	23	3.70	0.60
3. Enhances comprehension of the concepts of the topic	0	4	11	15	3.37	0.72
4. Encourages collaboration and teamwork in learning	0	0	3	27	3.90	0.31
5. Helps students develop clinical decision-making skills	0	1	9	20	3.63	0.56
6. Boosts students' motivation to learn and engage in class activities	0	2	9	19	3.57	0.63
7. Enhances students' clinical reasoning skills	0	1	12	17	3.53	0.57
8. Helps students learn, share knowledge, and clinical experiences	0	2	7	21	3.63	0.61
9. Promotes neat organized information	0	5	11	13	3.17	0.95
10. Promotes better practical learning and clinical imagination	0	0	3	27	3.90	0.31
11. Enhances long- term retention of learned material	0	4	8	18	3.47	0.73

Table 6 Continued

Baccalaureate Nursing Students' Perceived Learning using the UCS Pedagogy

Characteristics Items	SD	D	A	SA	M	SD
12. Applicable to most nursing topics and subjects	0	2	13	15	3.43	0.63
13. Boosts students' self-confidence in learning	0	4	11	15	3.37	0.72
14. Reduces classroom monotony and made learning enjoyable	1	1	7	21	3.60	0.72
15. Encourages students' in-depth thinking and knowledge integration	0	3	8	19	3.53	0.68
16. Provides more opportunities for questions and discussions	2	0	12	16	3.40	0.81
17. Better preparation for patient care planning in the clinical environment	1	1	12	16	3.43	0.73
18. Allows more objective evaluation of learning outcomes	0	6	9	14	3.17	0.99
19. Simplifies summary of all topics and subject content areas	1	4	15	10	3.13	0.78

Table 7

Baccalaureate Nursing Students' Perceived Learning of the UCS Pedagogy by Category

Category	Frequency (*f*)	Percent (%)
High: ≥ than 3.25	24	80
Moderate: 2.50 ‑3.24	5	17
Low: < 2.50	1	3

Table 7 shows that 80% of the baccalaureate nursing students had a high perception of learning using UCS pedagogy.

Additional Baccalaureate Nursing Students' Perceived Learning Data using the UCS Pedagogy

Other than the general characteristics of the UCS pedagogy, the baccalaureate nursing students viewed learning using the UCS pedagogy as being engaging (70%), having the ability to link theory to practice (63%), and enhancing critical thinking and cognitive abilities (56%). Details are shown in table 8.

Table 8

Baccalaureate Nursing Students' Additional Views on Perception of Learning using the UCS Pedagogy

Characteristics Items	Frequency (*f*)	Percentage (%)
Well engaged using the UCS pedagogy	21	70
Increased students' ability to link theory to practice and appreciate reality learning	19	63
Enhanced critical thinking and cognitive abilities	17	56
Preferred use of UCS in the learning sessions	4	13
Learning was more enjoyable using UCS	4	13
Consumption of much more time using UCS	3	10

Baccalaureate Nursing Students' Perceived Satisfaction of Learning Using the UCS Pedagogy

The baccalaureate nursing students' individual scores of perceived satisfaction of learning using UCS were established, and the details are presented in Appendix Q. The mean for perceived satisfaction of learning using UCS pedagogy was 8.47 (SD=0.72). Table 9 shows the categories of satisfaction of learning using UCS pedagogy. Most of the baccalaureate nursing students (53%) were highly satisfied with the UCS pedagogy.

Table 9

Baccalaureate Nursing Students' Perceived Satisfaction of Learning Using the UCS Pedagogy

Category	Frequency (*f*)	Percentage (%)
Highly Satisfied: 8.1-10	16	53
Moderately Satisfied: 5.1 - 8.0	14	47

Objective 3: Comparison of the Baccalaureate Nursing Students' Perceived Learning Using the Lecture and UCS Pedagogies

This section presents descriptive and inferential findings of the comparison between baccalaureate nursing students' perceived learning using the lecture and UCS pedagogies. Analysis of each baccalaureate nursing students' perceived learning scores for the lecture and UCS pedagogies were calculated using mean scores and standard deviation. The detailed baccalaureate nursing students' comparison individual scores of perceived learning are presented in Appendix T. Analysis of the baccalaureate nursing students' performance on each perceived learning statement comparing the lecture and UCS pedagogies respectively is shown in Table 10. The perception item about the lecture pedagogy's applicability to most nursing topics and subjects had the highest score with a mean of 3.77 (SD=0.43) as compared with the UCS pedagogy, of which this specific item had the lowest mean of 2.93 (SD = 1.01). The perception item about the lecture pedagogy promoting active involvement and teamwork with colleagues in the learning process scored lowest with a mean of 1.87 (SD = 0.68) as compared with the UCS pedagogy, of which this specific item had the highest mean of 3.93 (SD=0.25).

Table 10

Comparison of the Baccalaureate Nursing Students' Perceived Learning using the Lecture and UCS Pedagogies

	Lecture		UCS	
Characteristic Items	**M**	**SD**	**M**	**SD**
1. Enables students to attain all objectives effectively	3.20	0.48	3.53	0.57
2. Students found the pedagogy more interesting	3.40	0.56	3.53	0.68
3. Enhances comprehension of the concepts of the topic	3.67	0.48	3.30	0.84
4. Encourages collaboration and teamwork in learning	1.87	0.68	3.93	0.25
5. Helps students develop clinical decision-making skills	3.13	0.63	3.63	0.56
6. Boosts students' motivation to learn and engage in class activities	3.30	0.60	3.50	0.68
7. Enhances students' clinical reasoning skills	3.30	0.75	3.50	0.57
8. Helps students learn, share knowledge, and clinical experiences	3.37	0.61	3.80	0.41
9. Promotes neat, organized information	3.53	0.68	3.13	1.01
10. Promotes better practical learning and clinical imagination	3.40	0.72	3.80	0.41
11. Enhances long- term retention of learned material	3.20	0.61	3.37	0.96

Table 10 Continued

Comparison of the Baccalaureate Nursing Students' Perceived Learning for the Lecture and UCS Pedagogies

	Lecture		UCS	
Characteristic Items	**M**	**SD**	**M**	**SD**
12. Applicable to most nursing topics and subjects	3.77	0.43	2.87	0.97
13. Boosts students' self-confidence in learning	3.27	0.64	3.40	0.72
14. Reduces classroom monotony and made learning enjoyable	2.67	0.84	3.37	0.81
15. Encourages students' in-depth thinking and knowledge integration	3.37	0.49	3.47	0.78
16. Provides more opportunities for questions and discussions	3.10	0.76	3.43	0.68
17. Better preparation for patient care planning in the clinical environment	3.13	0.73	3.47	0.57
18. Allows more objective evaluation of learning outcomes	3.10	0.66	3.37	0.76
19. Simplifies summary of all topics and subject content areas	3.60	0.56	2.93	1.01

Inferential findings on comparison of perceived learning.

This section presents the inferential findings of the comparison between the baccalaureate nursing students perceived learning performance after the lecture and UCS pedagogies. The Wilcoxon Signed-Rank Test evaluated perceived learning outcomes between Unfolding Case Study (UCS) and Lecture pedagogies among baccalaureate nursing students. The Z-value of 2.445 indicates a moderately large difference, with UCS

scores (mean = 3.44, SD = 0.78) consistently higher than Lecture scores (mean = 3.23, SD = 1.04), as positive ranks outweighed negative ones. The lower standard deviation for UCS (0.78) compared to Lecture (1.04) suggests greater consistency in students' perceived learning outcomes with UCS, indicating more uniform positive responses. The two-tailed p-value of 0.015, below the $\alpha = 0.05$ threshold, confirms statistical significance. The effect size ($r = 0.454$) reflects a moderate-to-large impact, underscoring UCS's substantial enhancement of perceived learning outcomes. Table 11 shows the details.

Table 11

Significance of the Comparison of Perceived Learning of the Lecture and UCS Pedagogies using Wilcoxon Signed Rank Test

Perceived learning	Mean	SD	Z	r	*P*-value
Lecture pedagogy	3.23	1.04			
UCS pedagogy	3.44	0.78	2.445	0.454	0.015

Additional Baccalaureate Nursing Students' Perceived Learning Data using the Lecture and UCS Pedagogies

Other than the general characteristics of perceived learning of the lecture and UCS pedagogies, six (6) baccalaureate nursing students chose to comment about the two pedagogies. Findings showed that 20% of the baccalaureate nursing students felt that the lecture and UCS pedagogies complemented each other for holistic learning as presented in Table 12.

Table 12

Baccalaureate Nursing Students' Views on Perception of Learning using both Lecture and UCS Pedagogies (N=06)

Characteristic Items	Frequency (*f*)	Percentage (%)
Both lecture and UCS complement each other for holistic learning	6	20

Baccalaureate Nursing Students' Perceived Satisfaction of the Lecture and UCS Pedagogies

Each baccalaureate nursing students' perceived satisfaction scores using the lecture and UCS was established. The total baccalaureate nursing students' mean scores and standard deviation were calculated. The detailed baccalaureate nursing students' perceived satisfaction comparison individual results are presented in Appendix U. The mean score for perceived satisfaction of learning after the lecture pedagogy was 7.70 (SD=0.84) and 8.22 (SD=0.91) for the UCS pedagogy.

Inferential findings on comparison of perceived satisfaction of learning.

This section presents the inferential findings of the comparison between the baccalaureate nursing students' perceived satisfaction of learning performance after the lecture and UCS pedagogies. The Wilcoxon Signed-Rank Test assessed differences in perceived satisfaction between Unfolding Case Study (UCS) and Lecture pedagogies among baccalaureate nursing students. The test yielded a W statistic of 156.0, indicating that UCS scores (mean = 8.22, SD = 0.91) consistently surpassed Lecture scores (mean = 7.70, SD = 0.84) in most paired comparisons. The standardized test statistic (Z = 2.577)

reflects a substantial deviation with positive ranks (UCS > Lecture) predominating. The tighter standard deviation for UCS (0.91 vs. 0.84) suggests more consistent satisfaction ratings. The two-tailed p-value of 0.010 (below $\alpha = 0.05$) confirms statistical significance, indicating the difference is unlikely due to chance. The effect size ($r = 0.591$), denotes a large, practically significant impact, highlighting UCS's substantial enhancement of student satisfaction.

Table 13

Significance of Comparison of Perceived Satisfaction as an Element of Perceived Learning using the Lecture and UCS Pedagogies using Wilcoxon Signed Rank Test

Pedagogy	Mean	SD	Z	r	*P*-value
Lecture	7.70	0.84			
UCS	8.22	0.91	2.577	0.591	0.010

Summary

Chapter Four has presented the study findings with regard to the three study objectives considering the difference between the baccalaureate nursing students' perceived learning using the lecture and UCS pedagogies in prostate cancer surgical care at Uganda Christian University, Mukono. The analysis consisted of demographic data, and study findings that determined the perceived learning and satisfaction of perceived learning using the lecture and UCS pedagogies respectively. There was a statistically significant difference in the baccalaureate nursing students' perceived learning and satisfaction of perceived learning using the lecture and UCS pedagogies. Chapter Five

presents the discussion, interpretation of the study findings, recommendations for further research, significance of the findings, limitations, study implications and conclusion.

Chapter Five: Discussion, Conclusion and Recommendations

Chapter 5 presents a discussion of the study results on demographic data and each study objective. The study was guided by three objectives. The first objective was to describe the baccalaureate nursing students' perceived learning using the lecture pedagogy in prostate cancer surgical care at Uganda Christian University, Mukono. The second objective was to describe the baccalaureate nursing students' perceived learning using the UCS pedagogy in prostate cancer surgical care at Uganda Christian University, Mukono. The last objective was to compare the baccalaureate nursing students' perceived learning using the lecture and UCS pedagogies in prostate cancer surgical care at Uganda Christian University, Mukono. The chapter further discusses the conceptual model that guided this study. The chapter also presents recommendations, areas for future study that could be generated from this research, limitations of the study, implications and conclusion.

Demographics

The study disclosed that majority of the baccalaureate nursing students were female. This finding is in line with historical trends which show that women predominate the nursing profession (Berkery et al., 2014; Prosen, 2022). Additionally, the above finding is consistent with the evidence of Lalam and Oketcho (2022) where majority of the study respondents in Ugandan nursing institutions were female.

This study disclosed that all the baccalaureate nursing students were aged between 19 – 26 years old. This finding is consistent with the evidence of Kempango and Atuhaire (2024) where majority (80%) of the respondents were below 28 years which is

the right age bracket for tertiary and university students in Uganda. The study further indicated that all the thirty baccalaureate nursing students were in their third year of study. This finding is consistent with evidence from a study by Neumbe, Ssenyonga, Soita, Iramiot, and Nekaka, (2023) which shows that majority of the baccalaureate nursing students in the above age bracket were in the third year of study after successful progression in their studies.

Baccalaureate Nursing Students' Perceived Learning Using the Lecture Pedagogy

The findings of this current study showed that the baccalaureate nursing students' perception of learning was at moderate level after utilization of the lecture pedagogy in teaching pre-operative prostate cancer care. This moderate satisfaction likely stems from several factors. Lectures, while effective for delivering structured content and foundational knowledge, often lack the interactivity and practical application that nursing students' value for clinical preparedness. The moderate mean score suggests that while students appreciated the clarity and organization of lecture pedagogy, they may have found it less engaging compared to experiential methods.

The area where perception of learning scored highest was the "ability of the lecture method to enhance comprehension of concepts of the topic". Several factors could explain why the lecture method scored highest in enhancing conceptual comprehension. First, the lecturer's expertise in pre-operative prostate cancer care may have allowed for a focused, authoritative delivery that resonated with students seeking foundational knowledge. Second, the lecture format may have been tailored to emphasize key concepts through structured outlines or repetition, which aligns well with cognitive

learning theories that prioritize clarity for learners. Third, students' prior familiarity with lecture-based learning, a common pedagogical approach in their curriculum, may have made them more comfortable with this method for grasping theoretical content, despite its limitations in fostering critical thinking. According to Regmi (2012) a well-planned and structured presentation may increase the efficiency of the lecture method. Furthermore, some researchers contend that meaningful learning is possible using the expository lecture approach as it helps students to grasp new basic concepts (Kaddoura, 2011; Lindberg-Sand & Loughlin, 2022). Since prostate cancer surgical care was a new topic, students may have grasped the content well but may not have deeply synthesized it, since the lecture pedagogy promotes rote learning. This aligns with the assumption that with cognitive gain of content through memorization of facts, the learner should be able to transfer knowledge into practice. Additionally, the baccalaureate nursing students in this study are in a generation which could have been predominantly taught using the lecture pedagogy during their earlier education, thus still trusting its ability to help them acquire synthesized knowledge by faculty.

The finding in this study appeared to support the results where majority of the baccalaureate nursing students supported use of the lecture pedagogy and resented group work (Simpson, 2020). However, in contrast, findings from another study by Ghafourifard, Haririan and Aghajanloo (2013) showed that the lecture method was less appreciated by nursing students in improving comprehension skills. Findings of this study further showed a high score of perception on the area that stated that "the lecture pedagogy is applicable to most topics and subjects." These findings are in line with those

in the study done by Lindberg-Sand and Loughlin (2022) which showed that undergraduate health science students felt it relevant to be taught most of the subject topic areas during the semester using lecture pedagogy.

However, the baccalaureate nursing students' perception of learning using the lecture method was low on the area that assessed the pedagogy's ability in promoting active involvement and teamwork with colleagues in the learning process. This aforementioned result is consistent with the findings of the study by Hasheesh et al., (2011) in which learners felt that their learning was compromised since they were not given chance to participate in group discussions during the lecture sessions.

Baccalaureate Nursing Students' Perceived Learning using the Unfolding Case Study Pedagogy (UCS)

The findings of the current study showed that the use of the UCS created a high perception of learning in teaching post-operative prostate cancer surgical care to the baccalaureate nursing students. This high perception, likely results from UCS's interactive, scenario-based approach. By simulating real-world clinical situations, UCS engages students in active problem-solving, critical thinking, and decision-making, which align closely with the practical demands of nursing practice. Secondly, the collaborative nature of UCS, often involving group discussions, may have fostered peer learning and confidence in applying knowledge. Thirdly, the relevance of the prostate cancer care context, with its focus on patient-centered outcomes, may have made UCS particularly impactful, as students could directly connect theoretical knowledge to practice. Alternatively, the novelty of UCS compared to lecture may have increased

enthusiasm. This is consistent with findings of previous researchers such as Berghoff (2015), Bryant (2016) and Peele (2015) who reported positive baccalaureate nursing students' perception of learning after using UCS pedagogy. The area where perception of learning scored the highest was the "ability for the pedagogy to promote active involvement and teamwork with colleagues in the learning process". This is in line with findings in a study done by Shohani et al., (2023) that showed that majority of the nursing students agreed that the case study promoted more cooperation and allowed students to discuss concepts. Additionally, the baccalaureate nursing students appreciated that the UCS possesses a more practical learning approach that fosters clinical imagination. The findings of this study showed some consistency with the study done by Bryant (2016) in which the baccalaureate nursing students appreciated the UCS pedagogy's ability to improve their practical imagination using the information received in an UCS of oxygenation transfer and promoted potential utilization of this knowledge in different contexts. A similar study by Shohani et al., (2023) also showed that majority of the nursing students appreciated the case study's ability of being closer to reality.

The lowest score of the baccalaureate nursing students' perception of learning using the UCS method was on the area about the "UCS's ability to sum up all the topics and content areas in the subject". Unlike lecture pedagogy, which systematically covers a broad range of topics through structured outlines, UCS focuses on specific clinical scenarios. This targeted approach may have left the nursing students feeling that certain theoretical aspects are not fully addressed. The dynamic, unfolding nature of UCS, while engaging, may have also created a perception of fragmentation, as students navigated

evolving case details rather than receiving a cohesive summary of all content. Additionally, the novelty of UCS may have challenged students accustomed to traditional linear pedagogies, leading to uncertainty about whether all subject areas were adequately covered. Alternatively, the researcher's case design may have emphasized specific skills such as clinical decision-making over comprehensive content review, further contributing to this perception. However, UCS's ability to sum up all the topics and content areas varies from findings of similar studies, which reported relatively higher student scores in summarizing subject content (Bijani et al., 2019; Shohani et al., 2023).

A Comparison of the Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study (UCS) Pedagogies

This study showed that the UCS was preferred as the pedagogy that improved the baccalaureate nursing students' perception of learning of prostate cancer surgical care compared to lecture. The findings of the current study revealed a significant difference in perceived learning outcomes between UCS and Lecture pedagogies among baccalaureate nursing students**.** UCS pedagogy demonstrated clear advantages over lecture pedagogy in both perceived learning and student satisfaction. UCS's higher mean scores (3.44 for learning, 8.22 for satisfaction) and significant effect sizes ($r = 0.454$ for learning, $r = 0.591$ for satisfaction) suggest it better meets students' needs for applied learning and engagement. The findings highlight important implications for nursing education. The UCS approach enhances perceived learning, satisfaction, and clinical readiness, particularly in complex areas like prostate cancer surgical care. Students reported that UCS promoted active involvement, teamwork, and knowledge sharing, leading to greater

satisfaction than lecture-based methods. By simulating real clinical scenarios, UCS enables students to apply theoretical knowledge to patient-centered problems, fostering relevance, competence, and deeper engagement.

The baccalaureate nursing students in the present study highly agreed that the UCS promoted active involvement and teamwork with colleagues in the learning process as compared to lecture. In the education environment, social interaction derived from group discussions is important for cognitive development as students are exposed to multiple viewpoints as they dialogue with others (Burgess, et al., 2020). In this study, the baccalaureate nursing students shared clinical experiences encountered while nursing patients with prostate cancer, thus broadening their understanding of concepts. Additionally, students appreciated that the UCS facilitated them to learn better, share knowledge and clinical experiences compared to lecture. The baccalaureate nursing students also reported that UCS possessed a more practical approach that fosters clinical imagination compared to the lecture pedagogy. These findings are in line with results of similar studies by Bijani et al., (2019) which showed that Case-Based Learning (CBL) promotes cooperation and teamwork of students in class, improves learning and helps in longer retention of material compared to lecture. Findings from the same study by Bijani et al. show that CBL possesses a more practical approach that promotes clinical imagination. Results from studies by Ross (2019) and Shohani et al. (2023) show that majority of the nursing students were in agreement with the CBL's ability to bring clinical situations closer to reality. More so**,** findings from the current study show that the baccalaureate students were in agreement that the UCS pedagogy encouraged in-depth

thinking and integration of knowledge as compared to lecture. A related study by Guimond (2019) indicated an increase in the nursing students' critical thinking and self-efficacy in communication and dealing with complex obstetric situations using the UCS pedagogy.

However, in this study, the UCS was scored low on the area of perception of learning stating that "it has the ability to sum up all topics and content area in the subject" as compared to the lecture pedagogy. This finding differs from results in a study by Bijani et al., (2019) that showed a high score of the case study's ability to wrap up all subjects. More so, whereas UCS was scored lowest on the area of perception of learning stating that "it's applicable to most topics and subjects", the same area was scored as the highest with the lecture pedagogy. This may be attributed to constraints of time and supporting resources, as faculty often find it cumbersome to design high-quality UCS across most subject areas. Furthermore, some baccalaureate nursing students' verbatim findings from this study showed that UCS is time consuming in its delivery. This is especially true given that the UCS scenarios required more time for deep analysis of the information and engagement in fruitful discussions. According to Bayona and Duyan (2024) the case method is not a simple pedagogy, as it's time-consuming for both students and educators. They further noted that, while the case method has complex characteristics, it has proven to be a very effective learning method.

The baccalaureate nursing students rated the UCS pedagogy as more effective in appealing to their learning and were "highly satisfied with the pedagogy" compared to the lecture pedagogy. This is consistent with the findings from studies done by Bijani et

al. and Ghafourifard et al (2013) in which majority of the nursing students were highly satisfied with CBL as compared with the lecture pedagogy in diagnosis of cardiac dysrhythmias and nursing a post caesarean patient with severe hemorrhage, respectively.

In this study, the most important features of the UCS pedagogy were active involvement of students, promotion of learning, reduction of monotony, being closer to reality, sharing of clinical experiences, invoking critical thinking, integration of knowledge and being more practical compared to the lecture pedagogy. Since the learning environment is vital in determining the learner's motivation and satisfaction, UCS has been found to create a positive education environment, decreased monotony in the classroom and built confidence to practice in a safe classroom space (Bryant, 2016). The UCS scenarios focused on well-designed clinical scenarios that promoted clinical competencies through critical thinking and case analysis and thus enabled the nursing students to link theory to practice.

