

Faculty of Health Sciences
UNIVERSITY OF CAPE TOWN

A structured and collaborative clinical teaching training
programme and its influence on nursing preceptors' self-
reported competencies and confidence at a national referral
hospital in Uganda

Safinah Kisu Museene
Student Number: MSNSAF001

SUBMITTED TO THE UNIVERSITY OF CAPE TOWN
DEPARTMENT OF HEALTH AND REHABILITATION SCIENCES
DIVISION OF NURSING AND MIDWIFERY
In fulfilment of the requirements for the degree of Doctor of Philosophy in Nursing

Supervisor

Associate Professor Emeritus Pat Mayers
Division of Nursing and Midwifery, Department of Health and Rehabilitation Sciences,
Faculty of Health Sciences, University of Cape Town

Date 29th January 2018

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

Declaration

I [Safinah Kisu Museene](#) hereby declare that the work on which this thesis is based is my original work (except where acknowledgements indicate otherwise) and that I have used the APA system of referencing. I declare that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university. I empower the university to reproduce for the purposes of research either the whole or any portion of the content in any manner whatsoever.

Signed by candidate

Signed

Signature Removed

Date. 29th January 2018

Turn it in report

msnsaf001:FINAL_PhD_THESIS_DOCUMENT_Museene_Safinah_-for_turnitin.docx

Submitted on 6th July 2017; Submission ID 829262115 *by* Safinah Museene

Originality of the Report

Similarity Index = 10%

Internet Source = 7%

Publication=5%

Student Papers =6%

Dedication

This thesis is dedicated to my family, who were the greatest motivation for this work. I dearly appreciate my husband Mohammed, my children Fauza, Taqiyya, Zaheed and Luqman and my parents Haji and Hajat Mwanje. Your love and support was the driving force behind the accomplishment of my doctorate. I acknowledge, also, the contribution of my late grandfather Jaja Enos Mugweri Wadala who enrolled me for my basic education and made a memorandum of understanding with my father for him to continue paying my school fees. Without his contribution, it would not have been possible for me to accomplish this work. I pray to Allah to reward you all for your patience and support.

Acknowledgements

All glory and thanks are to Allah, the Beneficent, and the Merciful who sustained and kept me on track and focused throughout my doctoral journey. For that reason I pledge to share and use all the competencies I have acquired through my PhD journey for the purpose of supporting my profession and humanity.

I extend my sincere appreciation to the Foundation for Advancement of International Medical Education and Research (FAIMER) for the PhD scholarship; without this, enrolment at the University of Cape Town and the accomplishment of this PhD would have been impossible. I extend my gratitude to the authorities at University of Cape Town for giving me an opportunity to study at this great university in Africa.

Appreciation is extended to the management of Jinja School of Nursing and Midwifery, Mulago School of Nursing and Midwifery, Mulago hospital, Jinja hospital and the Ministry of Education and Sports. Your contribution to this doctoral journey is highly appreciated.

I am very grateful to my supervisor: Associate Professor Pat Mayers and Dr. Nicki Fouche, head of the Nursing and Midwifery division at the University of Cape Town. Professor Pat, thank you for being available at the time when I needed your counsel, mentorship, supervision and guidance. You made me a better nurse. Prof Sine, thank you for your critical eye on my initial work when you were still head of the division. I am equally grateful to Ms. Mary Shelton, whose guidance in library access was a great contribution to this thesis. I am grateful to Dr. Francis Mulekya Bwambale, whose input in statistical analysis was a great contribution to this work.

I wish to acknowledge the support and encouragement given by Professor Bill W. Burdick and Ms. Katherine Mason of FAIMER USA, as well as by Dr. George Bagambisa who was the Chairperson of the Governing Council of Jinja School of Nursing and Midwifery and by Mr. F. X. Lubanga the former Permanent Secretary for the Ministry of Education and Sports. I am indebted to your contribution.

Special thanks to the staff of Jinja and Mulago Schools of Nursing and Midwifery, Dr. Jane Egau, Ms Tina Nakalanzi and Mr. Mustafa Kasule. Your contributions are highly appreciated.

Abstract

Nursing practice is an outcome of good clinical teaching and learning. Both of these are facilitated by preceptors whose role is to provide clinical services to patients and clinical teaching to nursing students. Preceptors require formal training to gain appropriate pedagogical skills for conducting clinical teaching; however, in Uganda, there are no formal preceptorship programmes. There is only very limited information available concerning the degree of educational preparedness of Ugandan nursing preceptors for their role. The aim of the study was to describe preceptors' clinical teaching practices and in the light of this, to design, implement and evaluate a structured and collaborative clinical teaching training programme for improving the preceptors' pedagogical skills at a national referral hospital in Uganda.

A study in three phases was conducted. Thus, an initial cross-sectional survey was conducted to determine the current clinical teaching practices of preceptors and to identify perceived clinical teaching challenges. The results of this survey, together with an extensive literature search, were utilised for the development and design of the Structured and Collaborative Clinical Teaching Training Program manual. Preceptors were grouped into two groups (control and intervention). The intervention group preceptors completed a six-day training programme on the theories and practice of clinical teaching while those in the control group attended a one-day meeting where the results of the cross-sectional survey were presented. The evaluation of the training programme was conducted using a pre- and post-test design and follow-up at weeks six and twelve.