Nevertheless, the lecture pedagogy was moderately scored by students in appealing to their learning. This moderate appeal may be more attributable to the researcher's teaching skills, such as clear explanations, effective use of visual aids during the sessions than the method itself. Some scholars further argue that a variation in teaching approaches is likely to be a better approach than the dogmatic adoption of all lectures or no lectures (Regmi, 2012). Therefore, a combination of pedagogies can be incorporated in the teaching and learning sessions with less lectures and more of the student-centered learning pedagogies, such as the UCS. Combining both worlds of traditional classroom-based teaching, in this case lecture and modern methods of

teaching such as UCS pedagogy offers several advantages and improvements by eliminating the drawbacks of both sides. In this way, the two approaches compensate for each other's disadvantages, making the combination highly effective. This argument is in line with the notion that combining pedagogies to improve knowledge and skills for undergraduate students is very important as it provides customized realistic learning (Asem & Rajwa, 2023; Murphy, Eduljee & Croteau, 2021). In the present study, some baccalaureate nursing students noted that combined utilization of the lecture and UCS pedagogies complemented each other to generate holistic learning. In conclusion, students in this study agreed that UCS was a better pedagogy than lecture based on their open-ended statements of the comparison of the two pedagogies.

The Theoretical Model That Guided the Study

The Kolb's Experiential Learning Theoretical (ELT) model that guided this study has been utilized in previous educational pedagogical studies (Amod & Brysiewicz, 2019; Bagweneza et al., 2021;Fewster-Thuente & Batteson, 2018; Uppor, et al., 2024). Kolb's ELT requires educators to understand and effectively apply the continuous four spiral stages in the teaching and learning process in order for learning to be holistically accomplished. In this study, Kolb's ELT was applied to teach the baccalaureate nursing students' pre- and post-operative prostate cancer surgical care using the lecture and UCS pedagogies respectively. The learning process involved the baccalaureate nursing students' getting access to, grasping and comprehending information through concrete experience and abstract conceptualization. Transformation of information was through reflective observation and active experimentation of which the latter involved students

taking two quizzes after each pedagogy to assess the acquired knowledge. According to Kolb (1984), knowledge results from the combination of grasping and transforming experience. Since nursing is a practice-based profession, experiential learning is agreeable with its philosophy as it helped the nursing students to link theory to practice. Therefore, Kolb's ELT model is highly recommended to guide educational innovation in higher education.

Limitations of the Study

This study used a census based approach of 30 baccalaureate nursing students from one University, and this could limit maximum generalizability of the findings to other Universities. It would be even stronger to conduct this research using a diverse student population from different universities offering nursing programs. Secondly, the pedagogical sessions were conducted in one single class of Year Three Semester one and it covered one topic of prostate cancer surgical care. It would be better to evaluate perceived learning over a longer period of time such as a semester, while covering several topics of a specific subject.

Conclusion

The findings of the present study demonstrate that, compared to lecturing, the baccalaureate nursing students' perceived learning and satisfaction with learning of prostate cancer surgical care was more effective using the UCS pedagogy. Findings revealed that perception of learning improved greatly with the UCS as compared to the lecture method. Findings of the study further showed that the baccalaureate nursing

students were highly satisfied being taught using the UCS compared to the lecture pedagogy.

This study's findings underscore the importance of SCL pedagogies in promoting deep understanding and engagement. This active collaborative classroom low fidelity simulation was used by the researcher to teach post-operative prostate cancer surgical care to the baccalaureate nursing students. This contributed to developing competences for teamwork and communication, but also provided the situation to experience self-organization, independent learning and adaptability. While developing UCS scenarios required substantial time, the approach reflects a pedagogical shift from transmitting factual knowledge to prioritizing conceptual and constructive education essential for practice in dynamic clinical settings. In this regard, a blended approach that reduces lectures and emphasizes student-centered methods like UCS can further enhance learning by balancing the strengths and limitations of each pedagogy.

Recommendations

One crucial element in enhancing students' learning is to move from teacher-centered to student-centered activities, giving learners opportunities for independent learning. The typical educator's job description should change to include more guidance and facilitation rather than predominantly dwelling on fact-based knowledge delivery. It is recommended that nursing educators research on the efficacy of the different innovative teaching methods, have an open mind and choose the most fitting one for each situation. The UCS is one of the recommended pedagogies to use in nursing education, based on

the results of this present study. It is recommended that faculty incorporate utilization of this modern inexpensive teaching strategy in other nursing courses as well.

I recommend that nursing educators examine the pedagogies that they utilize across the various disciplines and years of study. It may be more conducive to apply student centered than teacher-centered pedagogies to various disciplines, at different stages of the learning process and with consideration of the learning outcomes. It is important that nursing educators utilize the most appropriate and effective pedagogy that enables learners to collaborate, connect information, reflect on their learning and transfer acquired competences into practice while ensuring success and motivation in the classroom. It is also crucial that nursing educators at administrative level strengthen collaboration and equip faculty with training and resources to sustain SCL pedagogies such as UCS that creates engaging learning experiences and drives student success.

The UCS pedagogy ties in well with the New Lower Secondary Curriculum (NLSC) currently being used at the ordinary education level (senior four) in Uganda. Students in the advanced level (senior six) are presently being introduced to a curriculum that is compatible with the one in the NLSC so as to benefit from the new advancement (The Independent news, 2025). I recommend that the UCS pedagogy be used in nursing education in universities in order to sustain continuity of learner centered education that is currently being recommended by the Ministry of Education and Sports (Museveni & Baguma, 2019). Faculty at the universities should be sensitized on the NLSC and the aligned Advanced Secondary Curriculum in preparation of successful instruction of these learners when they join university.

Implications

This study evaluated the perceived learning of the baccalaureate nursing students on utilization of the lecture and UCS pedagogies on prostate cancer surgical care. The findings of this study have the potential to guide the design of learning environments as well as nursing education pedagogy. Nursing educators have become increasingly concerned about the gap between academic preparation of the nursing students and the demands of real-world clinical practice in new graduates. The UCS pedagogy has been identified as a low-cost effective simulation that can be utilized by nurse educators to enable students to attain the required competences in a safe and supportive environment. Incorporation of UCS in the education of nurses at all levels shall yield a graduate with critical thinking skills which shall improve the quality of patient care. Nurse educators should ensure that professional development programs focus on SCL pedagogies, such as the UCS. The strong preference for UCS highlights the value of active, case-based learning in nursing education, which may better prepare students for clinical practice by fostering critical thinking and problem-solving skills. Education institutions should shift from excessive utilization of conventional pedagogies to collaborative SCL approaches and establish a conducive class environment suitable for UCS simulation.

It will be simpler to use contemporary learning approaches if nursing educators and nursing students have sufficient awareness and develop a positive attitude towards utilization of the most recent innovative pedagogies.

Areas for Future Study

The findings of this current study give rise to various issues for future study. There is need to replicate this study in higher educational nursing institutions with a larger representative sample of students and throughout an extended period of time in a more natural teaching and learning semester process in order to extensively assess the students' perception of learning. This would yield more generalizable results.

Further research can also be done to analyze other outcomes besides nursing students' perception of learning. Therefore, studies can be conducted to establish if the utilization of the lecture versus the UCS pedagogy can improve baccalaureate nursing students' critical thinking, self-efficacy, knowledge transfer and learning outcomes. This will help in determining the pedagogy that yields high order thinking which is vital in helping nursing students better manage the evolving healthcare needs of clients and prepare them in transition to their future role of practicing nurses.

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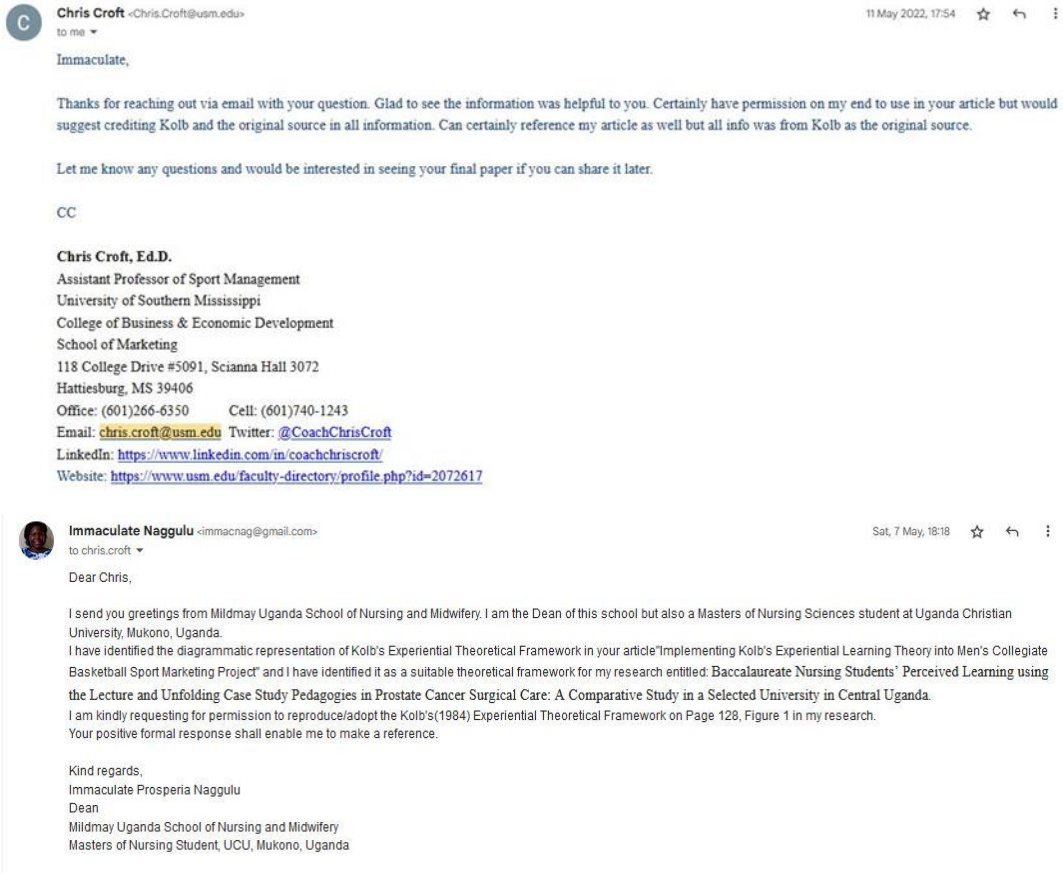
Appendix A: Permission to Use the Experiential Theoretical Framework



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Immaculate Naggulu <immacnag@gmail.com> Sat, 7 May, 18:18
to chris.croft

Dear Chris,

I send you greetings from Mildmay Uganda School of Nursing and Midwifery. I am the Dean of this school but also a Masters of Nursing Sciences student at Uganda Christian University, Mukono, Uganda.
I have identified the diagrammatic representation of Kolb's Experiential Theoretical Framework in your article"Implementing Kolb's Experiential Learning Theory into Men's Collegiate Basketball Sport Marketing Project" and I have identified it as a suitable theoretical framework for my research entitled: Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda.
I am kindly requesting for permission to reproduce/adopt the Kolb's(1984) Experiential Theoretical Framework on Page 128, Figure 1 in my research.
Your positive formal response shall enable me to make a reference.

Kind regards,
Immaculate Prosperia Naggulu
Dean
Mildmay Uganda School of Nursing and Midwifery
Masters of Nursing Student, UCU, Mukono, Uganda

Appendix B: Questionnaire

Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda.

Date: ……..

Questionnaire Number: …….

Dear Respondent, you are welcome to participate in this study that seeks to determine the difference between the baccalaureate nursing students' perceived learning using the lecture and unfolding case study pedagogies in prostate cancer surgical care in a selected university in Central Uganda. Your cooperation in answering the questions honestly will be highly appreciated. This study is purely for academic purposes and all responses shall be treated with utmost confidentiality.

Instructions

Please read the questions carefully and respond by ticking the appropriate box.

Section A: Socio - Demographic Characteristics

Age in Years ……

Gender …….

Year of Study……..…

Version 1: Perceived Learning Characteristics using the Lecture Pedagogy

Section B

Instructions: Tick the appropriate response by grading each stem once.

Characteristics of the Lecture Pedagogy as Perceived by the Baccalaureate Nursing Students					
Item	Undecided 0	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
1. This pedagogy enabled me attain all my objectives properly.					
2. I found being taught by this pedagogy more interesting.					
3. It enhanced my comprehension of the concepts of this topic.					
4. It promoted active involvement and teamwork with colleagues in the learning process.					
5. It helped me develop my clinical decision making skills.					

Characteristics of the Lecture Pedagogy as Perceived by the Baccalaureate Nursing Students					
Item	Undecided 0	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
6. It increased my motivation to learn and participate in class activities.					
7. It enhanced my clinical reasoning skills.					
8. It facilitated me to learn better, share knowledge and clinical experiences.					
9. The pedagogy promotes neat organization of information.					
10. It possesses a more practical learning approach that fosters clinical imagination.					

Characteristics of the Lecture Pedagogy as Perceived by the Baccalaureate Nursing Students					
Item	Undecided 0	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
11. The pedagogy enhances longer retention of learned material.					
12. It is applicable to most nursing topics and subjects.					
13. The pedagogy increased my self-confidence in learning.					
14. It reduced monotony in the classroom and made me enjoy the learning sessions.					
15. It encouraged my in-depth thinking and integration of knowledge.					

Characteristics of the Lecture Pedagogy as Perceived by the Baccalaureate Nursing Students					
Item	Undecided 0	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
16. It allowed for more space for asking and responding to questions.					
17. It was more efficient in making me ready to plan for patient care in the clinical environment.					
18. It allows for more objective evaluation of learning outcomes.					
19. It is easier to sum up all the topics and content areas in the subject.					
20. Overall, rating of the Lecture pedagogy on a scale of 0-10					

Version 2: Perceived Learning Characteristics using the UCS Pedagogy

Section B

Instructions: Tick the appropriate response by grading each stem once.

Characteristics of the Unfolding Case Study Pedagogy as Perceived by the Baccalaureate Nursing Students					
Item	Undecided 0	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
1. This pedagogy enabled me attain all my objectives properly.					
2. I found being taught by this pedagogy more interesting.					
3. It enhanced my comprehension of the concepts of this topic.					
4. It promoted active involvement and teamwork with colleagues in the learning process.					
5. It helped me develop my clinical decision making skills.					

Characteristics of the Unfolding Case Study Pedagogy as Perceived by the Baccalaureate Nursing Students					
Item	Undecided 0	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
6. It increased my motivation to learn and participate in class activities.					
7. It enhanced my clinical reasoning skills.					
8. It facilitated me to learn better, share knowledge and clinical experiences.					
9. The pedagogy promotes neat organization of information.					
10. It possesses a more practical learning approach that fosters clinical imagination.					

Characteristics of the Unfolding Case Study Pedagogy as Perceived by the Baccalaureate Nursing Students					
Item	Undecided 0	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
11. The pedagogy enhances longer retention of learned material.					
12. It is applicable to most nursing topics and subjects.					
13. The pedagogy increased my self-confidence in learning.					
14. It reduced monotony in the classroom and made me enjoy the learning sessions.					
15. It encouraged my in-depth thinking and integration of knowledge.					

Characteristics of the Unfolding Case Study Pedagogy as Perceived by the Baccalaureate Nursing Students					
Item	Undecided 0	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
16. It allowed for more space for asking and responding to questions.					
17. It was more efficient in making me ready to plan for patient care in the clinical environment.					
18. It allows for more objective evaluation of learning outcomes.					
19. It is easier to sum up all the topics and content areas in the subject.					
20. Overall, rating of the UCS pedagogy on a scale of 0-10					

Version 3: Perceived Learning Characteristics Comparing the Lecture and UCS Pedagogies

Section B

Instructions: Tick the appropriate responses by grading each stem once for both pedagogies.

Characteristics of the Lecture Vs. Unfolding Case Study Pedagogy as Perceived by the Baccalaureate Nursing Students										
Item	Undecided 0		Strongly Disagree 1		Disagree 2		Agree 3		Strongly Agree 4	
	Lecture	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**
1. This pedagogy enabled me attain all my objectives properly.										
2. I found being taught by this pedagogy more interesting.										
3. It enhanced my comprehension of the concepts of this topic.										
4. It promoted active involvement and teamwork with colleagues in the learning process.										
5. It helped me develop my clinical decision making skills.										

Characteristics of the Lecture Vs. Unfolding Case Study Pedagogy as Perceived by the Baccalaureate Nursing Students										
Item	Undecided 0		Strongly Disagree 1		Disagree 2		Agree 3		Strongly Agree 4	
	Lecture	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**
6. It increased my motivation to learn and participate in class activities.										
7. It enhanced my clinical reasoning skills.										
8. It facilitated me to learn better, share knowledge and clinical experiences.										
9. The pedagogy promotes neat organization of information.										

Characteristics of the Lecture Vs. Unfolding Case Study Pedagogy as Perceived by the Baccalaureate Nursing Students

Item	Undecided 0		Strongly Disagree 1		Disagree 2		Agree 3		Strongly Agree 4	
	Lecture	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**
10. It possesses a more practical learning approach that fosters clinical imagination.										
11. The pedagogy enhances longer retention of learned material.										
12. It is applicable to most nursing topics and subjects.										
13. The pedagogy increased my self-confidence in learning.										

Characteristics of the Lecture Vs. Unfolding Case Study Pedagogy as Perceived by the Baccalaureate Nursing Students										
Item	Undecided 0		Strongly Disagree 1		Disagree 2		Agree 3		Strongly Agree 4	
	Lecture	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**
14. It reduced monotony in the classroom and made me enjoy the learning sessions.										
15. It encouraged my in-depth thinking and integration of knowledge.										
16. It allowed for more space for asking and responding to questions.										
17. It was more efficient in making me ready to plan for patient care in the clinical environment.										

Characteristics of the Lecture Vs. Unfolding Case Study Pedagogy as Perceived by the Baccalaureate Nursing Students

Item	Undecided 0		Strongly Disagree 1		Disagree 2		Agree 3		Strongly Agree 4	
	Lecture	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**
18. It allows for more objective evaluation of learning outcomes.										
19. It is easier to sum up all the topics and content areas in the subject.										
20. Overall, rating of the Lecture Vs. Unfolding Case Study (UCS) pedagogies on a scale of 0-10	Lecture									
	UCS									

Provide Explanations on your Perceived Learning using the Questions below.

21. What else would you like us to know about your perception of learning using the lecture and UCS pedagogies in the teaching and learning process?

i)……

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ii)…….

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iii)……

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iv)……

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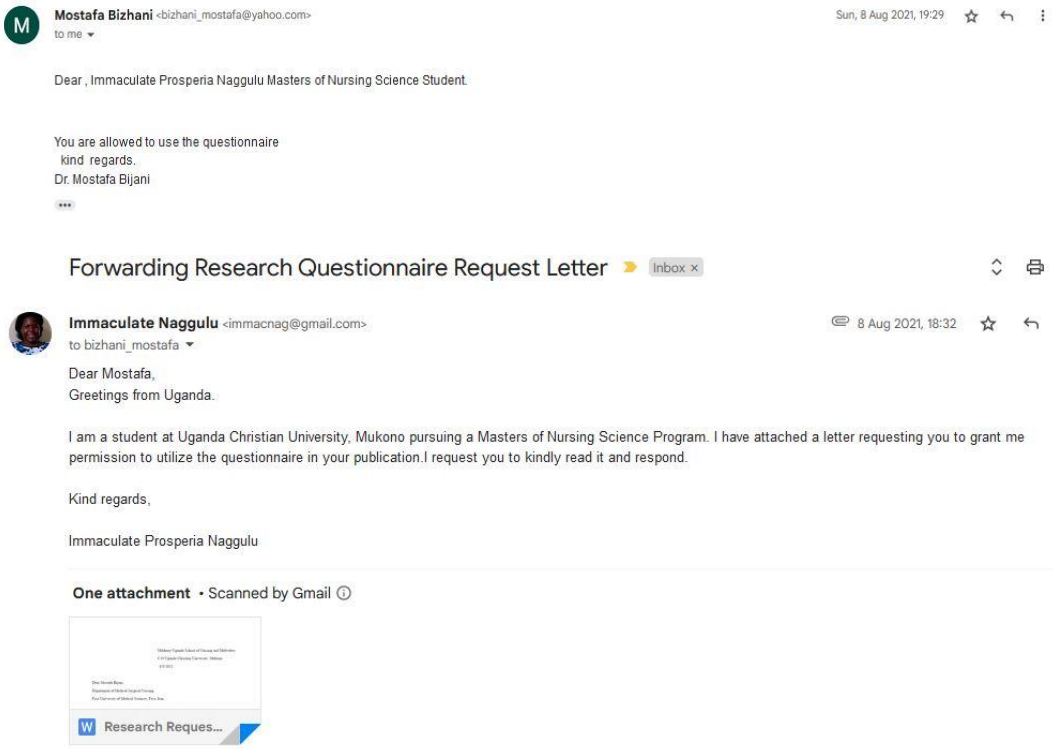
End of Questionnaire

I acknowledge your active contribution to this study.

Appendix C: Permission from Dr. Mostafa to Adapt Questionnaire



Mostafa Bizhani <bizhani_mostafa@yahoo.com> Sun, 8 Aug 2021, 19:29
to me

Dear , Immaculate Prosperia Naggulu Masters of Nursing Science Student.

You are allowed to use the questionnaire
kind regards.
Dr. Mostafa Bijani

Forwarding Research Questionnaire Request Letter Inbox ×

Immaculate Naggulu <immacnag@gmail.com> 8 Aug 2021, 18:32
to bizhani_mostafa

Dear Mostafa,
Greetings from Uganda.

I am a student at Uganda Christian University, Mukono pursuing a Masters of Nursing Science Program. I have attached a letter requesting you to grant me permission to utilize the questionnaire in your publication.I request you to kindly read it and respond.

Kind regards,

Immaculate Prosperia Naggulu

One attachment • Scanned by Gmail

Research Reques...

Mildmay Uganda School of Nursing and Midwifery

C/O Uganda Christian University, Mukono.

8/8/2021

Dear Mostafa Bijani,

Department of Medical Surgical Nursing,

Fasa University of Medical Sciences, Fasa, Iran.

RE: REQUEST TO UTILIZE YOUR RESEARCH QUESTIONNAIRE FOR MY STUDY.

My name is Immaculate Prosperia Naggulu, a Masters of Nursing Science student at Uganda Christian University Mukono, Uganda. My research topic is "Diploma Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected Nursing School in Central Uganda".

I have read your research publication dated February, 2019 and found it professional, interesting and of a very high quality. My study is based on similar lines but not identical. I am kindly requesting permission to utilize your questionnaire that you used for evaluation. I may adopt it as it is or slightly modify it to suit my study. I will abide by all research ethical principles and will acknowledge your contribution in my study. I would greatly appreciate it if you would allow me to utilize your questionnaire in my study.

I am looking forward to your positive response and assistance.

Kind regards,

Immaculate Prosperia Naggulu

Masters of Nursing Science Student

0772972577/0757983265

Appendix D: Permission to Conduct Research Study

Naggulu Immaculate Prosperia

Mildmay Uganda School of Nursing and Midwifery

23/8/2023

Approved to link up with the HOD

The Dean

Faculty of Public Health, Nursing and Midwifery

Uganda Christian University, Mukono

P.O Box, 4 Mukono.

UGANDA CHRISTIAN UNIVERSITY
11 OCT 2023
DEAN

RE: PERMISSION TO CONDUCT A RESEARCH STUDY AT THE NURSING AND MIDWIFERY DEPARTMENT

My name is Naggulu Immaculate Prosperia, a Masters of Nursing Science student (Cohort 10) at Uganda Christian University, Mukono. I hereby seek administrative clearance to conduct research at the Department of Nursing and Midwifery, Faculty of Public Health, Uganda Christian University, Mukono.

My study topic is "Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda." The time frame for conducting the study is from August 2023 to August 2024 as guided by the Uganda Christian University, Mukono - Research Ethics Committee approval. The participants will include all baccalaureate direct entry nursing students in the ~~fourth and final~~ Third year of their study. Utmost confidentiality shall be maintained and consent from students to participate in the study shall be sought.

I pledge to abide by the research and nursing department standard operating guidelines.

My research supervisors are: Prof. Karen Drake and Dr. Elizabeth Ekong (PhD).

I am looking forward to your kind consideration.

Yours faithfully,

Naggulu Immaculate Prosperia

Masters of Nursing Science Student

Cohort 10 0772972577.

UGANDA CHRISTIAN UNIVERSITY
APPROVED
UNTIL
07 AUG 2024
RESEARCH ETHICS COMMITTEE

Appendix E: Informed Consent Form for Participants

Title of the Proposed Study:

Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda.

Researcher

I am Immaculate Prosperia Naggulu, pursuing a Masters of Nursing Science Program at Uganda Christian University, Mukono at the Department of Nursing, Faculty of Public Health, Nursing and Midwifery. My supervisors are Professor Karen Drake and Dr. Elizabeth Namukombe Ekong.

Background and Rationale for the Study:

Globally and in Uganda, one of the major challenges faced by nursing schools and Universities is to enhance in students the ability of critical thinking and capability to provide holistic care in various clinical situations. The main objective of nursing education is to help nursing students acquire the necessary knowledge and skills to provide quality nursing care to patients. Nursing is a practice based profession and overreliance on teacher centered pedagogies may lessen the efficacy of education. Available global evidence shows that student centered learning pedagogies improve problem solving, clinical judgment and promotes lifelong learning. Much as nurse educators have used mixed methods of teaching, there is no evidence of how students perceive their learning.

Purpose of The Study and why you are Being Asked to Participate:

This comparative study seeks to find out the baccalaureate nursing students' perceived learning of prostate cancer surgical care after using the lecture and UCS pedagogies. This is a comparative study that requires you to fill in a questionnaire after the study sessions. I am kindly requesting you to participate in this study to explore the difference between the two pedagogical methods used and their effect in improving teaching and learning thus adopt the best method that best promoted your learning.

The Estimated Duration of Time that you will take in the Research Project and Procedures:

The study will take an estimated period of one (1) week and the day's sessions shall take 2 hours. The first day shall be dedicated for sensitization about the study and creating rapport. Day 2 and 3 shall be dedicated to the lecture pedagogy sessions and filling in a post session questionnaire. Day 4 and 5 shall be dedicated to the UCS pedagogy sessions and filling in of the post session questionnaire. Completing the lecture pedagogy and UCS questionnaires will take 1 hour (30 minutes each) and completing the final comparative pedagogy questionnaire will take 1 hour.

Risks:

There are no risks associated with this study but should any risk arise, the researcher will be ready to mitigate it.

Benefits:

You will benefit from the knowledge updates on prostate cancer surgical care which will be attained during the teaching sessions. The effect of the results of the study will help faculty and students to adopt and benefit from student centered learning pedagogies as innovative strategies that stimulate critical thinking and clinical judgment.

As a result, teaching and learning will improve and you will be able to translate theory into practice with ease.

Remuneration:

You will also receive ten thousand Uganda shillings (20,000/=) and a book as a gift for your participation. A snack and a cold drink shall be given during the first meeting. Kindly note that you will not be compensated for participating in this study.

Confidentiality:

Your confidentiality will be maintained by not disclosing your name and the name of your University in any of the documents and presentations although you will be using a unique code number the post session questionnaire filling. You will be the only person aware of your unique code number. The rest of the information will be accessed only by the researcher, her supervisor and her statistician but without knowing who filled what piece of information. All research information shall be kept under lock and key in a designated cupboard and the key shall only be accessed by the researcher.

Voluntary Participation and Withdraw Rights:

You are reminded that participation in this study is purely voluntary and in case you change your mind, you have a right to withdraw from the study before the filling in the final questionnaire, a time conducive for the researcher to identify your unique code yet not compromising the confidentiality of other students. Your withdrawal from the study shall not in any way affect your studies and your rights and privileges. I hope that you will find it pleasing and rewarding to participate in this study up to the end. Your time and effort are integral aspects of my study and I will appreciate your participation and cooperation.

Inquiries:

If there is any need for clarification about the study, kindly ask questions using my mobile contact number 0772972577/0757983265. I can also be reached by email immacnag@gmail.com/ immaculate.naggulu@mihs.ac.ug Department of Nursing and Midwifery, Faculty of Public Health, Uganda Christian University, P.O Box, 4 Mukono, Uganda. For further inquiries about the researcher or research topic, kindly contact my supervisor Dr. Elizabeth Namukombe Ekong on mobile number 0752817166.

Dissemination of results:

You will get feedback on the research findings and progress of the study and any new information that affects the study or data will be communicated to you and the Head of Department Nursing and Midwifery.

Ethical approval:

This study entitled 'Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda' has been approved by the Research and Ethics Committee (REC) of Uganda Christian University.

Statement of Consent

The researcher has carefully explained to me the intended research study, the purpose, rights, benefits and risks involved in the study. I understand that maximum confidentiality shall be provided and my identity will be concealed. I am aware that I have a right to withdraw at any time before submitting the final questionnaire. I therefore

voluntarily agree to participate in this study. Upon completion of signing this consent form, a copy of this form will be provided to me.

Signature of Participant …….. Date ……..

Signature of Researcher …… Date …….

Appendix F: Lesson Plan for the Lecture Pedagogy on Pre-operative Prostate Cancer Care

Facilitator: Immaculate Prosperia Naggulu

Venue: Nursing Lecture Room

Day 1

Lesson plan

Date	Time	Academic Year	Subject	Expected number of students	Number of students present
31/10/2023	1 hour	Year 3	Pre-operative Prostate Cancer Surgical Care	30	30

Topic: Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda.

Objectives: By the end of the session participants will be able to:

1. Explain the 3 preoperative prostate cancer surgical care goals.
2. Interpret the prostate cancer investigations and diagnostic findings.
3. Explain 9 clinical features of prostate cancer.

Methods:

1. Lecture with power point presentation
2. Brain storming

Teaching aids:

- Power point presentation

- Projector and laptop
- Handouts with lecture notes on pre-operative prostate cancer surgical care.
- Teaching chart showing the prostate gland

Main Content

Step/ Time	**Content/ Objective**	**Teacher's activity**	**Participants' activity**	**Remarks**
1. 05 min	Create rapport Re-introduction of self and the topic.	Greets participants Reintroduce self Introduces topic	Respond to greetings. Listen	
2. 5 min	Explains the 3 goals of pre-operative prostate cancer care	Tells the students the goals of preoperative prostate cancer care	Listen	
3. 30 min	Explain the prostate cancer investigations and diagnostic findings.	Asks participants the investigations performed to diagnose prostate cancer Explain the prostate cancer pre-op investigations	Respond to the question Listen attentively	
4 15min	Explain the clinical features of prostate cancer	Gives a brief review of the anatomy and physiology of the prostate gland Clarifies information by display of a flip chart with the prostate gland	Listen and observe attentively	

		Explains the clinical features of prostate cancer		
5 5 min	Summary of the session	Summarize lesson by asking participants questions Requests questions from participants and clears doubts	Respond Ask questions for clarity of difficult concepts	

Self-evaluation:

……

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……

Facilitator: Immaculate Prosperia Naggulu

Venue: Nursing Lecture Room

Day 1

Lesson plan

Date	Time	Academic Year	Subject	Expected number of students	Number of students present
31/10/2023	1 hour	Year 3	Pre-operative Prostate Cancer Surgical Care	30	30

Topic: Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda.

Objectives: By the end of the session participants will be able to:

1. Outline 5 priority pre-operative nursing diagnoses.
2. Describe the pre-operative vital signs.
3. Describe the psychosocial care.

Methods:

1. Lecture with power point presentation
2. Brain storming

Teaching aids:

- Power point presentation
- Projector and laptop
- Handouts with lecture notes on pre-operative prostate cancer surgical care.
- Teaching chart showing the prostate gland

Main Content

Step/ Time	**Content/ Objective**	**Teacher's activity**	**Participants' activity**	**Remarks**
1. 05 min	Create rapport Link up previous session to current topic.	Greets participants Briefly reviews previous key concepts and introduces topic	Respond to greetings. Listen	
2. 15 min	Outline 5 priority pre-operative nursing diagnoses	Asks participants the priority nursing diagnoses that can be generated in the pre-op period Tells participants 5 possible nursing diagnoses	Respond Listen	
3. 20 min	Describe the pre-operative vital signs	Explains to the participants the vital signs and importance.	Listen	
4 15min	Describe the psychosocial care and counseling on treatment options	Explains elaborately on the psychosocial care.	Listen	
5 5 min	Summary of the session	Summarize lesson by asking participants questions Requests questions from participants and clears doubts	Listen attentively Ask questions for clarity of difficult concepts	

Self-evaluation:

……

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……

Lesson Plan for the Lecture Pedagogy on Pre-operative Prostate Cancer Care

Facilitator: Immaculate Prosperia Naggulu

Venue: Nursing Lecture Room

Day 2

Lesson plan

Date	Time	Academic Year	Subject	Expected number of students	Number of students present
03/11/2023	1 hour	Year 3	Pre-operative Prostate Cancer Surgical Care	30	30

Topic: Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda.

Objectives: By the end of the session participants will be able to:

1. Describe patient shared decisions and informed consent.
2. Outline the pre-operative medication.
3. Explain the pre-operative hygiene requirements.
4. Describe the pre-operative exercises.

Methods:

1. Lecture with power point presentation
2. Brain storming

Teaching aids:

- Power point presentation
- Projector and laptop

- Handouts with lecture notes on pre-operative prostate cancer surgical care.

Main Content

Step/ Time	**Content/ Objective**	**Teacher's activity**	**Participants' activity**	**Remarks**
1. 05 min	Create rapport Introduction of topic.	Greets participants Introduces topic and reviews previous session	Respond to greetings. Listen	
2. 15 min	Describe patient shared decisions and generation of informed consent.	Explains to the students the process of making patient shared decisions and informed consent	Listen	
3. 15 min	Outline the pre-operative medication	Asks students to mention the common pre-operative medication Explains the pre-operative medication	Respond Listen	
4 5min	Explain the pre-operative hygiene requirements	Explains the hygiene needs of the pre-operative patient and skin care/shaving procedure	Listen	
5 10 min	Describe the pre-operative exercises	Ask participants to brain storm the importance of performing	Respond	

Step/ Time	Content/ Objective	Teacher's activity	Participants' activity	Remarks
		pre-operative exercises. Explains the need of performing Kegel's exercises and active exercises in general	 Listen attentively	
6. 10 min	Summary Short quiz	Invites questions from students Clears doubts and summarize lesson Gives a short quiz	Ask questions about difficult concepts Listen to explanation Attempt quiz	

Self-evaluation:

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Facilitator: Immaculate Prosperia Naggulu

Venue: Nursing Lecture Room

Day 2

Lesson plan

Date	Time	Academic Year	Subject	Expected number of students	Number of students present
03/11/2023	1 hour	Year 3	Pre-operative Prostate Cancer Surgical Care	30	30

Topic: Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda.

Objectives: By the end of the session participants will be able to:

1. Describe the pre-operative diet.
2. Explain the pre-operative elimination pattern.
3. Describe the pre-operative patient education.
4. Outline the content of the pre-operative theater cross checklist

Methods:

5. Lecture with power point presentation
6. Brain storming

Teaching aids:

- Power point presentation
- Projector and laptop
- Handouts with lecture notes on pre-operative prostate cancer surgical care.

Main Content

Step/Time	Content/ Objective	Teacher's activity	Participants' activity	Remarks
1. 05 min	Create Rapport Introduction of topic.	Greets participants Introduces topic and reviews previous session	Respond to greetings. Listen	
2. 10 min	Describe the pre-operative diet	Ask participants questions about the need to fast before operation Explains the recommended diet and time to stop eating/drinking prior to operation	Respond Listen attentively	
3. 10 min	Explain the pre-operative elimination pattern	Elaborates the need to have empty bowels prior to operation/ bladder care	Listen attentively	
4 15min	Describe the pre-operative patient education	Explains the important patient education such as lower limb exercises and side effects of radical robotic prostatectomy	Listen attentively	
5 10 min	Outline the content of the preoperative theater cross checklist	Explains the features of the pre-operative theater cross checklist	Listen attentively	

Step/Time	Content/ Objective	Teacher's activity	Participants' activity	Remarks
6. 10 min	Summary Short quiz	Invites questions from students Clears doubts and summarize lesson Gives a short quiz	Ask questions about difficult concepts Listen to explanation Attempt quiz Respond Listen attentively	

Self-evaluation:

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Appendix G: Lesson Plan for the UCS Pedagogy on Post-operative Prostate Cancer Care

Facilitator: Immaculate Prosperia Naggulu

Venue: Nursing Lecture Room

Day 3

Lesson plan

Date	Time	Academic Year	Subject	Expected number of students	Number of students present
07/11/2023	1 hour	Year 3	Post-operative Prostate Cancer Surgical Care	30	30

Topic: Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda.

Objectives: By the end of the session participants will be able to:

1. Explain the 3 goals of post-operative surgical care.
2. Explain the post-operative investigations.
3. Outline 8 post-operative priority nursing diagnoses.
4. Describe the post-operative vital signs.

Methods:

1. Low fidelity simulation using the UCS
2. Small group discussion and debrief
3. Brain storming

Teaching aids:

- Power point presentation
- Projector and laptop
- Handouts with UCS lecture notes on post-operative prostate cancer surgical care.

Main Content

Step/Time	**Content/ Objective**	**Teacher's activity**	**Participants' activity**	**Remarks**
1. 05 min	Create Rapport Introduction of topic. Introduction of the case study Explain the 3 goals of post-operative surgical care	Greets participants Introduces topic Introduces the case study. Assigns students in two groups by random number count. Tells the students the 3 core goals of post-operative surgical care.	Respond to greetings. Listen attentively. Sit according to the allocated 2 groups Listen	
2. 15 min	Explain the post-operative investigations and standing orders	Takes the students through the first segment about post-operative investigations and standing orders. Facilitate the group discussion	Reflection, discussion and synthesizing the case. Document responses for presentation	

Step/Time	Content/ Objective	Teacher's activity	Participants' activity	Remarks
3. 15 min	Outline 8 post-operative priority nursing diagnoses	Facilitate the group discussion on the priority nursing diagnoses	Reflection, discussion and synthesizing the case. Document responses for presentation	
4 15min	Describe the post-operative vital signs	Facilitate the group discussion on post-operative vital signs	Reflection, discussion and synthesizing the case. Document responses for presentation Group secretary presents responses to the class	
5 10 min	Summary and debrief	Summarizes lesson and performs a debrief Requests students to ask questions and respond	Listen attentively Ask questions Listen	

Self-evaluation: ……

……

Facilitator: Immaculate Prosperia Naggulu

Venue: Nursing Lecture Room

Day 3

Lesson plan

Date	Time	Academic Year	Subject	Expected number of students	Number of students present
07/11/2023	1 hour	Year 3	Post-operative Prostate Cancer Surgical Care	30	30

Topic: Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda.

Objectives: By the end of the session participants will be able to:

1. Explain the psychosocial therapy on side effects of surgery
2. Describe the post-operative exercises for the patient
3. Explain the teaching to David and family about post-operative surgical care

Methods:

4. Low fidelity simulation using the UCS
5. Small group discussion and debrief
6. Brain storming

Teaching aids:

- Power point presentation
- Projector and laptop

- Handouts with UCS lecture notes on post-operative prostate cancer surgical care.

Main Content

Step/Time	Content/ Objective	Teacher's activity	Participants' activity	Remarks
1. 05 min	Create Rapport Introduction of topic. Introduction of the case study	Greets participants Introduces topic Introduces the case study. Tells students to maintain the two groups.	Respond to greetings. Listen attentively. Listen and sit according to the allocated 2 groups	
2. 15 min	Explain the psychosocial therapy on key side effects of surgery	Facilitate the group discussion on key side effects of surgery	Reflection, discussion and synthesizing the case. Document responses	
3. 15 min	Describe the post-operative exercises for the patient	Facilitate the group discussion on post-operative exercises for the patient	Reflection, discussion and synthesizing the case. Document responses	
4 15min	Explain the teaching to David and family about post-	Facilitate the group discussion on patient and family teaching on post-operative	Reflection, discussion and synthesizing the case.	

Step/Time	Content/ Objective	Teacher's activity	Participants' activity	Remarks
	operative surgical care and associated temporary effects	surgical care and associated effects	Reflection, discussion and synthesizing the case. Document responses Group secretary presents content to the class	
5 10 min	Summary and debrief	Summarizes lesson and performs a debrief Requests students to ask questions and respond	Listen attentively Ask questions Listen	

Self-evaluation:

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Facilitator: Immaculate Prosperia Naggulu

Venue: UCU Mukono – Nursing Lecture Room

Day 4

Lesson plan

Date	Time	Year of study	Subject	Expected number of students	Number of students present
10/11/2023	1 hour	Year 3	Post-operative Prostate Cancer Surgical Care	30	30

Topic: Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda.

Objectives: By the end of the session participants will be able to:

1. Explain the post-operative medication.

2. Outline the post-operative hygiene and wound care.

3. Describe the post-operative diet and fluid monitoring.

Methods:

1. Low fidelity simulation using the UCS
2. Small group discussion and debrief
3. Brain storming

Teaching aids:

- Power point presentation
- Projector and laptop

- Handouts with UCS lecture notes on post-operative prostate cancer surgical care.

Main Content

Step/Time	**Content/ Objective**	**Teacher's activity**	**Participants' activity**	**Remarks**
1. 05 min	Create Rapport Introduction of topic. Introduction of the case study	Greets participants Introduces topic Introduces the case study. Tells students to maintain the two groups.	Respond to greetings. Listen attentively. Listen and sit according to the allocated 2 groups	
2. 15 min	Explain the post-operative medication	Takes the students through the first segment about post-operative medication. Facilitate the group discussion	Reflection, discussion and synthesizing the case. Document responses	
3. 15 min	Outline the post-operative hygiene and wound care	Facilitate the group discussion on post-operative on the post-operative hygiene and wound care	Reflection, discussion and synthesizing the case. Document responses	

Step/Time	Content/ Objective	Teacher's activity	Participants' activity	Remarks
4 15min	Describe the post-operative diet and fluid monitoring	Facilitate the group discussion on post-operative diet and fluid monitoring	Reflection, discussion and synthesizing the case. Document responses Group secretary presents content to the class	
5 10 min	Summary and debrief	Summarizes lesson and performs a debrief Requests students to ask questions and respond	Listen attentively Ask questions Listen	

Self-evaluation:

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Facilitator: Immaculate Prosperia Naggulu

Venue: UCU Mukono – Nursing Lecture Room

Day 4

Lesson plan

Date	Time	Year of study	Subject	Expected number of students	Number of students present
10/11/2023	1 hour	Year 3	Post-operative Prostate Surgical Care	30	30

Topic: Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care: A Comparative Study in a Selected University in Central Uganda.

Objectives: By the end of the session participants will be able to:

1. Outline the post-operative elimination care.
2. Describe the post-operative education for the patient and wife.
3. Outline the discharge planning instructions

Methods:

4. Low fidelity simulation using the UCS
5. Small group discussion and debrief
6. Brain storming

Teaching aids:

- Power point presentation
- Projector and laptop

- Handouts with UCS lecture notes on post-operative prostate cancer surgical care.

Main Content

Step/Time	Content/ Objective	Teacher's activity	Participants' activity	Remarks
1. 05 min	Create Rapport Introduction of topic. Introduction of the case study	Greets participants Introduces topic Introduces the case study. Tells students to maintain the two groups.	Respond to greetings. Listen attentively. Listen and sit according to the allocated 2 groups	
2. 15 min	Outline the post-operative elimination care	Facilitate the group discussion on post-operative elimination care	Reflection, discussion and synthesizing the case. Document responses	
3. 15 min	Describe the post-operative education for the patient and wife	Facilitate the group discussion on post-operative education for the patient and wife	Reflection, discussion and synthesizing the case. Document responses	
4 15min	Outline the discharge planning instructions	Facilitate the group discussion on discharge planning instructions	Reflection, discussion and synthesizing the case.	

Step/Time	Content/ Objective	Teacher's activity	Participants' activity	Remarks
			Document responses Group secretary presents content to the class	
5 10 min	Summary and debrief Brief quiz	Summarizes lesson and performs a debrief Requests students to ask questions and respond Gives a short quiz	Listen attentively Ask questions Listen Take the quiz	

Self-evaluation:

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References for All Lesson Plans Above

Graniero, C. E., & Hooper, G. (2017). Prostate cancer: An unfolding case study from symptoms to postoperative recovery. *Urologic Nursing*, *37*(5), 235-242, 250. doi:10.7257/1053-816X.2017.37.5.235

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Appendix H: Notes on Pre-operative Prostate Cancer Surgical Care

Pre-operative prostate Cancer Surgical Care

According to Ignatavicius, Workman, Rebar, and Heimgartner (2018), the pre-operative period commences immediately when the patient is slated for operation and stops at the moment when the patient is shifted to the operating theatre. The pre-operative prostate surgical care begins when the diagnosis and staging of prostate cancer has been done and the patient is scheduled for prostate surgery until he is received in the surgical suite. The pre-operative period may take a month to a week, and in this period, the patient interacts with the urologist surgical team (surgical nurses and surgeon) and assigned anesthesiologist.