The training programme demonstrated a positive influence on the intervention group's clinical teaching knowledge with a mean difference of 32.9% (P-value 0.00).

Preceptors reported clinical teaching challenges which included understaffing, large numbers of students and severely ill patients. No statistical significance was found between intervention and control groups with respect to preceptor confidence in their role as clinical facilitators.

The Recommendations of the study include: nursing preceptors involved in clinical facilitation should be prepared and trained in pedagogical methods using the SCCTTP approach. There is a need for clear guidelines which prescribe the educational preparation of clinical preceptors, the number of students per preceptor and the number of students per health facility/unit. A multifaceted approach to the teaching, learning and practicing of clinical skills and collaboration between the schools of nursing and their training hospitals is recommended in order to promote quality clinical teaching practice.

Table of Contents

Declaration	ii
Turn it in report.....	iii
Dedication	iv
Acknowledgements.....	v
Abstract	vii
Table of Contents.....	ix
List of Tables.....	xvi
List of Figures.....	xviii
Definition of Terms.....	xix
Abbreviations.....	xxi
Chapter 1: Introduction and background to the Study	1
1.1 Introduction	1
1.2 The health care system and nursing education in Uganda	4
1.2.1 Facts about Uganda	4
1.2.2 The health care system.....	5
1.2.3 Nursing education in Uganda.....	5
1.2.3 The evolution of nursing education in Uganda.....	9
1.2.4 Nursing programmes offered by Ugandan nursing schools and universities	10
1.3 Rationale for the Study.....	13
1.4 Aim of the Study.....	15
1.5 Objectives of the Study:	15
1.6 Research Questions	16
1.7 Study hypothesis	16
1.8 Summary.....	16
Chapter 2: Literature Review	17
2.1 Introduction	17
2.2 The Preceptor in the clinical setting.....	19
2.3 Clinical teaching models and approaches	22
2.4 Strategies and methods used in clinical teaching.....	29
2.4.1 Demonstration as a clinical teaching strategy.....	31
2.4.2 Role modelling as a clinical teaching strategy	33
2.4.3 Role play as a clinical teaching strategy	35
2.4.4 Reflection and journaling as a clinical teaching strategies	35
2.4.5 Self-directed learning, assignment directed learning and problem based learning as clinical teaching strategies	39

2.4.6	The One Minute Preceptor (OMP) as a clinical teaching strategy.....	40
2.4.7	Coaching as a clinical teaching strategy.....	42
2.4.8	SNAPPS technique as a clinical teaching strategy.....	42
2.5	Challenges of clinical teaching.....	43
2.5.1	Student related clinical teaching challenges.....	44
2.5.2	Staffing related clinical teaching challenges.....	44
2.5.3	Funding and financing related clinical teaching challenges.....	46
2.5.4	Environmentally related clinical teaching challenges.....	47
2.6	Preceptor training and development programmes from other settings.....	53
2.7	Preceptor competencies and qualities for conducting clinical teaching.....	59
2.7.1	Personal qualities and preceptorship.....	60
2.7.2	Role modelling as a competence for clinical teaching.....	61
2.7.3	The counselling and guidance competence.....	61
2.7.4	The collaborative competence.....	62
2.8	Learning theories as applied in clinical teaching for nurses.....	62
2.8.1	The behavioural learning theorists.....	63
2.8.2	Cognitive learning theorists.....	64
2.8.3	The constructivist learning theories.....	64
2.8.4	The humanistic learning theories.....	65
2.9	Summary.....	66
Chapter 3: Theoretical Framework.....		67
3.1	Introduction.....	67
3.2	The Kolb experiential learning cycle.....	68
3.2.1	Concrete experience.....	69
3.2.2	Reflective observation.....	69
3.2.3	Abstract conceptualisation.....	70
3.2.4	Active experimentation.....	70
3.3	Adult learning theory.....	75
3.3.1	The concept of learning in adult learning theory.....	75
3.3.2	The role of learner experience in adult learning theory.....	76
3.3.3	The concept of readiness to learn in adult learning theory.....	76
3.3.4	The concept of orientation to learning in adult learning theory.....	77
3.4	Adult learning theory in health professional education.....	77
3.5	Context Input Process Product (CIPP) evaluation model.....	79
3.6	Summary.....	81
Chapter 4: Research design and methodology.....		83
4.1	Introduction.....	83