Goals of Pre-operative Prostate Cancer Surgical Care

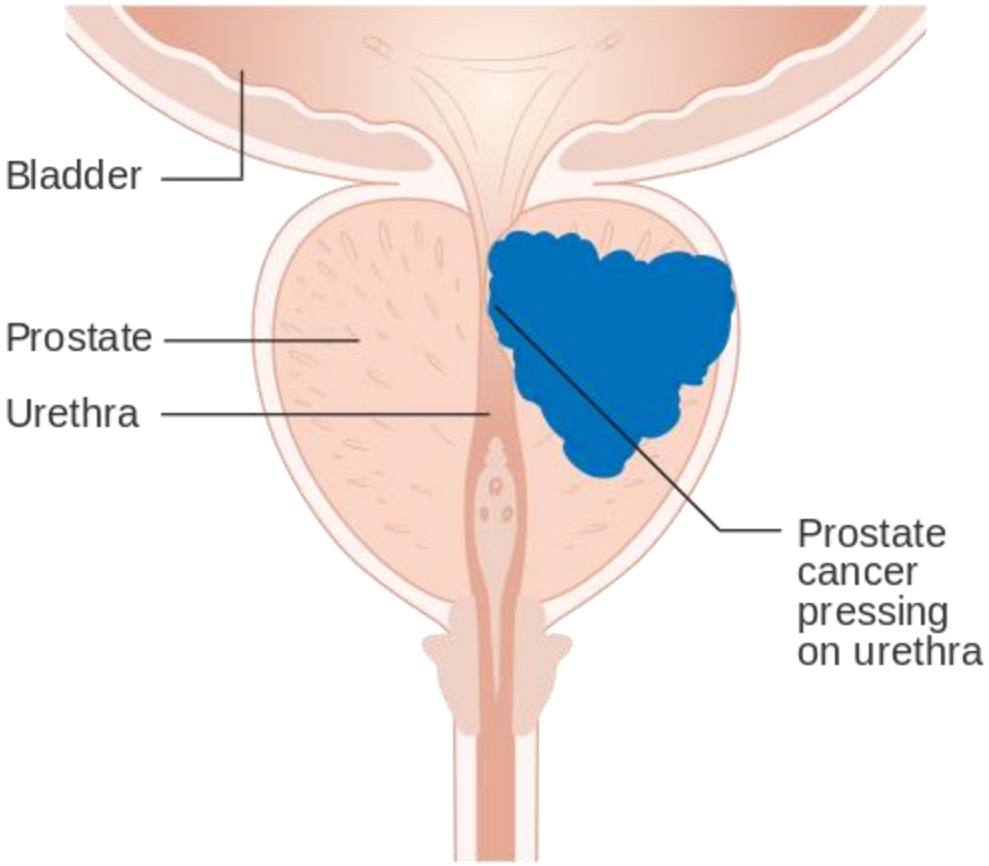
The major pre-operative goals for the pre-operative prostate cancer surgical patient are to;

- Reduce anxiety about his diagnosis and surgery
- Learn about his prostate cancer disorder and surgical intervention
- Understand the pre-operative protocols and impending intra and post-operative experience

Brief Review of the Anatomy and Physiology of the Prostate Gland regarding the Urinary and Reproductive System

The prostate gland is found in the male pelvis in front of the rectum and is inferior to the urinary bladder**,** surrounding the top portion of the urethra. It serves as a reproductive organ by secreting semen, a fluid that nourishes and transports the sperm. It

also affects the urinary system by regulating urine flow by sealing off the entry from the bladder to the urethra by help of the sphincter muscle hence it helps to prevent urine flow during sexual intercourse. In case of prostate cancer, micturition will be altered since it may press on the urethral sphincter. When prostatectomy is performed, it may lead to partial temporary urinary incontinence. It will also lead to infertility because there will not be semen production and seminal vesicles will have been removed. Sperms will be produced by the testis but will be reabsorbed in the body. Finally, it may lead to erectile dysfunction if the nerves are damaged, so the patient may not be able to have and sustain an erection, thus affecting the sex life.



A Diagrammatic Representation showing Prostate Cancer compressing the Urethra, which can cause Symptoms. (Source: Cancer Research UK / Wikimedia.)

Nursing Assessment

The pre-operative assessment is an assessment of clinical health risks of a patient to ascertain if he is fit to undergo anesthesia for a planned operation. The pre-operative care for the patient with prostate cancer should focus on the patient's safety and readiness for surgery so that complications and anxiety are reduced, hence attain positive surgical outcomes. The nurse validates and clarifies the patient's information that he may have got from the surgical team. The nurse assesses the existing signs and symptoms which may include;

- A feeling of urinary retention
- Painful micturition (dysuria)
- Visible blood in urine (hematuria)
- A weak flow of urine on micturition
- Difficulty in starting to urinate (hesitancy)
- Urine dribbling upon completion of micturition
- Need to micturate more frequently at night (nocturia)
- Urinary leakage before the patient gets to the urinal (urgency)
- Symptoms of advanced metastatic disease which may include (hematuria, erectile dysfunction, blood in semen, osteodynia especially of the lower back and cachexia (un explained loss of weight which is not intentional)

Additional Assessment

- The nurse assesses if the patient has encountered low libido and erectile dysfunction.
- If the patient can move out of bed and back to the bed without help.
- If he has lost weight or is pale.
- Complete medical history taken.

Priority Nursing Diagnoses for the Pre-operative Prostate Cancer Patient

Basing on the assessment data, the following nursing diagnoses may be generated;

- Fear of death related to altered health status evidenced by the prostate cancer diagnosis.
- Anxiety about the impending surgery and its outcome related to prostatectomy evidenced by factual prostatectomy information.
- Impaired urinary elimination related to hesitancy in starting urination and hematuria evidenced by patient's verbalization of micturition problems.
- Acute pain related to disease progress evidenced by the patient's verbalization of back pain.
- Knowledge deficit related to the disorder, pre-operative routines, impending surgical interventions/ treatment protocols, and out- come expectations evidenced by the patient's questions.
- Risk for interrupted family processes related to disease process, changes in family roles and socio economic status (Graniero & Hooper, 2017).

Review of Pre- operative Investigations and Interpretation of Diagnostic Findings

- Digital Rectal Examination (DRE)
- Abnormal Digital Rectal Examination (DRE) which is usually hard, nodular, enlarged, and asymmetrical in prostate cancer). NB. It should be noted that not all men with prostate cancer have an abnormal DRE.

Prostate Specific Antigen (PSA) Test

An abnormal elevated (PSA) reading according to age specific range is a clinical indicator of prostate cancer. NB. PSA is a protein produced by epithelial cells of the prostate gland**.** Whereas PSA is produced by normal prostate tissue in the males, its blood levels have a tendency to increase in malignancy. As part of normal physiology, PSA is released into prostatic fluid to help liquefy sperm. It has a dual role as it can be utilized in diagnosis and surveillance of prostate cancer. The clinical circumstances that may specifically drive a clinician to consider performing a PSA test include: the presence of lower urinary tract symptoms (e.g. nocturia, frequency, hesitancy, urgency or retention); visible hematuria; unexplained advanced prostate cancer symptoms (e.g. lower back pain, bone pain, un-intentional weight loss) and erectile dysfunction.

For African-American men, in order for the "PSA test to have 95% sensitivity, the following normal reference ranges should be used: in their 40s, 0 to 2.0 nannograms (ng) of PSA per milliliter; in their 50s, 0 to 4.0 ng per milliliter; in their 60s, 0 to 4.5 ng per milliliter; and in their 70s, 0 to 5.5 ng per milliliter" (Graniero & Hooper, 2017). American Urological Association (AUA) recommends that men in the age range of 40 to 49 years should have a result of 2.5. For men in the age range of 50 to 59 years, a PSA

target result is 3.5; for the age range of 60 to 69 years, 4.5; and for ages 70 to 79 years, the result of 6.5" is the limit (Graniero & Hooper).

Multi-parametric Magnetic Resonance Imaging (MRI)

Multi-parametric MRI is the first-line investigation in patients suspected to have localized prostate cancer after the DRE and PSA tests. It is interpreted using a 5 point Likert Score as follows;

- Clinically significant cancer highly unlikely to be present
- Clinically significant cancer is unlikely to be present
- Chance of clinically significant cancer is equivocal
- Clinically significant cancer is likely to be present
- Clinically significant cancer is highly likely to be present

Multi-parametric MRI influenced Prostate Biopsy

For patients with a Likert score of 3 or greater, a guided biopsy is offered to the patients using the Multi parametric MRI test. When the biopsy is negative, it does not completely exclude a prostate cancer diagnosis, therefore other aspects such as the Likert score above, PSA score levels, DRE results and results from a focused medical history may be considered.

Trans-rectal or Trans-perineal Ultra Sound Biopsy can be taken

It's the older method of checking for prostate cancer and it gives a correct depiction of the prostate gland. The procedure is performed by use of a rectal probe, which shows the prostate size and detects any abnormalities such as tumors. The biopsy is taken for histological evaluation.

Bone isotope scan, Computerized Tomography (CT) and further MRI

These tests can be performed to evaluate for any distant spread of prostate cancer.

Staging and Grading

In prostate cancer the **TNM classification** is used for staging whilst the **Gleason score** gives the histological grade according to biopsy results. The acronym TNM stands for; T- Tumor, N- Node and M- Metastasis. It assigns a score for each of the primary tumor, evident spread of the cancer to the lymph nodes and any distant metastasis.

TNM Classification

Stage I: This is the early stage of the cancer and is frequently slow growing. The tumor cannot be felt and involves one-half of 1 side of the prostate gland or even less than that. There are low PSA levels and the cancer cells resemble healthy cells.

Stage II: The tumor is confined only in the prostate gland. The PSA levels range from low to medium. Stage II prostate cancer is relatively small but has a potential risk of growing and spreading further. Stage **11** is divided into stages 11A, 11B and 11C.

Stage IIA: The tumor is confined in the prostate gland, is impalpable and involves half of 1 side of the prostate gland or even less than that. The PSA levels are at a medium score and the cancer cells are well differentiated.

Stage IIB: The tumor is confined in the prostate gland, but it may be reasonably large to be palpated during the DRE. The PSA level is at the medium score and the cancer cells are moderately differentiated.

Stage IIC: The tumor is confined in the prostate gland, but it may be reasonably large to be palpated during the DRE. The PSA level is at the medium score and the cancer cells may be moderately or poorly differentiated.

Stage III: The tumor is growing out of the confines and the PSA level scores are high. The cancer is regarded as a high grade locally advanced cancer that is likely to grow fast and metastate.

Stage IIIA: The cancer has spread past the outer layer of the prostate gland into nearby tissues including the seminal vesicles. The PSA level scores are at a high rate.

Stage IIIB: The tumor has emerged outside of the prostate gland and may possibly have penetrated or invaded the nearby structures, such as the bladder or rectum.

Stage IIIC: The cancer cells across the tumor are poorly differentiated, thus can be clearly differentiated from healthy cells.

Stage IV: The cancer has spread beyond the prostate gland.

Stage IVA: The cancer has spread to the regional lymph nodes.

Stage IVB: The cancer has spread to distant lymph nodes, and other parts of the body including the bones.

Gleason Score

The Gleason score is a histological grade designated to prostate cancer reporting of biopsy findings. From the biopsy, the most regular or main pattern of cell growth where the cancer is most obvious and second most common tumor pattern for another area of growth is assigned a score of 1 to 5 (the highest grade being 5) to give a combined score of 2 to 10. A Gleason score between 6 and 10 signifies prostate cancer;

the higher the score, the more likely the chance for aggressive disease or metastasis. Gleason scores of 5 and below are not significant and are not used to grade prostate cancer. For risk stratification in men with localized prostate cancer, risk can be stratified as low, intermediate and high on the basis the PSA, Gleason score and clinical stage (Graniero & Hooper, 2017).

- A Gleason score of **6 or lower:** The cells resemble the healthy cells, thus are well differentiated. Gleason 6 score is graded as a low grade cancer.
- A Gleason score of **7:** The cells somehow resemble the healthy cells, thus are moderately differentiated. Gleason 7 is graded as a medium grade cancer.
- Gleason scores of **8, 9, or 10:** The cells look significantly different from the healthy cells, thus are poorly differentiated or undifferentiated. Gleason 8, 9 and 10 are graded as high grade cancers.

Other important Vital Pre –operative Investigations

The following pre-operative investigations are done together with review of the prostate cancer specific test results that have been described above.

- Blood grouping and cross matching in case blood transfusion is needed.
- Electrocardiogram (EKG)
- Chest X-ray
- Renal function tests

Vital Signs Measurement

A complete set of vital observations; Temperature, pulse rate, respirations and blood pressure are measured for baseline values. In case of unstable values, surgery might be delayed in order to stabilize the patient. Patients are usually of different advancing age and their health status ranges from well to debilitated, therefore vital observations should be carefully checked carefully. The vital signs results , the signs and symptoms, the investigative findings and complete physical assessment gives accurate baseline data depicting the pre- operative patients health status and helps to prevent potential complications that may occur during and after prostate surgery (Ignatavicius, et al., 2018).

Psychosocial Care on Selected Treatment Options

The patient requires reassurance in order to allay anxiety on treatment options and the effect that the treatment will cause on his sexuality and family roles. He may also be worried about how the hospital medical bills shall be paid; therefore a social worker can be engaged to discuss the payment plans. Emphasizing the patient's results that show that the cancer is localized within the prostate gland (no presence of metastasis) is a basis of reassurance and guide to the selected treatment options. Radical prostatectomy is one of the conclusive treatment options for localized cancer of the prostate. The procedure involves the removal of the whole prostate gland and surrounding tissues including the seminal vesicles and occasionally the lymph nodes. It has some undesirable consequences that include erectile dysfunction and urinary incontinence.

Patient Shared Decisions and Informed Consent

Patient shared decision making is an agreement made by the patient after careful clinical decision support guidance and discussion with the health provider about the best available evidence as regards his health condition. For the case of a patient with prostate cancer, the health provider also puts into consideration the presenting symptoms, test results prior to surgery and the patients' preferences. This allows for a comprehensive examination of all aspects and outcomes of the intended surgery, including the benefits and risks in order to make an informed decision of the best treatment option (Graniero & Hooper, 2017).

The patient signs the consent form after understanding the nature of prostatectomy that is going to be done. A consent form is a written record of informed consent. It is worth noting that it is not the duty of the pre- operative nurse to provide detailed information about the surgical procedure to the patient. The nurse's specific duty is to elucidate on the factual information that has been given by the surgeon and dissipate any myths that the patient or family may have about the surgical experience. It is also the nurse's duty to confirm that the consent form is completely signed and serves as a witness to the signature, not to the fact that the patient is informed (Ignatavicius, et al., 2018).

Pre-operative Medication

Pre-operative medication is given to reduce anxiety, promote relaxation, prevent laryngospasm, reduce vagal-induced bradycardia, inhibit oral and gastric secretions, and decrease the amount of anesthetic needed for the induction and maintenance of

anesthesia. Pre medication drugs are usually given when the patient has been called to theater. Pre medication such as atropine 0.4-0.6 mgs which is an anticholinergic agent is given intravenously given 30-60 minutes before anesthesia is given to control salivation and bronchial secretions that may block the airway. Pre-operative antibiotics may also be given prior to operation within 60 minutes before commencement of surgery. Other drugs that may be used in the pre-operative period include sedatives such as hydroxyzine [Atarax]; hypnotics such as lorazepam [Ativan]; anxiolytics such as midazolam [Versed] and opioid analgesics such as morphine (Ignatavicius, et al., 2018).

The pre-operative patient should declare any medication he has been taking in order for the nurse to advice on continuity or discontinuation of the medication. This includes over-the-counter drugs, vitamins and herbs. This is because some medications such as anti-coagulants (aspirin, warfarin and vitamin E) may affect achieving hemostasis.

Hygiene

The pre-operative patient needs to have a thorough bath and oral care before operation. Showering with hibiclens microbial cleanser is essential to cleanse the skin of any microbes that could lead to infection at the surgical site during surgery. Hibiclens consists of a strong antiseptic called chlorhexidine gluconate which has the potential of killing skin microbes for a period of 24 hours after use.

Shaving on the ward by the patient is currently not recommended due to the risk of infection. However, the Centers for Disease Control and Prevention (CDC) recommends that, if shaving is deemed necessary, it should be done instantly prior to

commencing surgery either in the holding area of the operating room or in the operation theater itself and should be done by use of disposable sterile supplies and under aseptic principles. If it's done on the ward, it should be done by the nurse in the treatment room under the aseptic techniques too (Ignatavicius, et al., 2018).

Exercises

The pre-operative patient requires some simple active exercises such as walking around the bed in order to prevent occurrence of deep venous thrombosis (DVT) during the operation. Sequential Compression Devices (SCDs) in form of elastic compression stockings are applied to both the lower limbs prior to the operation in order to prevent DVT especially if the patient is going to be put in a lithotomy position during surgery. These stockings deflate and inflate with air thus aid in increasing blood flow through the lower limb veins hence preventing thrombosis. DVT prophylaxis is ideal for surgical patients and current research findings indicate that the utilization of SCDs decreases the risk of DVT by 60% (Graniero & Hooper, 2017).

Diet

The patient is instructed to refrain from eating easily digested food 6 hours prior to the operation and 2 hours for clear fluids in order to decrease gastric secretions, thus prevent aspiration of gastric contents that may occur during surgery (Ignatavicius, et al., 2018).

Elimination

The pre-operative patient should ensure that the bowels are empty prior to the operation. The nurse can administer an enema the evening prior to surgery or the morning

of surgery to avoid occurrence of haemorrhage and straining that may occur post operatively. Alternatively the patient can be given potent laxatives since enemas could be distressing to the older patients and may cause anal discomfort, electrolyte imbalance, orthostatic hypotension and vagal stimulation (Ignatavicius, et al., 2018).

In cases of discomfort due to urinary bladder distention or if the laboratory test results indicate azotemia (accumulation of nitrogenous waste products in the blood), the nurse prepares for introduction of a self-retaining catheter in order to decompress the bladder and drain the urine.

Patient Education Pre-operatively

The pre-operative patient education contains the following;

The patient is informed that he will be discharged with the indwelling catheter in situ. The patient and wife will be health educated on how to care for the indwelling catheter before discharge and informed that it will be removed at the first post-operative review visit at the urology surgical clinic.

The patient is encouraged to perform active exercises to avoid possible formation of blood clots that can occur in the lower extremities during and after surgery.

The patient shall be encouraged to use a small pillow over the incision site (incisional splinting) when coughing after prostatectomy in order to lessen pain and prevent unnecessary movement of the abdominal muscles which may lead to rupture of the wound.

The patient will be taught how to use the incentive spirometer so that it is easy to continue utilization after surgery. Incentive spirometry is a process in which the post-

operative patient is encouraged to take deep breaths with a purpose of promoting complete lung expansion and preventing pulmonary problems after anesthesia and surgery.

The patient is taught the importance of Kegels exercises. Kegels exercises strengthen the pelvic floor muscles which help in controlling the flow of urine. Training the pelvic floor muscles would help in hastening his recovery to continence after surgery. Furthermore, strengthening the pelvic floor muscles improves orgasmic function, and thus helps preserve and regain potency. The patient is taught the importance of having a consistent regimen of Kegel exercises and will be required to continue with it faithfully after surgery to prevent urinary incontinence.

The patient should be educated on the side effects of radical prostatectomy such as hemorrhage, infection at the incision sites and anesthetic complications. Most importantly, the patient shall be informed of the probability of having incontinence of urine and erectile dysfunction after surgery, both of which are life-altering complications that affect men both physically and socially. Thus it's important that the patient is encouraged to be open with the surgical team as they discuss the available treatment options before surgery.

Handover of the Pre-operative Patient

The patient shall then be dressed in a theater gown, identification band applied on the wrist, wheeled and handed over to the surgical team in operating theater with the patient's chart, all the necessary documents and theater cross check list.

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Graniero, C.E., & Hooper, G. (2017). Prostate cancer: An unfolding case study from symptoms to postoperative recovery. *Urologic Nursing*, *37*(5), 235-242, 250. doi:10.7257/1053-816X.2017.37.5.235

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https://wildirismedicaleducation.com/courses/prostate-cancer-ceu

Appendix I: Notes on Post-operative Prostate Cancer Surgical Care

According to Ignatavicius et al. (2018), the post-operative period starts when surgery has been successfully completed, patient transferred to the recovery room, critical care unit or surgical ward for monitoring until the patient is discharged from the hospital and until activity limitations have been lifted. The post-operative restrictions may continue at a home setting after discharge from the hospital.

Post-operative Care Goals

- To maintain homeostasis and hemodynamic stability
- To promote patient's physical and psychological comfort
- To prevent post- operative complications
- To provide health education about the procedure, prognosis, treatment and follow up care.

UCS Scenarios for the Post-operative Prostate Cancer Patient

Case Study Scenario

David Kitibwa is a 58-year-old Ugandan male university lecturer married to a housewife Suzan of 28 years with two sons in primary school. He plays golf in his leisure time and is involved in dairy farming. David had no significant past medical surgical history or prior health problems until he developed dysuria, nocturia, hematuria, and urinary hesitancy, accompanied by back and pelvic discomfort that began six months ago. David visited his family doctor for consultation, who then referred him to the urologist. David underwent various investigations, including a digital rectal examination (DRE) and a prostate-specific antigen (PSA) test. David's laboratory PSA was 5.2 ng/ml, and on

physical examination, the DRE showed an enlarged prostate that was asymmetric, hard, and non-tender. To further evaluate the elevated PSA and abnormal findings of his DRE, David underwent a prostate ultra sound and the trans-rectal ultrasound-guided biopsy indicated localized cancer of the prostate with a Gleason score of 8. David underwent pre-operative preparations and has had a successful radical laparoscopic robotic prostatectomy. The theater nurse has called the ward nurse to receive David from theater since he is in a stable recovery condition.

Scenario I: Postoperative Care of David Kitibwa

Student Instructions

You will be working with Mary, the Registered Graduate Nurse assigned to care for David in the post-operative period. The recovery room theater nurse has handed over a post-operative hand over report to Mary. Mary working on the Male Surgical ward is checking the post-operative orders:

- Admit to the Male Surgical Ward- Room 2.
- Monitor vital signs 4 hourly.
- Alert the physician if the temperature is greater than 38.6 degrees Celsius, pulse is greater than 110 or less than 60 beats/minute, and blood pressure greater than 180/100 mmHg or less than 90/50 mmHg.
- Monitor bowel sounds daily.
- Record the Jackson Pratt drain (JP) drain output hourly in the first 24 hours.
- Administer oxygen PRN to sustain oxygen saturation greater than 92%.

- Apply sequential compression devices (SCD) to bilateral lower extremities.
- Use an incentive spirometer 10 times hourly.
- Clear liquid diet initially, then fluids 3,000 mls per day.
- Advance diet as tolerated to a healthy diet.
- Normal Saline at 100 mL/hour.
- Monitor input and output chart
- Activity up ad lib.
- Pethidine 100 mgs IM, 8 hourly or Morphine 5 mgs IM, 8 hourly PRN for severe pain.
- Diclofenac 75 mgs IM, 8 hourly or Tramadol 100 mgs 8 hourly for breakthrough pain.
- Paracetamol 1 gm PO 8 hourly or PRN if temperature greater than 38.6 Degrees Celsius.
- Oxybutynin 5 mgs 6 hourly if tolerating fluids.
- Belladonna and opium (B & O) suppositories 30 mg per rectum, 8 hourly as needed for bladder spasms not relieved by oxybutynin or if unable to tolerate liquids .
- Catheter care and maintenance daily.

Graduate Nurses Notes on David's Vital Observations

Time	**1.30 pm**	**1.40 pm**	**1.45pm**	**2.00 pm**
Temperature in Degrees Celsius	37.4 C	37.4 C	37.2 C	37.3 C
Pulse rate	86	88	102	128
Respiratory rate	16	18	20	20
Blood pressure	146/72	135/73	110/70	95/50
Pulse-oximetry	95%	95%	94%	90%
Mental status	Alert	Alert	Anxious	Slightly confused
Pain rating	4/10	4/10	6/10	2/10

Daily Catheter Care and Maintenance

- 1.40 pm - Mary notices that David's indwelling urinary catheter with continuous bladder irrigation was draining clear, red-colored urine.
- 1.45 pm - bladder irrigation was increased and urine color was slightly red.
- 2.00 pm – David's pain had reduced and the urinary catheter was draining bright red urine.

Questions to Evoke Student Discussion

Discuss what you feel is the most important order in David's admitting orders for your nursing plan of care.

The most important and suitable order for David's nursing care plan is application of SCDs to the bilateral lower extremities as it helps to decrease the risk of DVT while

he is still admitted in the hospital. Current research has shown that the use of SCDs decreases the risk of getting DVT by 60%; thus, it is crucial for surgical patients to have DVT prophylaxis (Graniero & Hooper, 2017; Ignatavicius, et al., 2018).

How should you orient David and his family to the surgical nursing ward?

The nurse should greet and welcome the patient and family using therapeutic communication, soft skills and orient them to the nursing ward. The nurse ensures that staff names, nursing management teams' names, meal schedules, and work shift changes of the nursing and other medical staff are written on a white board which should be accessible by the patient and family for reference. The nurse introduces the interdisciplinary team which includes social workers, dieticians, counselors and pharmacists. All the patient's questions should be answered using appropriate professional language and ensure satisfactory read back in order to check understanding (Graniero & Hooper, 2017).

What vital observation findings require immediate follow up and what is the rationale?

- The mental status of the patient, the pulse rate, blood pressure and pulse oximetry.
- Rationale: The trends in the heart rate, blood pressure, and pulse oximetry reading are consistent with impending hypovolemic shock and the confusion could be a symptom of poor cerebral perfusion.
- The urine was only slightly red but is now once again bright red suggesting the bleeding is getting worse.

You walk into David's room to conduct the initial assessment, and in doing so, how you will screen for low health literacy levels during the assessment?

Since clients may have low health literacy, it is imperative for the nurse to provide updated current health education and information at all interactions with the clients, and to ensure that the information is clearly comprehended. Health literacy is defined as the client's ability to obtain, read and comprehend health information and use it to make the right health related decisions. The nurse should make sure that David and his family feel comfortable asking questions and expressing any prevailing concerns regarding the medical instructions received. The nursing team should use an understandable language while communicating to David and limit the amount of information that is given at ago. The nurse can screen for low health literacy by requesting David to repeat the kind of surgery he has undergone and why to ensure that he clearly understood the medical instructions (Graniero & Hooper, 2017).

What is the importance of listening for bowel sounds?

It is possible for a patient to develop a complication of paralytic ileus in the early postoperative period. If no bowel sounds are heard, the patient will be limited to sucking ice chips only. If bowel sounds are present, the patient will be allowed clear liquids initially, and if tolerated, may then be progressed to a soft diet and eventually to a regular diet (Graniero & Hooper, 2017; Ignatavicius, et al., 2018).

What will you teach David and his family about post-surgery care?

- David should anticipate to experience postoperative pain in the form of uncomfortable bladder spasms, associated urinary urgency and a distended

abdomen (due to carbon dioxide used during the procedure that has not yet dissolved into the tissues).

- There may be bruising at the incision site, but will usually subside within one week.
- David may have a JP drain immediately after surgery.
- David will receive clear liquids the evening of surgery and then progress to a regular diet.
- David should also be aware of constipation, which may occur as a side effect of pain medication. A stool softener is usually prescribed, and dietary instructions are provided. A nutrition consult is helpful prior to discharge.
- An incentive spirometer is provided to encourage deep breathing, and the nurse will instruct and encourage the patient to use and keep track of the progress of lung function to prevent pneumonia.
- Activity is increased during the postoperative period, and the patient is encouraged to ambulate with supervision (Graniero & Hooper, 2017; Ignatavicius, et al., 2018).

What nursing diagnoses can you generate during the post-operative period of David?

- Impaired urinary elimination related to mechanical obstruction: blood clots, edema, trauma, surgical procedure, pressure and irritation of catheter/balloon, loss of bladder tone due to preoperative over distension

evidenced by frequency, urgency, hesitancy, dysuria, incontinence, retention, bladder fullness and supra-pubic discomfort

- Acute pain related to irritation of the bladder mucosa; reflex muscle spasm associated with surgical procedure and/or pressure from bladder balloon (traction), evidenced by reports of painful bladder spasms, facial grimacing, guarding, restlessness and autonomic responses.
- Deficient knowledge related to lack of exposure/recall, information misinterpretation, and unfamiliarity with information resources evidenced by questions, request for information, statement of misconception, and verbalization of the problem, inaccurate follow-through of instructions and development of preventable complications.
- Risk for deficient fluid volume related to possible hemorrhage of the surgical site and restricted preoperative fluid intake.
- Risk for infection related to invasive procedures, instrumentation during surgery, catheter, and frequent bladder irrigation.
- Risk for sexual dysfunction related to situational crisis such as incontinence, leakage of urine after catheter removal, and radical procedure.
- Risk for depression related to possible sexual dysfunction and low self-concept.

Scenario 2: Discharge Education

After two days' hospitalization with no complications, David is informed that he is due for discharge and gets ready to be discharged home. The JP fluid drainage is minimal and the surgeon has considered its removal. The surgeon informs David that he will be discharged home with some medication that includes; analgesics, laxatives, and bladder antispasmodics which are vital for continuity of treatment. David will have a follow-up appointment in a week's time to undergo a cystogram that will determine whether the indwelling catheter can be removed. The social worker met with David and Suzan again before discharge to discuss any concerns about self-care needs. David's state of helplessness and fear of death has diminished as he has learnt that prostate cancer is the most common form of cancer affecting men. Due to his positive health outcome, David hopes he will inspire others to take control of their health and that a diagnosis of prostate cancer does not mean life is ending. David however wonders if he is completely cured of cancer and it will never recur (Graniero & Hooper, 2017).

Questions to Evoke Student Discussion

What is the importance of recording the JP drain output?

In practice, not all men who undergo prostatectomy have a drain in situ, however for those that have the JP drain, recording the drain output is important because, increasing output from the JP drain may indicate pelvic bleeding, leakage of urine, and leakage of lymph if there was involvement of the lymph nodes. Patients with robotic-assisted surgery may have higher output than open prostatectomy due to the presence of

retained irrigation solution that may not have been removed during the procedure (Graniero & Hooper, 2017; Ignatavicius, et al., 2018).

What are the teaching and learning priorities for David's discharge?

Priorities for David's discharge include thorough discharge education regarding detection and prevention of post-operative infection. He is advised to watch out for fever accompanied by chills; foul smelling purulent discharge and bleeding from the surgical site; foul smelling discharge from the catheter; redness, pain, swelling and warmth at the incisional site. He is taught what signs and symptoms would call for an emergency appointment and visit to the urological department, such as increased hematuria, severe vomiting, uncontrollable pain, swelling or calf pain in one leg and catheter falling out; and the quickest way to access care (Graniero & Hooper, 2017).

To avoid infection, David will be taught to clean the incisions with soap and water, and if there are any steri-strips present, they will fall off on their own. He is advised to maintain the incisional site clean and dry. He is taught how to care for the urinary catheter by gently washing the catheter with soap and water twice daily and paying keen interest to the tip of the penis and foreskin (for the uncircumcised). Other catheter instructions include ensuring the catheter is working properly, anchoring the catheter to the leg, keeping the catheter below the level of the bladder, and emptying the drainage bag before the bag gets full. Teaching should also include good hand hygiene and showering daily. Other teaching aspects include not soaking in a bathtub or hot tub until the catheter is removed.

The patient should be reassured that appearance of bloody urine in the early post-operative days is normal and should not be a cause for concern unless there is presence of large clots or bright red blood. David is also told that he may experience bladder spasms that can be controlled by medications, such as oxybutynin (Ditropan®).The patient must also be taught what to expect after the removal of the indwelling catheter. David is counseled that it is normal to experience mild incontinence during this time but would usually subside over time. The patient is further reassured that incontinence may also occur during coughing, laughing, and accompanying strenuous movements. If a patient reports persistent uncomfortable bloating, a post-void residual test will need to be obtained to check for urinary retention owing to the proximity of the rectum and prostate area.

The patient is encouraged to take plenty of fluids such as drinking at least eight glasses of water daily in order to prevent constipation and also to avoid straining on defecation. Other instructions include refraining from driving for the first three weeks and not to lift anything heavier than 2 kilograms for the first six weeks. Discharge teaching is important to ensure adequate transition to home and increased quality of life.

Erectile dysfunction (ED) is a significant concern for patients who have undergone prostate cancer surgery. This depends on whether the surgeon performed a nerve sparing approach during surgery or not. David should be reassured that ED is a relatively common complication of prostatectomy but also counselled on the availability of several pharmacological and non-pharmacological treatment options from which he can benefit from. Pharmacological medication includes use of the oral PDE-5 inhibitors

such as sildenafil (Viagra), vardenafil (Levitra) and tadalafil (Cialis), insertion of intraurethral suppositories (MUSE), and use of prostaglandin E1 intracavernous injections. Non-pharmacologic treatment has no effect on biochemical erectile tissue reaction and consist use of vacuum constriction devices and penile implants or prostheses. Couple counseling is beneficial to improve the intimacy adaptation process for the wife (Graniero & Hooper, 2017; Ignatavicius, et al., 2018).

How would you determine that Suzan understands the discharge instructions and is able to care for David safely at home?

The discharge instructions will be printed on a leaflet, and Suzan will be requested to recapitulate the discharge information with the nurse and David to ensure that the instructions are well understood. David and Suzan should be able to verbalize understanding of surgical procedure performed, potential complications, therapeutic needs, discharge instructions and follow up care. The nurse should use open-ended questions and encourage the family to raise any concerns. Suzan must be availed with the medical teams' contact information which must be carefully written out for correspondence should the couple have questions after discharge (Graniero & Hooper, 2017).

David and Suzan are worried about the relapse of the cancer after prostatectomy. What reassurance can you give them about their concern?

David and Suzan should be told that his PSA should reduce to a very low or even undetectable level (less than 0.1 ng/mL) within a couple of months after the laparoscopic robotic radical prostatectomy. David should check his PSA levels after 6-8 weeks

because some residue PSA can remain in the blood for several weeks after surgery, even if all of the prostate cells were removed. It's also very important that David allays anxiety by consulting his doctor to understand what PSA level might concern the doctor since the estimates may be unique to individual patients. David should be told that if his PSA levels are rising fast, it may be a sign that the cancer is recurring and may need further tests and medical attention. David is informed that patients who have a PSA level that doubles within a 3-month period tend to have a worse prognosis (outlook) compared to men whose PSA level does not double. This is also known as PSA doubling time (Watson, 2021)**.** There could be a biochemical occurrence which may show a test result above 0.2 ng/mL a few months after prostatectomy which is an indicator that the cancer is recurring (Watson, 2021)**.**The recurrence of prostate cancer could partly be due to residue prostate cancer cells that could have remained in the prostate tissue or in other body parts if slight metastasis had happened. The doctor will advise David to carry out repeat PSA tests once every 6 to 12 months for about 5 years and if the doctor determines that chances of recurrence are high, then 3 monthly tests are done. If the PSA levels stay normal, David can switch to once-a-year PSA tests.

David and Susan can be given hope by quoting statistics of clients who have survived prostate cancer after radical prostatectomy. The couple is also encouraged to join counseling and support groups.

Scenario 3 – Post operative continuity of care of David. K at Home

Two days upon discharge, David develops pyrexia. Susan is also concerned about the cloudy and decreased urine drainage from the indwelling catheter. Susan has brought

David back to the urological surgical outpatient clinic. Laboratory investigations are done and results indicate the following;

Complete Blood Count	**Current**	**High/Low/Within Normal Range**	**Previous**
White Blood Cells (4.5-11.0 mm 3)	13.2		7.5
Hemoglobin level (12-16 g/dL)	14.2		14.4
Neutrophil % (42-72)	84		66
Basic Metabolic Panel	**Current**	**High/Low/Within Normal Range**	**Previous**
Creatinine (0.6-1.2 mg/dL)	1.8		1.2
Potassium (3.5-5.0 mEq/L)	3.7		3.8
Lactate (0.5-2.2 mmol/L)	2.4		2.2
Urine Analysis	**Current**	**Abnormal/Within Normal Range**	
Color (yellow)	Yellow		Yellow
Clarity (clear)	Cloudy		Clear
Specific Gravity (1.015-1.030)	1.042		1.032
Bacteria	Large		Few
Epithelial cells	Few		Few

Questions to Evoke Student Discussion

What laboratory results are relevant and should be clinically recognized as significant by the nurse?

- There is an elevated white blood cell count and neutrophils indicating presence of infection. Hemoglobin level is decreasing. The lactate level is elevated indicating possible sepsis due to inability for the kidneys to perfuse correctly. Lactate values greater than two is a critical value.
- Raised creatinine levels further indicate possible impairment of kidney filtering function.
- The cloudy urine, increased specific gravity or concentration of urine, presence of bacteria and epithelial cells are indicators of urinary tract infection.

What is the most likely problem that David is presenting with? David has developed a urinary tract infection which is systemically progressively developing into possible sepsis.

Discuss the nursing interventions that are appropriate for David's diagnosis in order of priority and give the rationale.

1. Establish a peripheral intravenous line. **Rationale** - It's important to establish a venous access site prior to administering any medication treatment regimen and intravenous fluids.
2. Infuse 0.9 % Normal Saline 1,000 mls as a bolus. Observe strict input and output chart. **Rationale**- The treatment plan is to replace the fluid that was lost, correct current perfusion, and then continue to maintain adequate perfusion.

3. Screen for sepsis, take off a sample of blood/urine for culture and sensitivity and administer the Ceftriaxone 1 gram intravenously as prescribed. **Rationale**- Antibiotics help to fight against the infection.
4. Acetaminophen 650 mgs. **Rationale** - To reduce temperature
5. Intravenous Paracetamol 1 gram. **Rationale**- To control pain
6. Assess the vital signs 2 hourly, then 4 hourly. **Rationale**- To have an insight of the overall clinical status of the patient

What additional nursing educational and discharge priorities are needed for David and Susan? In order to prevent future recurrence of urinary tract infection, the couple need to be educated on vigilance on catheter care, the need to increase fluid intake to promote renal blood flow/flushing bacteria from the urinary tract and to complete the prescribed antibiotic therapy.

End of Case Study Reflection Questions for the Two Groups

1. What did you benefit from this case study as a group and were all questions answered properly?

2. Did you feel adequately prepared to complete the case study based on your knowledge level?

3. What were the most critical nursing assessments and interventions based on this case study?

4. How will you apply the learning from this case study for the future clients you will care for?

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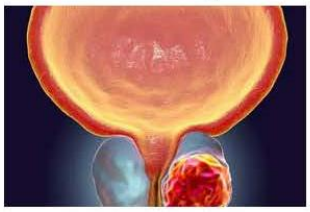
Appendix J: Day 1: Pre-operative Prostate Cancer Surgical Care PowerPoint

Prostate Cancer Surgical Care



Care of the patient with Prostate Cancer before, during and after surgery.

What is Prostate Cancer?

Prostate cancer is a form of cancer that begins in the gland cells of the prostate and is found only in males.

Pre-operative Prostate Cancer Surgical Care

- The pre-operative prostate cancer surgical care begins when the diagnosis and staging of prostate cancer has been done and the patient is scheduled for prostate surgery until he is received in the surgical suite.

Goals of Pre-operative Prostate Cancer Surgical Care

The major pre-operative goals for the pre-operative prostate cancer surgical patient are to;

- Reduce anxiety about his diagnosis and surgery
- Learn about his prostate cancer disorder and surgical intervention
- Understand the pre-operative protocols and impending intra and post- operative experience

Brief Review of the Anatomy and Physiology of the Prostate Gland

- The prostate gland is found in the male pelvis in front of the rectum and is inferior to the urinary bladder, surrounding the top portion of the urethra. It serves as a reproductive organ by secreting semen, a fluid that nourishes and transports the sperm.
- It also affects the urinary system by regulating urine flow by sealing off the entry from the bladder to the urethra by help of the sphincter muscle hence it helps to prevent urine flow during sexual intercourse.

- In case of prostate cancer, micturition will be altered since it may press on the urethral sphincter. When prostatectomy is performed, it may lead to partial temporary urinary incontinence.
- It will also lead to infertility because there will not be semen production and seminal vesicles will have been removed. Sperms will be produced by the testis but will be reabsorbed in the body.
- Finally, it may lead to erectile dysfunction if the nerves are damaged, so the patient may not be able to have and sustain an erection, thus affecting the sex life.

Pre- operative Investigations and Interpretation of Diagnostic Findings

1. Digital Rectal Examination (DRE)

Abnormal Digital Rectal Examination (DRE) which is usually hard, nodular, enlarged, and asymmetrical in prostate cancer). NB. It should be noted that not all men with prostate cancer have an abnormal DRE.

2. Prostate Specific Antigen (PSA) Test

An abnormal elevated (PSA) reading according to age specific range is a clinical indicator of prostate cancer. PSA is a protein produced by epithelial cells of the prostate gland.

Whereas PSA is produced by normal prostate tissue in the males, its blood levels have a tendency to increase in malignancy.

As part of normal physiology, PSA is released into prostatic fluid to help liquefy sperm. It has a dual role as it can be utilized in diagnosis and surveillance of prostate cancer.

Prostate Specific Antigen (PSA) Test

For African-American men, in order for the "PSA test to have 95% sensitivity, the following normal reference ranges should be used: in their 40s, 0 to 2.0 nannograms (ng) of PSA per milliliter; in their 50s, 0 to 4.0ng per milliliter; in their 60s, 0 to 4.5ng per milliliter; and in their 70s, 0 to 5.5ng per milliliter" (Graniero & Hooper, 2017).

4. Multiparametric Magnetic Resonance Imaging (mpMRI)

Multiparametric MRI is the first-line investigation in patients suspected to have localized prostate cancer after the DRE and PSA tests.

Multiparametric MRI is defined as a method used to obtain an ideal three dimensional prostate image by combining T2 weighted, diffusion weighted and dynamic contrast enhanced images to detect prostate cancer.

4. Multiparametric Magnetic Resonance Imaging (MRI)

- It is interpreted using a 5 point Likert Score as follows;
- Clinically significant cancer highly unlikely to be present
- Clinically significant cancer is unlikely to be present
- Chance of clinically significant cancer is equivocal
- Clinically significant cancer is likely to be present
- Clinically significant cancer is highly likely to be present

5. Transrectal or Transperineal Ultra Sound Biopsy

- An older method of checking for prostate cancer, it gives a correct depiction of the prostate gland. The procedure is performed by use of a rectal probe, which shows the prostate size and detects any abnormalities such as tumors.

6. Bone isotope scan, Computerized Tomography (CT) and further MRI

These tests can be performed to evaluate for any distant spread of prostate cancer.

- **Staging and Grading**

In prostate cancer the **TNM classification** is used for staging whilst the **Gleason score** gives the histological grade according to biopsy results. The acronym TNM stands for; T- Tumor, N- Node and M- Metastasis. It assigns a score for each of the primary tumor, evident spread of the cancer to the lymph nodes and any distant metastasis.

7. Gleason Score

The Gleason score is a histological grade designated to prostate cancer reporting of biopsy findings. From the biopsy, the most regular or main pattern of cell growth where the cancer is most obvious and second most common tumor pattern for another area of growth is assigned a score of 1 to 5 (the highest grade being 5) to give a combined score of 2 to 10. A Gleason score between 6 and 10 signifies prostate cancer; the higher the score, the more likely the chance for aggressive disease or metastasis.

Other Vital Pre –operative Investigations

The following pre-operative investigations are done together with review of the prostate cancer specific test results that have been described above.

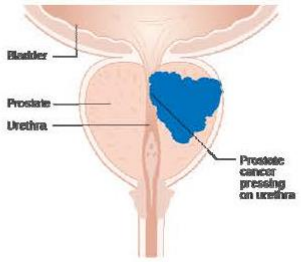
1-Blood grouping and cross matching in case blood transfusion is needed.

2- Electrocardiogram (EKG)

3- Chest X-ray

4- Renal function tests

Signs and Symptoms of Prostate Cancer



Signs and Symptoms of Prostate Cancer

1. A feeling of urinary retention
2. Painful micturition (dysuria)
3. Visible blood in urine (hematuria)
4. A weak flow of urine on micturition
5. Difficulty in starting to urinate (hesitancy)
6. Urine dribbling upon completion of micturition
7. Need to micturate more frequently at night (nocturia)
8. Urinary leakage before the patient gets to the urinal (urgency)
9. Symptoms of advanced metastatic disease which may include (hematuria, erectile dysfunction, blood in semen, osteodynia especially of the lower back and cachexia (un explained loss of weight which is not intentional)

Additional Assessment

10. The nurse assesses if the patient has encountered low libido and erectile dysfunction.
11. If the patient can move out of bed and back to the bed without help.
12. If he has lost weight or is pale.
13. Complete medical history taken.

Priority Nursing Diagnoses for the Pre-operative Prostate Cancer Patient

Basing on the assessment data, the following nursing diagnoses may be generated;

1. Fear of death related to altered health status evidenced by the prostate cancer diagnosis.
2. Anxiety about the impending surgery and its outcome related to prostatectomy evidenced by factual prostatectomy information.

Priority Nursing Diagnoses for the Pre-operative Prostate Cancer Patient

3. Impaired urinary elimination related to hesitancy in starting urination and haematuria evidenced by patient's verbalization of micturition problems.

4. Acute pain related to disease progress evidenced by the patient's verbalization of back pain.

Priority Nursing Diagnoses for the Pre-operative Prostate Cancer Patient

5. Knowledge deficit related to the disorder, pre-operative routines, impending surgical interventions/ treatment protocols, and out-come expectations evidenced by the patient's questions.