4.2	Study setting	84
4.3	General ethical considerations	85
4.4.1	Study implementation - logical flow	87
4.4.2	Study design, sample size and data management	89
4.5	Phase one: Survey of the current preceptors' clinical teaching practices at the National Referral Hospital.....	91
4.5.1	Survey population and sample	91
4.5.2	Inclusion and exclusion criteria.....	91
4.5.3	Survey sample size and power analysis.....	91
4.5.4	Recruitment of respondents for the survey	92
4.5.5	Data collection tools and instrumentation for the survey	92
4.5.6	Reliability and validity of the survey instrument.....	94
4.5.7	Piloting of the survey instrument	94
4.5.8	Research personnel.....	95
4.5.9	Management of data collection for the survey and quality control.....	96
4.5.10	Statistical analysis for the survey.....	97
4.5.11	Ethical considerations for the survey	97
4.6	Phase two: Design of the structured and collaborative clinical teaching training programme (SCCTTP).....	98
4.6.1	Design of draft one of the manual	99
4.6.2	Presentation of the manual, amendment and adaption of drafts at the consultative meetings	101
4.6.3	Consultative meetings and the SCCTTP	102
4.6.4	Pretesting the draft manual and teaching materials.....	103
4.7	Phase three: the research design for the SCCTTP intervention.....	103
4.7.1	Research design and rationale for the SCCTTP intervention	103
4.7.2	Population for the SCCTTP intervention.....	103
4.7.3	Inclusion and exclusion criteria for the SCCTTP intervention.....	104
4.7.4	Sample size and power analysis for the SCCTTP intervention	104
4.7.5	Study setting / sampling strategy for the SCCTTP intervention.....	105
4.7.6	Selection of wards for the SCCTTP intervention.....	106
4.7.7	Selection of preceptors for the SCCTTP intervention.....	106
4.7.8	Data collection tools and instrumentation for the SCCTTP intervention.....	107
4.7.9	Validity and reliability of the pre- and post-test evaluation questionnaires	109
4.7.10	Piloting of the instrument for the SCCTTP intervention	110
4.7.11	Research personnel for the SCCTTP intervention.....	110
4.8	Description of the structured and collaborative clinical teaching training programme (SCCTTP).....	111

4.8.1	Training package for week 1 of the SCCTTP.....	111
4.8.2	Management of the control group.....	115
4.8.3	Evaluation at week 6 and week 12.....	116
4.9	Management of data for the SCCTTP intervention and Quality Control.....	116
4.10	Data analysis for the SCCTTP intervention.....	117
4.10.1	Data analysis for preceptors' training (pre-and post-intervention measurements).....	117
4.10.2	Data analysis for training and its influence on knowledge increase.....	117
4.10.3	Post SCCTTP intervention data analysis.....	117
4.11	Summary.....	119
Chapter 5:	Results.....	120
5.1	Introduction.....	120
5.2	Survey results: The nursing preceptors' clinical teaching practice at the National Referral Hospital.....	120
5.2.1	Demographic characteristics of survey participants.....	120
5.2.2	Preceptors' understanding of the concepts of clinical teaching and preceptorship.....	121
5.2.3	Challenges of clinical teaching as reported by the preceptors.....	123
5.2.4	Clinical teaching improvement approaches previously used by the preceptors ...	126
5.2.5	Suggestions made by the preceptors to improve clinical teaching.....	127
5.3	Results of the SCCTTP: Influence of the intervention on the preceptors' clinical teaching knowledge and confidence.....	129
5.3.1	Demographic characteristics of preceptors in the intervention and control groups.....	129
5.3.2	Preceptors' clinical teaching knowledge levels as assessed at pre- and post-test evaluation.....	130
5.3.3	Influence of intervention on the preceptors' clinical teaching knowledge levels (what was the knowledge gained?).....	131
5.3.4	Self-rated preceptors' confidence levels in conducting clinical teaching at pre- and post- evaluation.....	132
5.3.5	Influence of the intervention on the preceptors' self-reported confidence level in conducting clinical teaching (what was the change in confidence levels?).....	133
5.4	Follow-up results: Influence of the use of SCCTTP on self-reported clinical teaching competencies and overall self-reported confidence in conducting clinical teaching (i.e. week 1, week 6 and week 12).....	134
5.4.1	Self-reported clinical teaching competencies at follow-up evaluations.....	134
5.4.2	Influence of the intervention on the preceptors' self-reported clinical teaching competencies during post-intervention follow-up evaluation.....	136

5.4.3	Influence of the SCCTTP on preceptors' confidence in conducting clinical teaching as reported during the post-intervention follow-up evaluation (day 6, weeks 6 and 12).....	143
5.4.4	Participants' justification for their self-reported overall scores.....	144
5.5	Summary.....	145
Chapter 6: Discussion and study limitations.....		146
6.1	Introduction.....	146
6.2	The clinical teaching practices at the National Referral Hospital (NRH).....	146
6.2.1	Preceptors' professional (nursing) preparation for the role of clinical teaching...146	
6.2.2	Preceptors' pedagogical preparation for the role of conducting clinical teaching 148	
6.2.3	Perceived clinical teaching challenges and proposed interventions to address them 151	
6.3	The SCCTTP and its influence on preceptors' clinical teaching knowledge and confidence levels.....	155
6.3.1	The importance of collaboration between the key stakeholders as a factor in the success of the SCCTTP.....	156
6.3.2	The SCCTTP and involvement of the preceptors during the design as a factor in its success 157	
6.3.3	The use of interactive training strategies as a factor in the success of the SCCTTP intervention.....	158
6.3.4	The factor of knowledge retention and the SCCTTP evaluation.....	159
6.4	The influence of the SCCTTP on preceptors' confidence to conduct clinical teaching.....	162
6.5	Proposed structured training model for collaborative clinical teaching.....	163
6.6	Methodological discussion.....	167
6.6.1	Generalisability and transferability.....	167
6.6.2	The role of reflexivity in the current study.....	168
6.7	Limitations of the current study.....	168
Chapter Seven: Implications, recommendations and conclusions.....		171
7.1	Introduction.....	171
7.2	Implications of the study findings for nursing practice, education and management 172	
7.3	Recommendations.....	172
7.3.1	Recommendations for the nursing schools and training hospitals.....	172