6. Risk for interrupted family processes related to disease process, changes in family roles and socio economic status (Graniero & Hooper, 2017).

Vital Signs Measurement

A complete set of vital observations; Temperature, pulse rate, respirations and blood pressure are measured for baseline values. In case of unstable values, surgery might be delayed in order to stabilize the patient. Patients are usually of different advancing age and their health status ranges from well to debilitated, therefore vital observations should be checked carefully.

Psychosocial Care on Selected Treatment Options

- The patient requires reassurance in order to allay anxiety on treatment options and the effect that the treatment will cause on his sexuality and family roles. For example, the effects of radical prostatectomy.
- He may also be worried about how the hospital medical bills shall be paid; therefore a social worker can be engaged to discuss the payment plans.

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Day 2: Pre-operative Prostate Cancer Surgical Care PowerPoint

Pre-Operative Prostate Cancer Care Day 2

Patient Shared Decision and Informed Consent

Patient shared decision making is an agreement made by the patient after careful clinical decision support guidance and discussion with the health provider about the best available evidence as regards his health condition.

Informed Consent

The patient signs the consent form after understanding the nature of prostatectomy that is going to be done.

A consent form is a written record of informed consent. It is worth noting that it is not the duty of the pre-operative nurse to provide detailed information about the surgical procedure to the patient.

The nurse's specific duty is to elucidate on the factual information that has been given by the surgeon and dissipate any myths that the patient or family may have about the surgical experience.

Pre-operative Medication

Pre-operative medication is given to reduce anxiety, promote relaxation, prevent laryngospasm, reduce vagal-induced bradycardia, inhibit oral and gastric secretions, and decrease the amount of anesthetic needed for the induction and maintenance of anesthesia.

Pre operative medication continued

The pre-operative patient should declare any medication he has been taking in order for the nurse to advice on continuity or discontinuation of the medication.

This includes over-the-counter drugs, vitamins and herbs. This is because some medications such as anti-coagulants (aspirin, warfarin and vitamin E) may affect achieving hemostasis.

Hygiene

- The pre-operative patient needs to have a thorough bath and oral care before operation.
- Shaving on the ward by the patient is currently not recommended due to the risk of infection.
- If it's done on the ward, it should be done by the nurse in the treatment room under aseptic techniques. (Ignatavicius, et al., 2018).

Exercises

- The pre-operative patient requires some simple active exercises such as walking around the bed in order to prevent occurrence of deep venous thrombosis (DVT) during the operation.
- Sequential Compression Devices (SCDs) in form of elastic compression stockings are applied to both the lower limbs prior to the operation in order to prevent DVT especially if the patient is going to be put in a lithotomy position during surgery.

Sequential Compression Devices (SCDs)

SCDs in form of elastic compression stockings are applied to both the lower limbs prior to the operation in order to prevent DVT

Diet

The patient is instructed to refrain from eating solid food 6 hours prior to the operation and 2 hours for clear fluids in order to decrease gastric secretions, thus prevent aspiration of gastric contents that may occur during surgery (Ignatavicius, et al., 2018).

Elimination

The pre-operative patient should ensure that the bowels are empty prior to the operation. The nurse can administer an enema the evening prior to surgery or the morning of surgery to avoid occurrence of haemorrhage and straining that may occur post operatively.

Elimination (Urinary Bladder)

In cases of discomfort due to urinary bladder distention or if the laboratory test results indicate azotemia (accumulation of nitrogenous waste products in the blood), the nurse prepares for introduction of a self retaining catheter in order to decompress the bladder and drain the urine.

Patient Education Pre-operatively

The pre-operative patient education contains the following;

1. The patient is informed that he will be discharged with the indwelling catheter in situ. The patient and wife will be health educated on how to care for the indwelling catheter before discharge and informed that it will be removed at the first post-operative review visit at the urology surgical clinic.

2. The patient is encouraged to perform active exercises to avoid possible formation of blood clots that can occur in the lower extremities during and after surgery.

Patient Education Pre-operatively

3. The patient shall be encouraged to use a small pillow over the incision site (incisional splinting) when coughing after prostatectomy in order to lessen pain and prevent unnecessary movement of the abdominal muscles which may lead to rupture of the wound.

4. The patient will be taught how to use the incentive spirometer so that it is easy to continue utilization after surgery. Incentive spirometry is a process in which the post- operative patient is encouraged to take deep breaths with a purpose of promoting complete lung expansion and preventing pulmonary problems after anesthesia and surgery.

Patient Education Pre-operatively

5. The patient is taught the importance of Kegel exercises. Kegel exercises strengthen the pelvic floor muscles which help in controlling the flow of urine. Training the pelvic floor muscles would help in hastening his recovery to continence after surgery.

Patient Education Pre-operatively

6. The patient should be educated on the side effects of radical prostatectomy such as hemorrhage, infection at the incision sites and anesthetic complications. Most importantly, the patient shall be informed of the probability of having incontinence of urine and erectile dysfunction after surgery, both of which are life-altering complications that affect men both physically and socially.

Handover of the Pre-operative Patient

The patient shall then be dressed in a theater gown, identification band applied on the wrist, wheeled and handed over to the surgical team in operating theater with the patient's chart, all the necessary documents and theater cross check list.

Pre-Operative Theatre Cross Check list

- The surgical checklist is an essential part of surgical safety.
- The checklist is meant to ensure that the team performs key safety checks without having to rely on memory and instill a sense of shared accountability for the outcome of the procedure.

Content of the Theater Cross Checklist

- Patient identity- name and date of birth
- Procedure
- Site of operation
- Informed consent for surgery
- Known allergies
- Any antibiotic and anticoagulant prophylaxis
- Laboratory and histology results
- Fasting
- Denture removal
- Shaving

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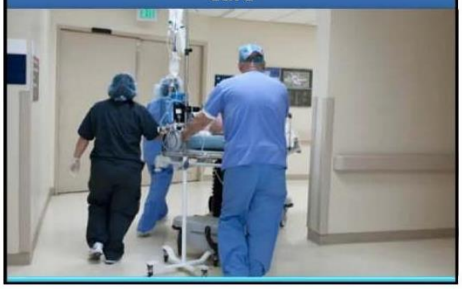
Appendix K: Day 3: Post-operative Prostate Cancer Surgical Care PowerPoint

Post-Operative Prostate Cancer Surgical Care



Post-operative Care Goals

- To maintain homeostasis and hemodynamic stability
- To promote patient's physical and psychological comfort
- To prevent post- operative complications
- To provide health education about the procedure, prognosis, treatment and follow up care

Introduction

Case Study Scenario

David K. is a 58-year-old Ugandan male university lecturer married to a housewife Suzan of 28 years with two sons in primary school. He plays golf in his leisure time and is involved in dairy farming.

David had no significant past medical surgical history or prior health problems until he developed dysuria, nocturia, hematuria, and urinary hesitancy, accompanied by back and pelvic discomfort that began six months ago.

Case Study Scenario

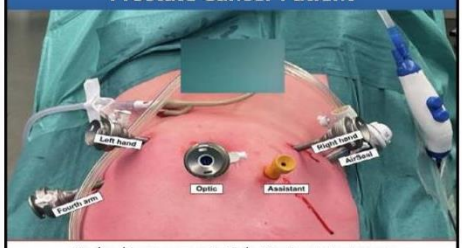
David visited his family doctor for consultation, who then referred him to the urologist. David underwent various investigations, including a digital rectal examination (DRE) and a prostate-specific antigen (PSA) test. David's laboratory PSA was 5.2 ng/ml, and on physical examination, the DRE showed an enlarged prostate that was asymmetric, hard, and non-tender.

Case Study Scenario

To further evaluate the elevated PSA and abnormal findings of his DRE, David underwent a prostate ultra sound and the trans rectal ultrasound-guided biopsy indicated localized cancer of the prostate with a Gleason score of 8.

David underwent pre-operative preparations and has had a successful radical laparoscopic robotic prostatectomy. The theater nurse has called the ward nurse to receive David from theater since he is in a stable recovery condition.

UCS Scenarios for the Post-operative Prostate Cancer Patient



Radical Laparoscopic Robotic Prostatectomy

Scenario I: Postoperative Care of David K

Student Instructions:

You will be working with Mary, the Registered Graduate Nurse assigned to care for David in the post-operative period. The recovery room theater nurse has handed over a post-operative hand over report to Mary. Mary working on the Male Surgical ward is checking the post-operative orders:

Post-Operative Orders

A. Admit to the Male Surgical Ward- Room 2

B. Monitor vital signs 4 hourly.

C. Alert the physician if the temperature is greater than 38.6 degrees Celsius, pulse is greater than 110 or less than 60 beats/minute, and blood pressure greater than 180/100 mmHg or less than 90/50 mmHg.

Post-Operative Orders

D. Monitor bowel sounds daily.

G. Apply sequential compression devices (SCD) to bilateral lower extremities.

E. Record the Jackson Pratt drain (JP) drain output hourly in the first 24 hours.

H. Use an incentive spirometer 10 times hourly.

F. Administer oxygen PRN to sustain oxygen saturation greater than 92%.

I. Clear liquid diet initially, then fluids 3,000mls per day.

Post-Operative Orders

J. Advance diet as tolerated to a healthy diet.

M. Activity up ad lib.

K. Normal Saline at 100 mL/hour.

N. Pethidine 100 mgs IM,8 hourly or Morphine 5 mgs IM, 8 hourly PRN for severe pain.

L. Monitor input and output chart

O. Diclofenac 75 mgs IM, 8 hourly or Tramadol 100 mgs 8 hourly for breakthrough pain.

Post-Operative Orders

P. Paracetamol 1gm PO 8 hourly or PRN if temperature greater than 38.6 Degrees Celsius.

Q. Oxybutynin 5 mgs 6 hourly if tolerating fluids.

Post-Operative Orders

R. Belladonna and opium (B & O) suppositories 30 mg per rectum, 8 hourly as needed for bladder spasms not relieved by oxybutynin or if unable to tolerate liquids .

S. Catheter care and maintenance daily.

Graduate Nurses Notes on David's Vital Observations

- 1.40 pm - Mary notices that David's indwelling urinary catheter with continuous bladder irrigation was draining clear, red-colored urine.
- 1.45 pm - bladder irrigation was increased and urine color was slightly red.
- 2.00 pm – David's pain had reduced and the urinary catheter was draining bright red urine.

Graduate Nurses Notes on David's Vital Observations

Time	1.30 pm	1.40 pm	1.45 pm	2.00 pm
Temperature	37.4 C	37.4 C	37.2 C	37.3 C
Pulse rate	86	88	102	128
Respiratory rate	16	18	20	20
Blood pressure	146/72	135/73	110/70	95/50
Pulse oximetry	95%	95%	94%	90%
Mental status	Alert	Alert	Anxious	Slightly confused
Pain Rating	4/10	4/10	6/10	2/10

Discussion Questions

1. Discuss what you feel is the most important Doctor's order in David's admitting instructions for your nursing plan of care.

Discussion Questions

2. How should you orient David and his family to the surgical nursing ward?

Discussion Questions

3. You walk into David's room to conduct the initial assessment, and in doing so, how will you screen for low health literacy levels during the assessment?

Discussion Questions

4. Explain the key post operative investigation that is crucial in David's follow up care.

Discussion Questions

5. What nursing diagnoses can you generate during the post-operative period of David?

Discussion Questions

6. What vital observation findings require immediate follow up and what is the rationale ?

Discussion Questions

- 7. Nurse Mary suspects the client is experiencing hemorrhagic shock. Explain the appropriate interventions to include in David's plan of care.

Discussion Questions

- 8. Explain the Psychosocial therapy on the side effects of Prostate Cancer Surgery.

Discussion Questions

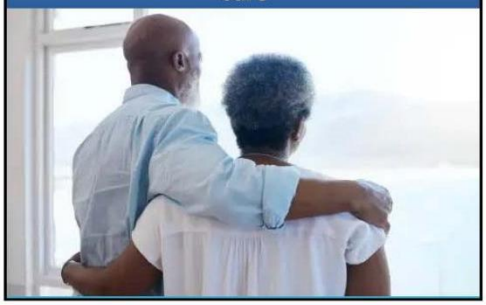
- 9. What is the importance of listening for bowel sounds?

Discussion Questions

10. What will you teach David and his family about post-surgery care?

Day 4: Post-operative Prostate Cancer Surgical Care PowerPoint

Post-operative Prostate Cancer Surgical Care



Discharge Education

- After two days' hospitalization with no complications, David is informed that he is due for discharge and gets ready to be discharged home. The JP fluid drainage is minimal and the surgeon has considered its removal. The surgeon informs David that he will be discharged home with some medication that includes; analgesics, laxatives, and bladder antispasmodics which are vital for continuity of treatment.

Discharge Education

- David will have a follow-up appointment in a week's time to undergo a cystogram that will determine whether the indwelling catheter can be removed. The social worker met with David and Suzan again before discharge to discuss any concerns about self care needs. David's state of helplessness and fear of death has diminished as he has learnt that prostate cancer is the most common form of cancer affecting men.

Discussion Questions

1. What is the importance of recording the Jackson Pratt (JP) drain output?

Discussion Questions

2. What are the teaching and learning priorities for David's discharge?

Discussion Questions

3. How would you determine that Suzan understands the discharge instructions and is able to care for David safely at home?

Discussion Questions

- Two days upon discharge, David develops pyrexia. Susan is also concerned about the cloudy and decreased urine drainage from the indwelling catheter. Susan has brought David back to the urological surgical outpatient clinic. Laboratory investigations are done and results indicate the following;

Discussion Questions

Complete Blood Count	Current	High/Low/Within Normal Range	Previous
White Blood Cells (4.5-11.0 mm 3)	13.2		7.5
Hemoglobin level (12-16 g/dL)	14.2		14.4
Neutrophil % (42-72)	84		66
Basic Metabolic Panel	Current		Previous
Creatinine (0.6-1.2 mg/dL)	1.8		1.2
Potassium (3.5-5.0 mEq/L)	3.7		3.8
Lactate (0.5-2.2 mmol/L)	3.2		
Urine Analysis	Current		
Color (yellow)	Yellow		Yellow
Clarity (clear)	Cloudy		Clear
Specific Gravity (1.015-1.030)	1.042		1.032
Bacteria	Large		Few

Discussion Questions

- **4. What laboratory results are relevant and should be clinically recognized as significant by the nurse?**

Discussion Questions

- **5. What is the most likely problem that David is presenting with?**

Discussion Questions

- **6. Discuss the nursing interventions that are appropriate for David's diagnosis in order of priority and give the rationale.**

Discussion Questions

- **7. What additional educational and discharge priorities are needed for David and Susan?**

Discussion Questions

8. David and Suzan are worried about the relapse of the cancer after prostatectomy. What reassurance can you give them about their concern?

End of Case Study Reflection Questions for the Two Groups

1. What did you benefit from this case study as a group and were all questions answered properly?

2. Did you feel adequately prepared to complete the case study based on your knowledge level?

End of Case Study Reflection Questions for the Two Groups

3. What were the most critical nursing assessments and interventions based on this case study?

4. How will you apply the learning from this case study for the future clients you will care for?

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Appendix L: Individual Participants' Perceived Learning Scores of the 19 Questions on Lecture Pedagogy

Lecture Pedagogy: Responses of each Participant to the 19 Questions

Question:	1	2	3	4	5	6	7	8	9
Participant									
1	3	4	3	3	4	4	4	3	4
2	4	3	4	1	4	4	3	3	4
3	4	3	4	3	4	3	4	3	4
4	3	3	4	3	4	3	4	4	3
5	4	3	3	2	4	4	3	4	3
6	3	4	3	4	4	3	4	3	4
7	4	3	4	3	3	3	3	3	4
8	3	4	4	3	3	3	4	3	3
9	3	4	3	2	4	3	4	4	4
10	4	3	4	3	3	3	4	3	4
11	4	4	4	3	4	4	3	4	4
12	4	4	4	3	3	4	4	4	3
13	4	4	3	2	4	4	4	3	4
14	4	4	3	3	3	4	4	4	3
15	3	4	4	2	3	3	3	4	2
16	3	4	4	2	4	3	3	3	4
17	3	4	3	2	3	3	4	4	3
18	1	3	3	2	2	2	3	2	4
19	2	3	3	2	2	4	3	3	3
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22	3	4	3	2	3	2	3	3	4
23	3	4	3	3	3	4	3	2	3
24	3	4	4	3	2	3	3	3	4
25	1	2	4	1	2	3	2	3	2
26	2	3	4	2	3	3	4	2	2
27	4	3	4	2	3	3	1	3	2
28	3	4	3	2	2	4	3	4	3
29	4	3	3	3	2	3	3	2	2
30	2	3	4	2	4	4	4	3	4
Totals	94	103	106	73	94	99	100	95	99

Lecture Pedagogy: Responses of each Participant to the 19 Questions

10	11	12	13	14	15	16	17	18	19
3	3	3	3	3	3	3	4	3	4
3	3	4	3	4	4	4	3	4	4
4	4	4	3	4	3	4	4	3	4
4	4	3	4	3	3	3	3	3	3
4	4	4	3	4	2	4	3	4	4
4	4	4	3	2	3	4	3	4	3
4	4	4	3	3	4	4	3	3	4
4	3	3	4	4	3	4	4	3	4
3	4	4	3	4	3	4	3	3	3
3	3	4	3	4	4	4	3	4	3
3	4	4	3	4	4	4	4	4	4
4	3	4	4	4	4	3	4	4	4
4	3	3	4	3	4	4	3	3	4
4	3	4	4	3	4	4	4	4	3
4	4	4	3	3	4	3	3	3	2
3	3	3	3	3	4	3	4	3	3
2	2	2	1	3	3	4	3	3	4
3	3	4	1	0	1	3	4	2	3
4	3	4	2	3	3	4	3	3	3
2	2	3	4	3	3	4	3	3	4
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2	2	3	3	2	3	3	3	3	4
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2	0	3	2	1	2	2	2	3	3
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1	2	3	1	2	3	3	2	1	3
4	2	3	4	4	3	4	3	4	3
2	2	4	3	2	3	0	4	4	2
4	4	4	4	4	3	3	3	4	4
97	90	106	91	91	95	102	98	97	102

Lecture Pedagogy: Responses of each Participant to the 19 Questions

Totals	Means	SD	Category
64	3.37	0.50	HPL
66	3.47	0.77	HPL
69	3.63	0.50	HPL
64	3.37	0.50	HPL
66	3.47	0.70	HPL
66	3.47	0.61	HPL
66	3.47	0.51	HPL
66	3.47	0.51	HPL
65	3.42	0.61	HPL
66	3.47	0.51	HPL
72	3.79	0.42	HPL
71	3.74	0.45	HPL
67	3.53	0.61	HPL
69	3.63	0.50	HPL
61	3.21	0.71	MPL
62	3.26	0.56	HPL
56	2.95	0.85	MPL
46	2.42	1.12	LPL
57	3.00	0.67	MPL
60	3.16	0.69	MPL
51	2.68	0.58	MPL
61	3.21	0.63	MPL
56	2.95	0.62	MPL
61	3.21	0.63	MPL
40	2.11	0.94	LPL
58	3.05	0.71	MPL
46	2.42	0.96	LPL
62	3.26	0.73	HPL
51	2.68	1.00	MPL
67	3.53	0.70	HPL
1832			
Mean	**3.21**		
SD		**0.78**	
Category			**MPL**

Key: Likert scale category abbreviations in full.

LPL- Low Perceived Learning
MPL- Moderate Perceived Learning
HPL- High Perceived Learning

Appendix M: Individual Participants' Perceived Learning Satisfaction Scores on a Scale of 0-10-Lecture Pedagogy

Question 20:

Participant:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Score	8	7	6	8	7	9	7	7	7	8	6	9

13	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
7	8	7	6	8	6	7	8	7	8.5	8	8	8

26	**27**	**28**	**29**	**30**	**Mean**	**SD**	**Category**
8	7	8	8	9	7.52	0.88	MS

Key: Category abbreviations in full.

HS- Highly Satisfied
MS- Moderately Satisfied
D- Dissatisfied

Appendix N: Performance of each Perceived Learning Statement for the Lecture Pedagogy

	Lecture					
Items	**SD**	**D**	**A**	**SA**	**M**	**StD**
1. This pedagogy enabled me to attain all my objectives properly	2	3	14	11	3.13	0.86
2. I found being taught by this pedagogy more interesting	0	2	13	15	3.43	0.63
3. It enhanced my comprehension of the concepts of this topic	0	0	15	15	3.53	0.51
4. It promoted active involvement and teamwork with colleagues in the learning process	2	14	13	1	2.43	0.68
5. It helped me develop my clinical decision-making skills	0	7	12	11	3.13	0.78
6. It increased my motivation to learn and participate in class activities	0	2	17	11	3.30	0.60
7. It enhanced my clinical reasoning skills	1	1	15	13	3.33	0.71
8. It facilitated me to learn better, share knowledge and clinical experiences	0	5	15	10	3.17	0.70
9. The pedagogy promotes neat organization of information	0	6	9	15	3.30	0.79

	Lecture					
Items	**SD**	**D**	**A**	**SA**	**M**	**StD**
10. It possesses a more practical learning approach that fosters clinical imagination	1	6	8	15	3.23	0.90
11. The pedagogy enhances longer retention of learned material	0	6	14	9	3.00	0.91
12. It is applicable to most nursing topics and subjects	0	1	12	17	3.53	0.57
13. The pedagogy increased my self-confidence in learning	3	3	14	10	3.03	0.93
14. It reduced monotony in the classroom and made me enjoy the learning sessions	1	5	12	11	3.03	1.00
15. It encouraged my in-depth thinking and integration of knowledge	1	3	16	10	3.17	0.75
16. It allowed for more space for asking and responding to questions	0	1	12	16	3.40	0.86
17. It was more efficient in making me ready to plan for patient care in the clinical environment	0	2	18	10	3.27	0.58
18. It allows for more objective evaluation of learning outcomes	1	1	18	10	3.23	0.68
19. It is easier to sum up all the topics and content areas in the subject	0	2	14	14	3.40	0.62

Appendix O: Performance of each Perceived Learning Statement by Frequency and Percentage-Lecture

Items		Frequency	Percentage
1.This pedagogy enabled me attain all my objectives properly	Strongly Disagree	2	7%
	Disagree	3	10%
	Agree	14	47%
	Strongly Agree	11	37%
2. I found being taught by this pedagogy more interesting	Strongly Disagree	0	0%
	Disagree	2	7%
	Agree	13	43%
	Strongly Agree	15	50%
3. It enhanced my comprehension of the concepts of this topic	Strongly Disagree	0	0%
	Disagree	0	0%
	Agree	15	50%
	Strongly Agree	15	50%
4. It promoted active involvement and teamwork with colleagues in the learning process	Strongly Disagree	2	7%
	Disagree	14	47%
	Agree	13	43%
	Strongly Agree	1	3%
5. It helped me develop my clinical decision making skills	Strongly Disagree	0	0%
	Disagree	7	23%
	Agree	12	40%
	Strongly Agree	11	37%
6. It increased my motivation to learn and participate in class activities	Strongly Disagree	0	0%
	Disagree	2	7%
	Agree	17	57%
	Strongly Agree	11	37%

Performance of each Perceived Learning Statement by Frequency and Percentage-Lecture			
7. It enhanced my clinical reasoning skills	Strongly Disagree	1	3%
	Disagree	1	3%
	Agree	15	50%
	Strongly Agree	13	43%
8. It facilitated me to learn better, share knowledge and clinical experiences	Strongly Disagree	0	0%
	Disagree	5	17%
	Agree	15	50%
	Strongly Agree	10	33%
9. The pedagogy promotes neat organization of information	Strongly Disagree	0	0%
	Disagree	6	20%
	Agree	9	30%
	Strongly Agree	15	50%
10. It possesses a more practical learning approach that fosters clinical imagination	Strongly Disagree	1	3%
	Disagree	6	20%
	Agree	8	27%
	Strongly Agree	15	50%
11. The pedagogy enhances longer retention of learned material	Strongly Disagree	0	0%
	Disagree	6	21%
	Agree	14	48%
	Strongly Agree	9	31%
12. It is applicable to most nursing topics and subjects	Strongly Disagree	0	0%
	Disagree	1	3%
	Agree	12	40%
	Strongly Agree	17	57%

Performance of each Perceived Learning Statement by Frequency and Percentage-Lecture			
13. The pedagogy increased my self-confidence in learning	Strongly Disagree	3	10%
	Disagree	3	10%
	Agree	14	47%
	Strongly Agree	10	33%
14. It reduced monotony in the classroom and made me enjoy the learning sessions	Strongly Disagree	1	3%
	Disagree	5	17%
	Agree	12	41%
	Strongly Agree	11	38%
15. It encouraged my in-depth thinking and integration of knowledge	Strongly Disagree	1	3%
	Disagree	3	10%
	Agree	16	53%
	Strongly Agree	10	33%
16. It allowed for more space for asking and responding to questions	Strongly Disagree	0	0%
	Disagree	1	3%
	Agree	12	41%
	Strongly Agree	16	55%
17. It was more efficient in making me ready to plan for patient care in the clinical environment	Strongly Disagree	0	0%
	Disagree	2	7%
	Agree	18	60%
	Strongly Agree	10	33%
18. It allows for more objective evaluation of learning outcomes	Strongly Disagree	1	3%
	Disagree	1	3%
	Agree	18	60%
	Strongly Agree	10	33%

Performance of each Perceived Learning Statement by Frequency and Percentage-Lecture			
19. It is easier to sum up all the topics and content areas in the subject	Strongly Disagree	0	0%
	Disagree	2	7%
	Agree	14	47%
	Strongly Agree	14	47%

Appendix P: Participants' Perceived Learning Individual Scores of the 19 Questions on the UCS Pedagogy

Unfolding Case Study Pedagogy: Responses of each Participant to the 19 Questions

Question:	1	2	3	4	5	6	7	8	9
Participant									
1	4	4	3	4	4	4	3	4	3
2	3	4	4	4	4	4	4	4	4
3	4	4	4	4	3	4	4	4	4
4	4	4	4	4	4	4	4	4	4
5	4	4	4	4	3	4	4	4	4
6	4	4	3	4	4	4	4	4	4
7	4	4	4	4	3	4	4	4	3
8	4	4	3	4	4	3	4	4	4
9	2	4	3	4	4	4	4	4	4
10	4	4	3	4	4	4	3	4	3
11	3	3	4	4	3	3	3	3	2
12	3	3	4	4	4	3	3	3	3
13	2	4	2	4	4	4	4	2	3
14	4	4	2	4	4	4	4	4	4
15	4	4	4	4	3	4	3	3	2
16	3	4	3	4	4	4	4	4	2
17	4	4	4	4	4	4	4	3	4
18	2	3	2	4	4	2	3	2	0
19	4	4	4	4	3	4	4	4	3
20	4	4	4	4	4	4	4	4	3
21	4	3	4	3	3	2	3	4	3
22	4	4	4	4	4	3	3	4	2
23	4	4	4	4	4	4	4	4	4
24	4	2	2	4	4	3	4	4	4
25	4	3	3	4	2	3	3	3	3
26	3	4	4	3	4	3	3	3	4
27	4	4	3	4	3	4	3	4	3
28	3	2	3	4	3	3	2	4	4
29	4	4	3	4	4	3	4	4	2
30	3	4	3	3	4	4	3	3	3
Totals	107	111	101	117	109	107	106	109	95

Unfolding Case Study Pedagogy: Responses of each Participant to the 19 Questions

10	11	12	13	14	15	16	17	18	19
4	4	4	3	4	4	3	4	3	4
4	3	4	3	4	4	4	3	4	3
4	4	4	4	4	4	4	4	4	4
4	4	4	4	4	4	3	4	4	4
4	4	4	4	4	4	4	4	4	4
4	4	4	3	4	4	4	4	2	4
4	4	4	4	4	4	1	4	4	2
4	4	3	3	4	3	3	4	3	3
4	4	4	4	4	3	4	4	4	3
4	3	3	4	3	4	4	4	3	4
3	3	3	3	3	3	3	3	3	2
4	4	4	3	3	4	3	4	4	2
4	2	3	4	4	4	3	3	3	3
4	4	4	4	4	4	4	4	4	3
4	4	3	3	4	3	3	3	4	2
4	4	4	4	3	4	3	3	4	3
4	4	3	4	4	4	3	4	4	3
4	2	3	2	3	2	1	3	2	1
3	3	3	4	4	4	4	4	4	4
3	3	3	4	3	3	4	3	3	3
4	3	4	3	4	4	4	4	4	3
4	4	3	4	4	3	3	3	2	3
4	4	4	4	4	4	4	4	4	4
4	3	3	2	4	2	4	3	0	3
4	4	3	2	1	4	3	1	2	3
4	2	4	2	3	2	4	2	2	3
4	2	2	4	4	3	4	3	3	3
4	3	2	3	2	4	4	3	2	4
4	4	4	3	4	4	4	4	3	4
4	4	3	3	4	3	3	3	3	3
117	104	103	101	108	106	102	103	95	94

Unfolding Case Study Pedagogy: Responses of each Participant to the 19 Questions

Totals	Means	SD	Category
70	3.68	0.48	HPL
71	3.74	0.45	HPL
75	3.95	0.23	HPL
75	3.95	0.23	HPL
75	3.95	0.23	HPL
72	3.79	0.54	HPL
69	3.63	0.83	HPL
68	3.58	0.51	HPL
71	3.74	0.56	HPL
69	3.63	0.50	HPL
57	3.00	0.47	MPL
65	3.42	0.61	HPL
62	3.26	0.81	HPL
73	3.84	0.50	HPL
64	3.37	0.68	HPL
68	3.58	0.61	HPL
72	3.79	0.42	HPL
45	2.37	1.07	LPL
71	3.74	0.45	HPL
67	3.53	0.51	HPL
66	3.47	0.61	HPL
65	3.42	0.69	HPL
76	4.00	0.00	HPL
59	3.11	1.10	MPL
55	2.89	0.94	MPL
59	3.11	0.81	MPL
64	3.37	0.68	HPL
59	3.11	0.81	MPL
70	3.68	0.58	HPL
63	3.32	3.00	HPL
1995			
Mean	**3.50**		
SD		**0.71**	
Category			**HPL**

Key: Likert scale category abbreviations in full.

LPL- Low Perceived Learning
MPL- Moderate Perceived Learning
HPL- High Perceived Learning

Appendix Q: Individual Participants' Perceived Learning Satisfaction Scores on a Scale of 0-10 - UCS Pedagogy

Question 20:

Participant	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Score	9	9	8	8	8	9.5	9	8	7	9	9	9	9	9	8

16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
8	9	8	8	8	8	9.5	9	9	9	7	7	8	9	9

Mean	**SD**	**Category**
8.47	0.72	HS

Key: Category abbreviations in full.

HS- Highly Satisfied
MS- Moderately Satisfied
D- Dissatisfied

Appendix R: Performance of each Perceived Learning Statement for the UCS Pedagogy

	UCS					
Items	**SD**	**D**	**A**	**SA**	**M**	**StD**
1. This pedagogy enabled me to attain all my objectives properly	0	3	7	20	3.57	0.68
2. I found being taught by this pedagogy more interesting	0	2	5	23	3.70	0.60
3. It enhanced my comprehension of the concepts of this topic	0	4	11	15	3.37	0.72
4. It promoted active involvement and teamwork with colleagues in the learning process	0	0	3	27	3.90	0.31
5. It helped me develop my clinical decision-making skills	0	1	9	20	3.63	0.56
6. It increased my motivation to learn and participate in class activities	0	2	9	19	3.57	0.63
7. It enhanced my clinical reasoning skills	0	1	12	17	3.53	0.57
8. It facilitated me to learn better, share knowledge and clinical experiences	0	2	7	21	3.63	0.61
9. The pedagogy promotes neat organization of information	0	5	11	13	3.17	0.95
10. It possesses a more practical learning approach that fosters clinical imagination	0	0	3	27	3.90	0.31

	UCS					
Items	**SD**	**D**	**A**	**SA**	**M**	**StD**
11. The pedagogy enhances longer retention of learned material	0	4	8	18	3.47	0.73
12. It is applicable to most nursing topics and subjects	0	2	13	15	3.43	0.63
13. The pedagogy increased my self-confidence in learning	0	4	11	15	3.37	0.72
14. It reduced monotony in the classroom and made me enjoy the learning sessions	1	1	7	21	3.60	0.72
15. It encouraged my in-depth thinking and integration of knowledge	0	3	8	19	3.53	0.68
16. It allowed for more space for asking and responding to questions	2	0	12	16	3.40	0.81
17. It was more efficient in making me ready to plan for patient care in the clinical environment	1	1	12	16	3.43	0.73
18. It allows for more objective evaluation of learning outcomes	0	6	9	14	3.17	0.99
19. It is easier to sum up all the topics and content areas in the subject	1	4	15	10	3.13	0.78

Appendix S: Performance of each Statement for UCS by Frequency and Percentage

Items		Frequency	Percentage
1. This pedagogy enabled me attain all my objectives properly	Strongly Disagree	0	0%
	Disagree	3	10%
	Agree	7	23%
	Strongly Agree	20	67%
2. I found being taught by this pedagogy more interesting	Strongly Disagree	0	0%
	Disagree	2	7%
	Agree	5	17%
	Strongly Agree	23	77%
3. It enhanced my comprehension of the concepts of this topic	Strongly Disagree	0	0%
	Disagree	4	13%
	Agree	11	37%
	Strongly Agree	15	50%
4. It promoted active involvement and teamwork with colleagues in the learning process	Strongly Disagree	0	0%
	Disagree	0	0%
	Agree	3	10%
	Strongly Agree	27	90%
5. It helped me develop my clinical decision making skills	Strongly Disagree	0	0%
	Disagree	1	3%
	Agree	9	30%
	Strongly Agree	20	67%
6. It increased my motivation to learn and participate in class activities	Strongly Disagree	0	0%
	Disagree	2	7%
	Agree	9	30%
	Strongly Agree	19	63%

Performance of each Statement for UCS by Frequency and Percentage			
7. It enhanced my clinical reasoning skills	Strongly Disagree	0	0%
	Disagree	1	3%
	Agree	12	40%
	Strongly Agree	17	57%
8. It facilitated me to learn better, share knowledge and clinical experiences	Strongly Disagree	0	0%
	Disagree	2	7%
	Agree	7	23%
	Strongly Agree	21	70%
9. The pedagogy promotes neat organization of information	Strongly Disagree	0	0%
	Disagree	5	17%
	Agree	11	38%
	Strongly Agree	13	45%
10. It possesses a more practical learning approach that fosters clinical imagination	Strongly Disagree	0	0%
	Disagree	0	0%
	Agree	3	10%
	Strongly Agree	27	90%
11. The pedagogy enhances longer retention of learned material	Strongly Disagree	0	0%
	Disagree	4	13%
	Agree	8	27%
	Strongly Agree	18	60%
12. It is applicable to most nursing topics and subjects	Strongly Disagree	0	0%
	Disagree	2	7%
	Agree	13	43%
	Strongly Agree	15	50%

Performance of each Statement for UCS by Frequency and Percentage			
13. The pedagogy increased my self-confidence in learning	Strongly Disagree	0	0%
	Disagree	4	13%
	Agree	11	37%
	Strongly Agree	15	50%
14. It reduced monotony in the classroom and made me enjoy the learning sessions	Strongly Disagree	1	3%
	Disagree	1	3%
	Agree	7	23%
	Strongly Agree	21	70%
15. It encouraged my in-depth thinking and integration of knowledge	Strongly Disagree	0	0%
	Disagree	3	10%
	Agree	8	27%
	Strongly Agree	19	63%
16. It allowed for more space for asking and responding to questions	Strongly Disagree	2	7%
	Disagree	0	0%
	Agree	12	40%
	Strongly Agree	16	53%
17. It was more efficient in making me ready to plan for patient care in the clinical environment	Strongly Disagree	1	3%
	Disagree	1	3%
	Agree	12	40%
	Strongly Agree	16	53%
18. It allows for more objective evaluation of learning outcomes	Strongly Disagree	0	0%
	Disagree	6	21%
	Agree	9	31%
	Strongly Agree	14	48%

Performance of each Statement for UCS by Frequency and Percentage			
19. It is easier to sum up all the topics and content areas in the subject	Strongly Disagree	1	3%
	Disagree	4	13%
	Agree	15	50%
	Strongly Agree	10	33%

Appendix T: Comparison of Individual Participants' Perceived Learning Scores on the 19 Items for the Lecture and UCS Pedagogies

Questions	1		2		3		4	
Participant	Lecture	UCS	Lecture	UCS	Lecture	UCS	Lecture	UCS
1	3	4	3	4	4	3	1	4
2	4	3	4	4	4	4	2	4
3	3	4	4	4	4	4	2	4
4	3	4	3	4	4	4	3	4
5	3	4	4	4	3	4	3	4
6	3	4	4	4	3	3	1	4
7	4	4	3	4	4	4	2	4
8	4	4	4	4	4	3	2	4
9	3	3	4	4	4	3	2	4
10	3	4	3	4	3	3	1	4
11	3	3	4	3	4	4	1	4
12	3	3	4	3	4	4	2	4
13	3	3	3	4	4	3	1	4
14	3	4	3	4	4	4	2	4
15	3	4	3	4	4	4	1	4
16	4	3	3	4	4	4	2	4
17	3	4	4	4	3	4	2	4
18	3	2	3	3	3	2	2	4
19	3	4	3	4	4	4	2	4
20	3	4	3	4	4	4	1	4
21	3	4	4	3	3	4	2	3
22	3	4	4	4	3	4	2	4
23	3	3	4	3	3	3	3	4
24	3	3	3	2	3	2	1	3
25	4	4	2	3	4	3	1	4
26	3	3	3	3	4	1	2	4
27	4	4	3	4	4	3	2	4
28	3	3	4	2	3	3	2	4
29	4	3	3	2	4	2	3	4
30	2	3	3	3	4	2	3	4
Total	**96**	**106**	**102**	**106**	**110**	**99**	**56**	**118**

Comparison of Individual Participants' Perceived Learning Scores on the 19 Items for the Lecture and UCS Pedagogies

5		6		7		8		9	
Lecture	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**
3	4	4	4	4	3	4	4	4	3
3	4	3	4	4	4	3	4	4	4
3	4	3	4	4	4	3	4	3	4
3	4	3	4	3	4	4	4	3	4
3	4	2	4	3	4	4	4	3	4
3	4	4	4	3	4	3	4	3	4
4	4	3	4	3	4	3	4	4	3
4	4	4	3	4	4	3	4	4	4
4	4	4	4	4	4	4	4	4	4
4	4	4	4	4	3	4	4	4	3
4	4	3	4	4	4	3	3	4	4
4	4	4	3	4	3	3	4	4	3
3	4	4	4	3	4	4	4	4	3
2	4	3	4	2	4	3	4	4	4
3	3	3	4	4	3	4	3	4	4
4	4	4	4	4	4	3	4	4	2
3	4	3	4	4	4	4	4	3	4
3	4	3	3	3	3	3	4	4	4
3	3	4	4	3	4	3	4	3	4
3	4	3	4	3	4	4	4	4	3
3	3	3	3	3	3	4	4	4	3
3	4	2	3	3	3	4	4	4	2
3	3	4	3	3	3	3	4	3	1
3	2	3	2	3	3	4	3	4	1
2	3	3	3	2	3	3	3	4	3
3	4	3	3	4	3	2	3	2	2
3	3	3	4	1	3	3	4	2	3
2	3	4	3	3	4	4	4	3	4
2	3	3	2	3	2	2	3	2	2
4	3	3	2	4	3	3	4	4	1
94	**109**	**99**	**105**	**99**	**105**	**101**	**114**	**106**	**94**

Comparison of Individual Participants' Perceived Learning Scores on the 19 Items for the Lecture and UCS Pedagogies

10		11		12		13		14	
Lecture	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**
3	4	3	4	4	4	4	3	2	4
3	4	3	3	4	4	3	3	3	4
4	4	3	4	4	2	3	4	3	4
3	4	3	4	3	4	4	4	3	4
3	4	4	4	4	2	3	4	1	4
3	4	3	4	4	4	3	3	2	4
4	4	3	4	4	4	3	4	3	4
4	4	3	4	4	3	4	3	4	4
4	4	3	4	4	2	3	4	3	4
4	4	4	3	4	3	3	4	4	3
4	3	3	4	4	3	3	4	3	4
3	4	4	4	4	4	4	4	2	3
4	4	4	4	4	3	3	4	3	4
3	4	4	4	4	4	3	4	1	4
4	4	3	4	4	3	3	3	3	4
4	4	4	4	4	4	3	4	3	3
3	4	3	4	4	3	4	4	3	4
3	4	3	2	4	3	3	2	3	3
4	3	3	4	4	2	3	4	2	4
3	3	3	3	3	3	4	4	3	3
3	4	3	3	3	4	3	3	3	3
4	4	3	4	4	3	4	4	3	3
3	3	4	1	4	1	3	2	2	2
3	3	3	1	3	1	3	3	2	3
4	4	4	4	4	3	3	2	1	1
4	4	3	3	3	1	4	3	3	2
1	4	2	1	3	2	1	4	2	4
4	4	2	3	3	2	4	3	4	2
2	4	2	3	4	2	3	3	2	3
4	3	4	3	4	3	4	2	4	3
102	**114**	**96**	**101**	**113**	**86**	**98**	**102**	**80**	**101**

Comparison of Individual Participants' Perceived Learning Scores on the 19 Items for the Lecture and UCS Pedagogies

15		16		17		18		19	
Lecture	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**	**Lecture**	**UCS**
3	4	2	3	4	4	3	3	4	4
3	4	4	4	3	3	3	4	4	3
3	4	2	4	3	4	3	4	4	4
3	4	3	3	3	4	3	4	3	4
4	4	3	4	3	4	3	4	4	4
4	4	4	4	3	4	4	2	3	2
4	4	3	3	4	4	3	4	4	3
4	3	4	3	4	4	3	3	4	4
3	3	3	4	3	4	3	4	4	3
4	4	4	4	3	4	4	3	4	4
4	3	3	4	3	4	4	4	4	2
4	4	3	3	3	4	3	4	4	3
3	4	4	4	4	4	4	4	4	4
3	4	2	4	1	4	2	4	4	3
4	3	3	3	3	3	3	4	4	4
4	4	3	3	4	3	3	4	3	3
3	4	4	3	3	4	3	4	4	3
3	2	3	2	4	3	3	2	4	1
3	4	4	4	3	4	3	4	3	2
3	3	4	4	3	3	3	3	2	3
3	4	3	4	4	3	3	4	3	3
4	3	3	3	4	3	3	2	4	3
3	2	2	2	3	3	3	3	4	2
3	2	2	3	2	3	2	3	4	1
4	4	2	4	2	3	3	2	3	3
3	4	4	4	3	3	3	4	3	1
3	4	3	4	2	3	1	3	3	3
3	4	4	4	3	3	4	2	3	4
3	2	2	3	4	3	4	3	3	4
3	2	3	2	3	2	4	3	4	1
101	**104**	**93**	**103**	**94**	**104**	**93**	**101**	**108**	**88**

Comparison of Individual Participants' Perceived Learning Scores on the 19 Items for the Lecture and UCS Pedagogies

Lecture	UCS	Lecture	UCS	Lecture	UCS	Lecture	UCS
62	70	3.26	3.68	0.96	0.51	HPL	HPL
64	71	3.37	3.74	1.02	0.50	HPL	HPL
61	74	3.21	3.89	1.22	1.26	MPL	HPL
60	75	3.16	3.95	0.91	0.45	MPL	HPL
60	74	3.16	3.89	1.33	0.56	MPL	HPL
60	70	3.16	3.68	1.10	0.48	MPL	HPL
65	73	3.42	3.84	0.91	0.60	HPL	HPL
71	69	3.74	3.63	1.15	0.37	HPL	HPL
66	70	3.47	3.68	0.76	0.42	HPL	HPL
68	69	3.58	3.63	1.13	0.23	HPL	HPL
65	68	3.42	3.58	0.96	0.96	HPL	HPL
66	68	3.47	3.58	1.06	0.93	HPL	HPL
66	72	3.47	3.79	1.03	0.96	HPL	HPL
53	75	2.79	3.95	0.71	0.96	MPL	HPL
63	68	3.32	3.58	1.00	0.61	HPL	HPL
67	69	3.53	3.63	0.84	0.93	HPL	HPL
63	73	3.32	3.84	0.60	0.37	HPL	HPL
60	53	3.16	2.79	1.02	1.41	MPL	MPL
60	70	3.16	3.68	1.26	0.92	MPL	HPL
59	67	3.11	3.53	0.96	0.37	MPL	HPL
60	65	3.16	3.42	1.17	0.45	MPL	HPL
64	64	3.37	3.37	1.39	1.26	HPL	HPL
60	48	3.16	2.53	0.51	0.51	MPL	MPL
54	44	2.84	2.32	1.01	0.48	MPL	LPL
55	59	2.89	3.11	0.81	0.96	MPL	MPL
59	55	3.11	2.89	0.90	0.42	MPL	MPL
46	64	2.42	3.37	1.08	1.24	LPL	HPL
62	61	3.26	3.21	0.90	0.96	HPL	MPL
55	53	2.89	2.79	0.82	0.45	MPL	MPL
67	49	3.53	2.58	0.58	0.37	HPL	MPL
1841	**1960**						
Means		**3.23**	**3.44**				
				1.04	**0.78**		
Categories						**MPL**	**HPL**

Key: Likert scale category abbreviations in full.