7.3.2 Recommendations for the regulatory bodies (Uganda Nurses and Midwives Council)	173
7.3.3 Recommendations for the Ministry responsible for nursing education.....	174
7.3.4 Recommendations for policy	174
7.3.5 Recommendations for future research.....	174
7.4 Conclusion.....	175
References	177
Appendices	194
Appendix A: Ethics Approval Letters.....	194
Appendix B: Information Sheet for the Preceptors’ Survey.....	198
Appendix C: Consent Form: Preceptors in the survey.....	201
Appendix D: Nursing Preceptors’ Survey Questionnaire	202
Appendix E: Information Sheet for Participation in the training program (Intervention Group)	208
Appendix F: Information sheet for the preceptors in the control group.....	210
Appendix G: Informed consent form for participants in the intervention group.....	212
Appendix H: Informed consent form for participants in the control group	213
Appendix I: Post-training evaluation check list baseline evaluation (day 01 or day 06)	214
Appendix J: Session timetable for implementation of the SCCTTP.....	216
Appendix K: Training and evaluation schedule: 5 th June to 28 th October 2015.....	217
Appendix L: Pre- post questionnaire for clinical teaching knowledge assessment	218
Appendix M: Marking guide for clinical teaching knowledge assessment questionnaire	221
Appendix N: Week 6 and week 12 post-training: preceptors’ follow-up evaluation questionnaire.....	225
Appendix O: Map of Uganda showing whereabouts in KCCA the NRH is located	227
Appendix P: Permission to Use the MCTQ from Ms. Renée Stalmeijer (email copy).	228

Appendix Q: The SCCTTP /Preceptor Training End of Day Evaluation	229
Appendix R: SCCTTP Trainers guide (Manual)	230

List of Tables

Table 1.1: Training objectives for registered /diploma nurses' courses in Uganda.....	8
Table 1.2: Nursing educational programmes offered in Uganda:.....	11
Table 2.1 : Key words for the study	178
Table 2.2: Guiding questions for literature search.....	189
Table 2.3: Clinical teaching models.....	234
Table 2.4: The five micro-skills for clinical	412
Table 2.5: Preceptorship training programmes.....	578
Table 3.1: Relevancy of ELT to SCCTTP.....	71
Table 4.1: Number of outcome per section	102
Table 4.2: Ward strata for intervention and control groups.....	1068
Table 4.3: Responses from Daily evaluation of the SCCTTP session presentations	1146
Table 4.4: Post-intervention analysis	120
Table 5.1: The demographic characteristics of survey respondents.....	123
Table 5.2: Interventions to improve competencies in clinical teaching	129
Table 5.3: Demographic characteristics of participants in the SCCTTP intervention	131
Table 5.4: Association between SCCTTP and knowledge gain compared across intervention and control.....	134
Table 5.5: Self-rated preceptors' confidence levels in conducting clinical teaching.	135
Table 5.6: Preceptors' confidence in conducting clinical teaching: self-rating.....	135

Table 5.7: Comparison between intervention and control groups (evaluation of training) from Baseline to 12 weeks.....	137
Table 5.8: improvement observed in intervention group	138
Table 5.9: observed improvement up to six weeks in intervention group.....	140
Table 5.10: Common observations for both the intervention and control groups	143
Table 5.11: Comparison of individual competencies at baseline, week 6.....	144
Table 5.12: Cluster scores (0-4, 5-7 and 8-10) for self-rated confidence levels for both intervention and control groups	145
Table 5.13: Reasons for change in the overall scores from the score provided at baseline.....	147
Table 6.1: Justification for introduction of simulated patients for clinical teaching..	155
Table 6.2: Ten competencies with steady progress and then decline after six weeks of SCCTTP.....	163

List of Figures

Figure 3.1: Modified experiential learning theory model	746
Figure 3.2: Evaluation of the SCCTTP Model as modified from ELT and CIPP evaluation model	83
Figure 4.1: Study implementation - logical flow	90
Figure 5.1 Satisfaction percentage levels in use of specific teaching methods by the preceptors	124
Figure 5.2: The respondents' knowledge of use of the various clinical teaching models	125
Figure 5.3: Challenges of clinical teaching as perceived by the preceptors	126
Figure 5.4: Observed limitations as perceived by the preceptors at the end of nursing students' clinical rotation	127
Figure 5.5: Preceptors' previous exposure to competency training in percentages.	128
Figure 5.6: Proposed strategies to improve practice of clinical teaching	130
Figure 5.7: The variation in competence levels over time as observed in the intervention group	139
Figure 5.8: Improvement up to week 6 and decline at week 12 for ten clinical teaching competencies as observed in the intervention group	141
Figure 5.9: The six clinical teaching competencies that showed improvement up to week 6 and then declined at week 12 for the control group	142
Figure 6.1: The proposed Structured Collaborative Clinical Teaching Training Model (SCCTTM) for Preceptors	168

Definition of Terms

Assistant Commissioner Health Services - Nursing (ACN), in the Ugandan context, refers to a head nurse at a national referral hospital or the assistant to the Commissioner for Health Services – Nursing, at the Ministry of Health.