LPL- Low Perceived Learning
MPL- Moderate Perceived Learning
HPL- High Perceived Learning

Appendix U: Comparison of Individual Participants' Perceived Learning Satisfaction Scores on a scale of 0-10 for the Lecture and UCS Pedagogies

Question 20

Participant	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Pedagogy:													
Lecture	6	8	7	8	7	7	6	7	7	9	7	8	8
UCS	9	9	7	8	7	8	7	8	9	8	8	8	8

14	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
8	7	7	8	9	9	8	7	8	8	9	8
9	8	9	9	9	9.5	7	8	10	8	9	8

26	**27**	**28**	**29**	**30**	**Mean**	**SD**	**Category**
8	8	7	8	9	7.70	0.84	MS
8	7	7	7	10	8.22	0.91	HS

Key: Category abbreviations in full.

HS - Highly Satisfied
MS - Moderately Satisfied
D - Dissatisfied

Appendix V: Comparison of Performance against each Perceived Learning Statement for the Lecture and UCS Pedagogies

	Lecture						UCS					
Items	**SD**	**D**	**A**	**SA**	**M**	**StD**	**SD**	**D**	**A**	**SA**	**M**	**StD**
1. This pedagogy enabled me to attain all my objectives properly	0	1	22	7	3.20	0.48	0	1	12	17	3.53	0.57
2. I found being taught by this pedagogy more interesting	0	1	16	13	3.40	0.56	36	0	0	0	3.53	0.68
3. It enhanced my comprehension of the concepts of this topic	0	0	10	20	3.67	0.48	1	4	10	15	3.30	0.84
4. It promoted active involvement and teamwork with colleagues in the learning process	9	16	5	0	1.87	0.68	0	0	2	28	3.93	0.25
5. It helped me develop my clinical decision-making skills	0	4	18	8	3.13	0.63	0	1	9	20	3.63	0.56

	Lecture						UCS					
Items	**SD**	**D**	**A**	**SA**	**M**	**StD**	**SD**	**D**	**A**	**SA**	**M**	**StD**
6. It increased my motivation to learn and participate in class activities	0	2	17	11	3.30	0.60	0	3	9	18	3.50	0.68
7. It enhanced my clinical reasoning skills	1	2	14	13	3.30	0.75	0	1	13	16	3.50	0.57
8. It facilitated me to learn better, share knowledge and clinical experiences	0	2	15	13	3.37	0.61	0	0	6	24	3.80	0.41
9. The pedagogy promotes neat organizatio n of information	0	3	8	19	3.53	0.68	3	4	9	14	3.13	1.01
10. It possesses a more practical learning approach that fosters clinical imagination	1	1	13	15	3.40	0.72	0	0	6	24	3.80	0.41
11. The pedagogy enhances longer retention of	0	3	18	9	3.20	0.61	3	1	8	18	3.37	0.96

	Lecture						UCS					
Items	**SD**	**D**	**A**	**SA**	**M**	**StD**	**SD**	**D**	**A**	**SA**	**M**	**StD**
learned material												
12. It is applicable to most nursing topics and subjects	0	0	7	23	3.77	0.43	3	7	11	9	2.87	0.97
13. The pedagogy increased my self-confidence in learning	1	0	19	10	3.27	0.64	0	4	10	16	3.40	0.72
14. It reduced monotony in the classroom and made me enjoy the learning sessions	3	8	15	4	2.67	0.84	1	3	10	16	3.37	0.81
15. It encouraged my in-depth thinking and integration of knowledge	0	0	19	11	3.37	0.49	0	5	6	19	3.47	0.78
16. It allowed for more space for asking and responding to questions	0	7	13	10	3.10	0.76	0	3	11	16	3.43	0.68
17. It was more efficient in	1	3	17	9	3.13	0.73	0	1	14	15	3.47	0.57

	Lecture						UCS					
Items	**SD**	**D**	**A**	**SA**	**M**	**StD**	**SD**	**D**	**A**	**SA**	**M**	**StD**
making me ready to plan for patient care in the clinical environment												
18. It allows for more objective evaluation of learning outcomes	1	2	20	7	3.10	0.66	0	5	9	16	3.37	0.76
19. It is easier to sum up all the topics and content areas in the subject	0	1	10	19	3.60	0.56	4	4	12	10	2.93	1.01

Appendix W: Comparison of Performance against each Perceived Learning Statement for Lecture versus UCS by Frequency and Percentage

Count & Percentage Number %

Items	SD	N %	D	N %	A	N %	SA	N %
1. This pedagogy enabled me attain all my objectives properly	0	0	1	3	22	73	7	23
	UCS							
	0	0	1	3	12	40	17	57
2. I found being taught by this pedagogy more interesting	**Lecture**							
	0	0	1	3	16	53	13	43
	UCS							
	0	0	3	10	8	27	19	63
3. It enhanced my comprehension of the concepts of this topic	**Lecture**							
	0	0	0	0	10	33	20	67
	UCS							
	1	3	4	13	10	33	15	50
4. It promoted active involvement and teamwork with colleagues in the learning process	**Lecture**							
	9	30	16	53	5	17	0	0
	UCS							
	0	0	0	0	2	7	28	93
5. It helped me develop my clinical decision making skills	**Lecture**							
	0	0	4	13	18	60	8	27
	UCS							
	0	0	1	3	9	30	20	67
6. It increased my motivation to learn and participate in class activities	**Lecture**							
	0	0	2	7	17	57	11	37
	UCS							
	0	0	3	10	9	30	18	60
7. It enhanced my clinical reasoning skills	**Lecture**							
	1	3	2	7	14	47	13	44
	UCS							
	0	0	1	3	13	43	16	53

Items	Count & Percentage Number %							
	SD	N %	D	N %	A	N %	SA	N %
8. It facilitated me to learn better, share knowledge and clinical experiences	**Lecture**							
	0	0	2	7	15	50	13	43
	UCS							
	0	0	0	0	6	20	24	80
9. The pedagogy promotes neat organization of information	**Lecture**							
	0	0	3	10	8	27	19	63
	UCS							
	3	10	4	13	9	30	14	47
10. It possesses a more practical learning approach that fosters clinical imagination	**Lecture**							
	1	3	1	3	13	43	15	50
	UCS							
	0	0	0	0	6	20	24	80
11. The pedagogy enhances longer retention of learned material	**Lecture**							
	0	0	3	10	18	60	9	30
	UCS							
	3	10	1	3	8	27	18	60
12. It is applicable to most nursing topics and subjects.	**Lecture**							
	0	0	0	0	7	23	23	77
	UCS							
	3	10	7	23	11	37	9	30
13. The pedagogy increased my self-confidence in learning	**Lecture**							
	1	3	0	0	19	63	10	33
	UCS							
	0	0	4	13	10	33	16	53
14. It reduced monotony in the classroom and made me enjoy the learning sessions	**Lecture**							
	3	10	8	27	15	50	4	13
	UCS							
	1	3	3	10	10	33	16	53
15. It encouraged my in-depth thinking and integration of knowledge	**Lecture**							
	0	0	0	0	19	63	11	37
	UCS							
	0	0	5	17	6	20	19	63

	Count & Percentage Number %							
Items	**SD**	**N %**	**D**	**N %**	**A**	**N %**	**SA**	**N %**
16. It allowed for more space for asking and responding to questions	**Lecture**							
	0	0	7	83	13	43	10	33
	UCS							
	0	0	3	10	11	37	16	53
17. It was more efficient in making me ready to plan for patient care in the clinical environment	**Lecture**							
	1	3	3	10	17	57	9	30
	UCS							
	0	0	1	3	14	47	15	50
18. It allows for more objective evaluation of learning outcomes	**Lecture**							
	1	3	2	7	20	67	7	23
	UCS							
	0	0	5	17	9	30	16	53
19. It is easier to sum up all the topics and content areas in the subject	**Lecture**							
	0	0	1	3	10	33	19	63
	UCS							
	4	13	4	13	12	40	14	33

Appendix X: Comparison of Perceived Learning by Categories using the Lecture and UCS Pedagogies

	Lecture		UCS	
Categories	Frequency	%	Frequency	%
High (≥ than 3.25)	15	50	22	73
Moderate (2.50 -3.24)	14	47	7	23
Low (< 2.50)	1	3	1	3

Appendix Y: Comparison of Perceived Satisfaction as an Element of Perceived Learning by Categories using the Lecture and UCS Pedagogies

	Lecture		UCS		Difference
Categories	Frequency	%	Frequency	%	%
Highly Satisfied (8.1-10)	5	17	11	37	20
Moderately Satisfied (5.1 to 8.0)	25	83	19	63	-20

Appendix Z: Nursing Students' Verbatim Opinion Responses of the Lecture and UCS Pedagogies

Lecture Pedagogy

- The lecture pedagogy does not enhance wider understanding of the topic of study since it does not give chance for active participation-1
- I think during the lecture pedagogy, we have also to engage in team work with classmates like in UCS pedagogy since it enhances someone's critical thinking as we discuss in groups -1
- Using the lecture pedagogy, the lecturer should encourage students to engage through discussions, questions and interactive elements to enhance understanding-1
- During the lecture pedagogy discussions by the students should have been helpful-1
- The lecture pedagogy lets the teacher do more of the talking and sometimes we students avoid asking questions-1
- Lectures provide direct guidance while UCS pedagogies, there is no direct guidance, we have to discuss-1
- The lecture pedagogy is about sitting and learning from the lecturer only without involving the students actively-1
- The lecture pedagogy encouraged active listening without much participation-1
- The lecture pedagogy promoted more of factual information and there was limited discussion and sharing of ideas with classmates-1
- The lecture pedagogy limits an environment of discussion-1
- Using the lecture pedagogy leaves others behind especially shy quiet people. But when it comes to the UCS pedagogy, since we are interacting with our fellow classmates only and then the lecturer comes in later, this allows one to bring out his/her view in the group discussion-1
- Lecture pedagogies are more of sitting and listening to what the lecturer says and may even end up getting bored or dosing off-4
- Lectures are not assured to have participation of all people in the class, so not everyone will learn appropriately-1
- Lectures are best for topics which aren't practical and don't require critical thinking but require memorization-2
- Lecture is not practical at all while the UCS is practical. UCS opens our mind to understand what is in the practical field of Nursing-3
- Lecture pedagogy is not good for clinical practice skills since they are boring-4
- The lectures should be more hands on. For example, more practical than theoretical bit-3
- However, the lecture pedagogy was also good since it was broad and many concepts were taught-4
- Lecture is teacher centered while UCS is both student and teacher involved. Therefore, the UCS made us cooperative- 1
- More emphasis was needed after the lecture to review the lecture content like the debrief in UCS-2

- The lecture pedagogy is monotonous and boring as it involves basically one direction of teaching, also very little work is covered in a lot of time-1
- Lecture requires more time while the UCS requires less time to understand the concepts. Therefore, the lecturer may need more time to teach while using the lecture pedagogy-5

Unfolding Case Study Pedagogy

- UCS pedagogy is more interactive among the students-1
- UCS pedagogy also allows students to interact during the clinical -1
- The UCS is a more lively approach to use because it involves student active participation in class-1
- The UCS is more interesting since it has a provision for active participation in the learning outcome-1
- UCS is better since it involves my active participation and also, I get to give my own idea-1
- UCS pedagogy was more lively and more teamwork was seen among us-1
- I prefer UCS pedagogies because we were able to participate in different ways like having group discussions-1
- The UCS pedagogies involve teamwork in the learning process and this has improved my reasoning capacity-1
- The UCS is all about accepting students' contributions and enhances better learning-1
- In UCS, there is active participation whereas in lectures we may not participate actively thus passive participation-1
- The UCS pedagogy is more interesting, interacting and involves teamwork, unity and cooperation-1
- The UCS enhanced my communication skills through discussion and research about the topic-1
- The interaction during the case study helped to boost communication skills between the course members-1
- But UCS pedagogies are more interactive and encourage more of the discussions between us the learners and more involvement of the student in the learning, so they are better than the lecture pedagogies-1
- UCS is good because you share with colleagues what you think is the best way to manage a given condition, then you agree on the approach-1
- The UCS encouraged and promoted more collaboration among nursing students in the class as there was sharing of ideas-1
- There is more interaction, teamwork and sharing of knowledge in the UCS-1
- Being taught using the UCS pedagogy was a very good experience especially, the lecturer kept us engaged-1
- A lot of work can be covered within a short period of time. The UCS pedagogy widens an individual's understanding of a specific topic since questions can be asked-1

- UCS pedagogy enables the students to think hence improving their thinking skills-2
- UCS pedagogy with case studies allows students to acquire more knowledge. For example, about measurements and interpretation of the normal ranges of laboratory tests and vital observations as depicted in the case study-2
- UCS provides more knowledge about the topic which is interesting-2
- UCS is very interesting since it gives us more information of what happens during practice in the clinical area-3
- The UCS gave me a wider understanding of the topic than the lecture-2
- The UCS pedagogies help me to understand The UCS pedagogy involves critical thinking-2
- My perception is that the UCS pedagogy is very efficient in a way that one is able to participate which enhances ones understanding and ability to remember facts unlike for lecture where information is just fed to the brain-2
- Learning using the UCS pedagogy promotes critical thinking skills of an individual as it is a more active than passive listening as would be the case in learning with lecture-2
- The UCS pedagogy makes learning more enjoyable, thus more compelling to know more about a condition hence making the students well equipped with the necessary information
- The UCS pedagogy has enabled me to realize the common omissions that nurses usually commit while in practice. I have come to be able to understand that I have to use critical thinking while handling cases and every information available is important and should be analyzed efficiently-2
- UCS enables students to think imaginatively and apply critical thinking in solving/ treating patients-2
- The UCS pedagogy encouraged problem solving and critical thinking-2
- The UCS pedagogy helped me think more critically in order to come up with the relevant solutions to the patients' problems in the given scenarios-2
- The case study was very detailed and gave me opportunity to learn. It was very informative-2
- UCS pedagogies calls for critical thinking as compared to the lecture pedagogy where most of the content is shared by one person-2
- UCS enables a person to grow as they gain confidence in their clinical judgment of a patient's presenting condition-2
- Generally, there's more learner's application of relatively broad critical thinking related to the topic of the case study using UCS-2
- There is more interaction, teamwork and sharing of knowledge in UCS-1
- Proper explanation and critical analysis is efficient in UCS-2
- The UCS is more relevant to improving our critical thinking capacity and problem-solving ability as Baccalaureate nurses-2
- Using the UCS, students can apply the theoretical knowledge to practical situations bridging the gap between theory and real-world practice-3
- Using UCS, combining studies provide context to theoretical concepts discussed in lectures, making the learning experiences more meaningful-3

- The UCS makes one assume they are in a real hospital setting since we are required to first reason out as students before the teacher intervenes to make a conclusion-3
- UCS is practical-3
- I preferred the UCS pedagogy over the lecture because it brought the clinical cases to us in class. So, it improved my perception and knowledge on how to manage similar cases-3
- The UCS is more practical since we are handling cases that may appear during our clinical practice-3
- In my opinion, the UCS pedagogy is more practical and very good for teaching and learning -3
- It is easier to understand a live simulated example than theoretical information-3
- UCS enabled me to gain or have a more practical feel of the subjects discussed-3
- The UCS developed my practical skills and knowledge of the cases studied-3
- UCS pedagogy hints also on students' knowledge to the main topic and helps them expound on their clinical experiences-3
- I felt using UCS helped me gain a true picture of what I had learnt and would be able to translate theory to the clinical area if I needed to nurse a post-operative prostate cancer patient-3
- I would encourage lecturers to use UCS pedagogies more often than lecture as its more impactful and useful in real world situations-3
- The scenario given using UCS helped me to be confident in nursing post- operative prostate cancer -3
- Whereas I also learnt well using the lecture pedagogy, I appreciated the UCS more because it improved my patient clinical imagination, helping me to link theory to practice-3
- The UCS of the post-operative cancer patient brought the clinical picture of such other patients close to reality-3
- UCS pedagogies bring the clinical picture for you so you can feel like you are there physically with the patient-3
- UCS is easy to understand the case study during the process of delivery as it is sequential, one step leads to another. In the end, a full clinical picture of the patient is understood-3
- The UCS made me understand the topic of post-operative prostate cancer surgical care better and I gained confidence to care for such patients-3
- It was easier and better to learn through the UCS pedagogy-4
- The UCS pedagogy is better than the lecture pedagogy as it simplifies the learning process-4
- UCS pedagogy is more cooperative and there is more interaction between the students and the lecturer plus exchanging of ideas. Therefore personally, I preferred it better-4
- The UCS pedagogy is so wide and can be used hand in hand with the lecture
- The UCS pedagogy is versatile/wide, it does not have specific limitations in topics. We just studied all round, touching everything necessary as linked to the scenario; therefore, making it better for learning purposes and for practice-3

- I found learning using UCS more interesting and would love to make it more used in classes-5
- I found the UCS of prostate post-operative care more interesting than the lecture0 pedagogy-5
- I think the UCS should be utilized more in teaching nursing students than the lecture especially in the practical topics-4
- Lecture is teacher centered while UCS is both student and teacher involved. Therefore, the UCS made us cooperative-1
- More emphasis was needed after the lecture to review the lecture content like the debrief in UCS-1
- With UCS, one can cope up rather than lag behind due to emphasis on the general crucial recaps as clarification is done-5
- The UCS eradicates boredom during lessons-5
- UCS is time consuming since there is time for discussions about the case studies as well as time to develop the solutions for the case study-6
- UCS is time consuming because of the lengthy discussions before presenting hence if time is limited, objectives may not be fully accomplished-6
- UCS is time consuming since we all have different opinions-6

Both Lecture and UCS Pedagogy Responses

- Both the lecture and UCS should be used because all contribute to our learning-1
- I think the two pedagogies should be used hand in hand because a person can miss out information during the UCS pedagogies that can be captured in the lecture-1
- Both lecture and UCS complement each other since the lecture provides theoretical knowledge which can be put in practice while handling the UCS pedagogy-1
- Both the lecture and UCS pedagogies have generally been good but the UCS was more important as it helped me have a better understanding of the topic-1
- Both learning pedagogies are equally essential to be applied concurrently since UCS can allow student explanations whereas the lecture pedagogy allows us to get a broader picture about the topic-1
- However, both approaches can be used interchangeably, for better understanding during the learning process. Integrating theory and practical methods of teaching enhances better understanding-1

***Note*:** The numbers aside each statement refer to predominate topics and how statements were grouped

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DISSERTATION CORRECTION COMPLIANCE REPORT BY THE CANDIDATE (POST VIVA FORM)

Date: 21/8/2025

Name of Candidate: Immaculate Prosperia Naggulu **Reg. No:** RM19M11/010

Title of Dissertation: Baccalaureate Nursing Students' Perceived Learning using the Lecture and Unfolding Case Study Pedagogies in Prostate Cancer Surgical Care. A Comparative Study conducted at Uganda Christian University, Mukono.

SN	COMMENTS BY EXTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	The study population described is not clear, it stated that the study population consisted of all Baccalaureate Nursing Students in Uganda. Instead of Target population.	The study population has been corrected to Target Population to rhyme with the statement-All Baccalaureate Nursing Students in Uganda.	Page 59
2	The sampling method, described as a consecutive sample, is not correct. I think the researcher meant convenient sampling.	Whereas Polit and Beck refer to it as convenient sampling, the method has been revised to Census method as per guidance at VIVA.	Page 59

3	Inclusion criteria: those who consented to participate were involved in the study. This is not a researcher's decision.	Statement was deleted	Page 60
4	There are no statistical analyses to give conclusions.	Inferential tables enriched with the Z and r values of the Wilkoxon Signed- Rank Test and analyses expounded on.	Pages 94, 95, 96, 97
5	The researcher refers to previous studies, however, there is no in depth discussion of why some results came out as they did.The results required further analysis with statistical methods to derive meaning	Results have been strengthened using the z, r and *p* values interpretation of the Wilkoxon Signed Rank Test and by indepth discussion of some of the results that needed strengthening.	Pages 100, 102,104

SN	COMMENTS BY INTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	Very few typing phrasing errors	Corrected them to perfection.	Pages 4,16-19, 22

SN	COMMENTS BY VIVA VOCE PANNEL	ACTION TAKEN	INDICATOR
1	Why didn't you mention the study site? You need to mention the study site to own the study.	By the VIVA panel's recommendation, Uganda Christian University, Mukono has replaced 'A Selected University in Central Uganda' wherever it applies.	Title Page and Pages 4, 10, 11, 58
2	What was the population of study and why 30? What informed the 30?	Mentioned that I was interested in the Third Year Students, who were 30 in number and were available.	Page 59
3	How did you determine the sample size and method used to calculate sample size? You needed not to sample, it was a census because the total was 30 and you used the 30.	Deleted Sampling plan because the entire cohort of 30 students were used and was a small respondent group. Replaced Consecutive sample with Census method.	Page 59
4	Is the study an experimental design?	Doesn't qualify as an experimental study because I manipulated the lecture and UCS pedagogies but used a within subject design with the same group of students experiencing both pedagogies. There was neither random sampling nor control group.	Page 58

5	Clarity on the quasi quantitative design in methodology Why did you use a study design of quasi experimental quantitative design?	Quasi quantitative data analysis method is a technique that transforms descriptive qualitative data into numerical information by coding counting themes, categories or frequencies. It allows researchers to use qualitative data to derive numerical data enabling the application of quantitative style analysis to qualitative findings. I didn't use quasi experimental quantitative design.	Page 64
6	The study is called mixed methods if data was collected quantitatively and qualitatively.	No interviews done, only one open ended question given whose data analysis was by quasi quantitative analysis technique. The study was a Quantitative Comparative Cross over Within Subject Design.	Page 58
7	When you taught those 2 weeks, one for theory and one for the UCS, did you ask the students on only what you taught? How did you examine the past lectures?	Yes, I only asked students on what I taught. That was their perceived learning after the Lecture, UCS and the Comparison of Lecture and UCS. Plus the 2 quizzes after Lecture and UCS. I did not examine the past lectures because it was completely out of the scope of my study.	Page 68, 69
8	Which finding led you to recommend that administrators should empower educators in recommendations?	Constraints of time and resources in preparing UCS scenarios was mentioned in discussion. Context improved to nursing educators at administrative level should strengthen collaboration and equip faculty with training and resources to sustain SCL pedagogies such as UCS.	Pages 105, 110

Immaculate Prosperia Naggulu		Dr. Elizabeth Namukombe Ekong	
.....	.....	.....	.....
Candidate's Name	Signature	Supervisor's Name	Signature