- **Clinical teaching** refers to a series of deliberate actions on the part of the teacher to guide students in their learning. It involves a sharing and mutual experience on the part of both the teacher and student and is carried out in “an environment of support and trust” (Gaberson & Oermann, 2010, p. 60).
- **Clinical instructor** in the Ugandan context refers to a registered nurse employed by the education service commission and posted in the nursing schools for the purpose of teaching and supervising the acquisition of clinical skills.
- **Health centre** in the Ugandan context refers to a health unit at parish or at sub country or at county level. The lowest ranking health unit is the health centre II, which is at parish level. The other two (health centre III and health centre IV) are at sub county and county level respectively.
- **Preceptor** is a qualified nurse or midwife or health professional who in addition to his/her daily patient caring duties, takes on clinical teaching related responsibilities for the purposes of supporting, mentoring, modelling, counselling and resource mobilisation for effective facilitation of learning and creation of safe and conducive clinical learning environment.
- **Preceptorship** is a period of training for future medical professionals, during which a more experienced medical professional (or preceptor) provides training and observation time for the less experienced trainee (DeCicco, 2008; Santiago, 2012).

- **Pre-registration nursing students:** this term refers to nurses and midwives who are undergoing training in diploma nursing or diploma midwifery or who have passed the Uganda Nurses and Midwives Examination Board (UNMEB) examinations but are not yet licensed to practice by the Nursing Council.
- **Registered nurses,** in this study, mean all nurses and midwives registered to practice nursing or midwifery in Uganda by the Nurses and Midwives Council.
- **Tutors** in this study, refers to nurses and midwives who have completed tutorship diploma/bachelors/postgraduate diploma training at a recognised institution and are registered as nursing or midwifery tutors by the Uganda Nurses and Midwives Council
- **Uganda Nurses and Midwives Council** is a body that regulates nursing and midwifery practice in Uganda.
- **Structured and collaborative clinical teaching training programme** is a new concept used by the researcher to refer to a training course which can be implemented by the nursing institutions in collaboration with hospital management to improve preceptorship skills.

Abbreviations

ACN	Assistant Commissioner Health Services - Nursing
BSc	Bachelor of Science
CTA	Clinical Teaching Associate
CIPP	Context, Input, Process and Product
CP-TLO	Clinical Practice and Learning Observatory
ELT	Experiential Learning Theory
KCCA	Kampala Capital City Authority
NRH	National Referral Hospital
OMP	One Minute Preceptor Model
SCCTTM	Structured and Collaborative Clinical Teaching Training Model
SCCTTP	Structured and Collaborative Clinical Teaching Training Program
UCT	University of Cape Town
UBOS	Uganda Bureau of Statistics
UNMC	Uganda Nurses and Midwives Council
WHO	World Health Organization

Chapter 1: Introduction and background to the Study

1.1 Introduction

Nursing education is vocational training which involves theoretical and practical/clinical training (Eddy, 2010). In Uganda, as in other countries, theoretical training is conducted in the classroom and libraries under the guidance of pedagogically prepared tutors and clinical instructors. Practical / clinical teaching is conducted in hospital wards, clinics and health centres under the guidance of preceptors, tutors and clinical instructors (Ali, 2012; Chisengantambu, Penman, & White, 2005; McCarthy & Murphy, 2010; Nyoni & Barnard, 2016). Best practices require that pedagogically prepared and clinically competent tutors, clinical instructors and preceptors conduct training of nursing students in the clinical settings (DeCicco, 2008; Happell, 2009; Jeggels, Traut, & Africa, 2013). In Uganda, clinical nurses and midwives who perform the preceptorship role in the clinical settings are not pedagogically prepared; however, it is one of their job requirements to offer clinical teaching to pre-registered nursing and midwifery students.

The meaning of the term “preceptor” has been provided for by various scholars. Smith (2006) defined the term “preceptor” to mean “qualified nurses and midwives with pedagogical preparation who teach nursing and midwifery skills in the clinical areas”. Phillips (2006, p. 150) defines, a preceptor as “an experienced staff member who has outstanding clinical skills, knowledge and experience in guiding new orientees to think critically and take on up to the minute role in the clinical setting”. Other scholars’ definitions are similar: Carlson, Wann-Hansson, and Pilhammar (2009), Hallin & Danielson (2009), Happell (2009) and Ryan & McAllister (2017) all recognise a preceptor as a professional person, performing the role of health care provision and also assisting and mentoring students

in the clinical environment. These definitions emphasises the importance of being trained to precept and the processes involved of being a preceptors. A health professional can be recognised as a preceptor after undergoing preceptorship preparation (Pasila, Elo, & Kaariainen, 2017). In this study based on the various definitions reviewed, a preceptor will be understood as a qualified nurse or midwife or health professional in addition to his/her daily patient caring duties, takes on clinical teaching related responsibilities for the purposes of supporting, mentoring, modelling, counselling and resource mobilisation for effective facilitation of learning and creation of safe and conducive clinical learning environment.

Preceptorship which involves guiding and mentoring nursing students to acquire nursing skills (DeCicco, 2008; Mamchur & Myrick, 2003; Ness, Duffy, McCallum, & Price, 2010, Ward & McComb, 2017) are the processes involved in precepting. Preceptorship and mentorship are sometimes used interchangeably by educators. Mentorship is defined as a “developmental, empowering and nurturing relationship that extends over a period of time in which mutual sharing, learning and growth occur in an atmosphere of respect, collegiality and affirmation” (Vance & Olson, 1998). The mentorship relationship is beyond the clinical allocation period where as the preceptorship relationship is with the period of clinical allocation. This study will use the concept preceptorship for the clinical teaching relationship with student for the reason that mentorship relationship is far beyond the precepting period.

Preceptorship is a teaching approach in which students are assigned to work alongside a qualified professional (a preceptor) employed in the clinical setting. Preceptorship is considered to be the best model for teaching undergraduate nurses in the United Kingdom (UK) and United States of America (USA) (Mamchur & Myrick, 2003; Omansky, 2010; Busubaia & O’Neill, 2017). This is because of its usefulness, especially in the area of

interpersonal relationships between the learner and preceptor. A similar approach to the preceptorship model described above is utilised in the Ugandan nursing education institutions. Nursing students learn and acquire nursing skills through observation and interaction with the behaviour, knowledge, experience and actions of their preceptors/ formalised in the nursing student- preceptorship relationship (Ali, 2012; Myrick & Yonge, 2005; Ramani & Leinster, 2008; Weitzel, Walters, & Taylor, 2012). In order to maintain the standard of practice and quality of clinical teaching, a preceptor requires formal instruction in precepting (Mundy, 1997; Rahnavard, Nodeh, & Hosseini, 2013; Smith, 2006). In Uganda, it is not yet a mandatory requirement for the preceptors to undergo formalised pedagogical clinical teaching training. Preceptor training standards have yet to be instituted by the Uganda Nurses and Midwives Council.

Happell (2009) and Hallin and Danielson (2009) emphasised the importance of having competent preceptors to provide clinical teaching to nursing students. They contend that the quality of newly qualified nurses is highly dependent on the quality of their clinical trainers. Proper mentoring and role modelling, as well as proper content presentation and use of appropriate clinical teaching resources, are all essential if this is to be achieved (Barker & Pittman, 2010; Happell, 2009).

The selection of nursing preceptors is also important, and the competencies required for positive shaping of the nursing profession should be considered in their selection (Mohide et al., 2012). In order to ensure effectiveness in the conduct of clinical teaching, the selection process should be done by preceptors who are trained to diagnose students' learning needs, plan instructions based on student learning needs and supervise students in order to maximize the clinical learning experience (Mohide et al., 2012; Myrick & Barrett, 1992; Myrick &

Yonge, 2002). Additional competencies considered important in clinical teaching include: provision of timely feedback, availability of preceptors at the clinical sites and good interpersonal relationship skills (Gaberson & Oermann, 2010; Mohide et al., 2012; Myrick & Yonge, 2002).

1.2 The health care system and nursing education in Uganda

1.2.1 Facts about Uganda

Uganda is one of the six countries that form the eastern region of Africa. It is a land locked country bordered by Kenya, Tanzania, Rwanda, Democratic Republic of Congo and South Sudan. Its population is approximately 35 million with more than 55% aged 18 years and below, high fertility rate and ill equipped health facilities (Matsiko & Kiwanuka, 2003; UBOS, 2016). The GDP per capita in Uganda is equivalent to five percent of the world average (World Bank. 2017). Uganda's GDP is low compared to its' neighbouring countries; Tanzania and Rwanda has a GDP of seven percent and Kenya has a GDP of six percent. Uganda is a low level developing country with social economic challenges and high disease burden. Most of the health facilities are overloaded with patients and they are understaffed (Matsiko & Kiwanuka, 2003).

Uganda is a peaceful country with stable governance (National Planning Authority, 2015). Although it is low developing country, its administrative structures are organised. Currently the country is implementing the national development plan two which prioritised investments in five areas including human capital development (National Planning Authority, 2015). Investment in the human capital is aimed at development of a skilled and health workforce to lead Uganda into a middle income economy.

1.2.2 The health care system

The provision of health care services in Uganda involves both the public and private sectors, with a central and decentralized approach under the district and health sub-districts (Ministry of Health, 2010a). There are two national referral hospitals, thirteen regional referral hospitals, as well as several district hospitals operated by the government of Uganda and the private sector (Ministry of Health, 2010a). Health care services are also delivered at health centre IIs, health centre IIIs and health centre IVs (Ministry of Health, 2010a, 2010b). These health centres are the lower health service delivery units and are found at parish, sub-county and county political administrative levels. These facilities provide primary health care and cater for referral of patients with complicated illnesses to district, regional and national referral hospitals. These facilities provide clinical teaching sites and preceptors for nursing and health professional education. Clinical teaching sites are areas where nursing and midwifery students are attached to learn nursing and midwifery skills. These sites include hospitals, clinics, homes, communities, rehabilitation centres and others. Nursing and midwifery students learn provision of referral services at districts, regional and national referral hospitals while skills for providing basic and uncomplicated nursing and midwifery services are acquired at health centres II, III and IV. Nursing and midwifery students acquire public health skills from communities and homes where outreach and home visiting approaches are used.

1.2.3 Nursing education in Uganda

Clinical teaching of nursing and midwifery students has been carried out in the hospitals and clinics from the time when modern medicine was introduced in Uganda. Modern medicine was introduced to the country by the white missionaries in 1897 at Mengo hospital (Uganda Nurses and Midwives Council, 2016). Doctor Albert Cook and Mrs Catherine Cook

established the first maternity training school in Uganda for training enrolled midwives at Mengo hospital between 1917 and 1919 (Uganda Nurses and Midwives Council, 2016). They trained midwives using local Luganda language and the apprenticeship clinical teaching model (Uganda Nurses and Midwives Council, 2016). The training focused on the acquisition of midwifery skills within the context of the local needs.

The training of nurses and midwives was fully managed by the missionaries until 1955 when the government nursing and midwifery training institution was established at Mulago hospital. The Mulago School of Nursing and Midwifery was officially opened on the 26th October 1956 by Lady Cohen who was the representative of Her Majesty the Queen of England (Campbell, 1968). Catherine Campbell, who was the assistant matron in charge of training at Mulago hospital, reported that there were three types of training: a 28 months' training course for pupil nurses, a 36 months' training course for direct registered nurses and an 18 months' training course for enrolled nurses upgrading to registered-nursing (Campbell, 1968). The 28 months training was for pupil nurses, the equivalent of the current certificate nursing students. The pupil nursing students were trained to work at basic levels of service delivery and to work in hospitals under the supervision of registered nurses. A 36-month training programme for direct entrants and an 18-month training for upgrading students was offered for nurses and midwives. The nurses known as sisters were placed in hospitals at national / regional and district levels. Currently the direct and extension diploma nurses and midwives training is offered over a similar time period.

By the early 1950s, the emphasis of training was on practical and skills acquisition which was done in the hospital wards under the supervision of nurses and midwives (Campbell, 1968). The clinical rotation (ward work) covered 44 weeks out of the 52 weeks of

the year and only four weeks of the year were assigned for study block (classroom). Campbell (1968), reported that while in the clinical settings, nursing students were taught by the nurses from the hospital while tutors from the school were responsible for coordination of training. The nurses and tutors of the 1960s were provided with a syllabus with six objectives. After the 1990s, nursing curricula are developed based on the same principles however the number of objectives in each curriculum and number of nursing programmes offered in Uganda have expanded. The syllabus / curriculum objective are presented in table 1.1 below. These syllabuses were used as a guide to what the nurses and tutors would teach the nursing students and pupil nurses (Conrad, 1997; Uganda Nurses Midwives and Nursing Assistants Council, 1962). The current training is still guided by a similar practice; thus, a curriculum is provided as a guide to the content to be delivered. For example the current 2007 diploma in nursing curriculum has seven general objectives; this document provides the content for the tutors and clinical instructor to use when training diploma nurses (Ministry of Education and Sports, 2007a, p. viii). The preceptors and tutors are expected to facilitate the acquisition of the clinical skills based on the stated objectives. Similarly the provision of such a standard provides a reference for the evaluation of performance by supervisory/regulatory bodies and examination boards.

Ms. Daly, one of the Principal tutors of the Mulago School of Nursing and Midwifery reported in her notes on 1960s nursing education in Uganda that the standard of training of a nurse was observed by professional nurses (Daly, 1983). The Uganda Nurses, Midwives and Nursing Assistants Council was responsible monitoring and supervision of the quality of nursing (Daly, 1983). This is demonstrated through the availability of reports including the 1962 syllabus for the registered nurses course. These documents were written by the Uganda Nurses, Midwives and Nursing Assistants Council (Uganda Nurses Midwives and Nursing

Assistants Council, 1962). This practice changed slightly when the schools were transferred to the Ministry of Education and Sports in 1998. The Ministry of education and sports now provides the general supervisory role for activities related to health professional education including the mandate to design and implement training curricula (Jacob, Nsubuga, & Mugimu, 2009, p. 336). Meanwhile, the Ugandan ministry of health and the nursing and midwifery councils provide updates and regulations which support quality and professional values in nursing and midwifery education.

Table 1.1: Training objectives for registered /diploma nurses’ courses in Uganda

Syllabus for registered nurses course. Uganda (1962)	Curriculum for diploma in nursing curriculum (2007)
1. To provide an opportunity for candidates with suitable ability to pursue a course in nursing education, duration three years.	Acquire knowledge attitudes, skills and values for nursing care.
2. To ensure that the state registered nurse at the end of this course is compassionate, competent and skilful in practice.	Carry out practical nursing procedures.
3. To provide a broad preparation which will enable the nurse to make a valuable contribution to the community, to the society and to nursing education in Uganda.	Identify and manage health units.
4. To correlate all subjects in order to assist in the understanding of the patient as whole person in a varied environment.	Train and supervise community based health workers.
5. To provide avenues for the promotion of a nurse with qualities of leadership in clinical situations or teaching or nursing administration.	Initiate change to promote the quality of life in the community.
6. Family planning. An introduction to the dangers of an explosive population that is now occurring in so many parts of the world.	Manage and maintain resources in the community.
	Seek opportunities for continued growth as a professional and a citizen.
Source: Uganda Nurses Midwives and Nursing Assistants Council (1962). <i>Syllabus for registered nurse course- Uganda</i> . Kampala.	Source: Ministry of Education and Sports (2007a). <i>Ministry of Education and Sports Curriculum for Diploma Direct Nurses - Uganda</i> .

In table 1.1 above the current curriculum for diploma in nursing has been presented in compulsion to that of the 1960s. In the 1960s fewer programmes were offered compared to

the current status. These curricula are regularly updated by tutors and so are the objectives.

1.2.3 The evolution of nursing education in Uganda

Until the mid-1990s, the only education available to nurses in Uganda was at the enrolled and registered level, which was comparable to the licensure and diploma programmes in the USA (Leffers, Mbabali, Nabirye, & Mbalinda, 2014). The introduction of a bachelor's degree in nursing at Makerere University in 1993 marked a new era of nursing education in Uganda. It led to the end of the multiple nursing certificates syndrome that was prevailing at that time in the Ugandan nursing education systems.

Up until 1993, when the Bachelor of Science in nursing was introduced at Makerere University (Leffers et al., 2014), the practice was mainly for horizontal upgrade training with only minimal vertical upgrade training. Horizontal upgrading in Ugandan nursing education is a career academic progression whereby a nurse can be trained as a midwife and vice versa. This cross over training is offered at the same nursing / midwifery academic level, for example nurse to midwife at diploma level. Vertical upgrading training is offered for nurses and midwives who wish to improve their qualifications, but within the specific discipline only. This type of horizontal training at certificate level was highly recognised in terms of professional career progression and was used by the Ministry of Health as one of the requirements for professional promotion. For example, nurses who studied enrolled nursing would work for a minimum of two years and then enrol for another enrolled programme in midwifery or psychiatric nursing. Similarly, nurses who studied a course leading to the registered nursing certificate would also work for two years upon qualification and then enrol for horizontal level registered midwifery or registered psychiatric nursing training. Upon qualification they would be designated as double trained nurses. This practice led to nurses

possessing many certificates and hence to the rise of the multiple nursing certificate syndromes. These, in turn, later became multiple diploma syndromes after the introduction of nursing diplomas in the nursing schools. Many senior nurses, who are still in practice and act as preceptors, obtained their promotions through this approach. The nurses with a diploma or with certificates in registered nursing/midwifery are the main supervisors of pre-registration nursing students and BSc nurses interns on clinical rotation and internship.

1.2.4 Nursing programmes offered by Ugandan nursing schools and universities

The management and supervision of health training institutions in Uganda is the responsibility of the Ministry of Education and Sports (Matsiko & Kiwanuka, 2003). This practice began in 1998 when all health training institutions, including schools of nursing and midwifery, were transferred to the Ministry of Education and Sports in response to the recommendations contained in the World Bank restructuring report. Many changes took place at that time including the implementation of the World Bank policy on liberalisation and privatisation which gave rise to the formation of private nursing training institutions. Currently there are 73 nursing and midwifery training institutions (Uganda Nurses and Midwives Council, 2016). The rise in the number of nursing schools was accompanied by the introduction of more nursing programmes; the number of such programmes increased from the three offered in the 1960s to 18 as seen in Table 1.2 below. These factors led to an increase in the demand for clinical teaching services (Uganda Nurses and Midwives Council, 2016). The nursing programmes provide for basic and important nursing skills which require intensive and strict clinical teaching approaches to facilitate acquisition of nursing skills. Most of the current curricula in Uganda as outlined in table 1.2 below aim at training skilled personnel who are able to provide promotive, preventive, curative and rehabilitative services

at all levels of health care. The implementation of these curricula and especially the clinical training component requires a competent preceptor.

Table 1.2: Nursing educational programmes offered in Uganda:

Type of entry	Certificate Programmes	Diploma Programmes	Degree Programmes	Masters Programmes
Basic programmes	Certificate in nursing	Diploma in nursing	Bachelor of science-nursing	
	Certificate in midwifery	Diploma in midwifery	Bachelor of science - midwifery	
	Certificate in mental health nursing	Diploma in mental health nursing		
	Certificate in comprehensive nursing	Diploma in comprehensive nursing		
Post basic /extension programmes		Diploma in nursing	Bachelor of science-nursing	Master of nursing science
		Diploma in midwifery		
		Diploma in mental health nursing		
		Diploma in comprehensive nursing		
		Diploma in public health nursing		
		Diploma in paediatrics and child health		

Source: Uganda Nurses and Midwives Council (2016). Data base: List of Accredited Nursing Schools, cadres of nurses and midwives and other reports.

Thirty of the 73 accredited nursing institutions offer diploma in nursing programmes and rotate their students at the Mulago National Referral Hospital (MNRH) in order to gain specialised experience in nursing (Uganda Nurses and Midwives Council, 2016). These institutions implement the nursing curricula approved by the Ministry of Education and Sports in which the content for theoretical and practical training is prescribed. The clinical rotation, learning and teaching programme for every pre-registration nursing student commences immediately after the first three months of training. This requirement is prescribed in the Diploma in Nursing curriculum approved by the Ministry of Education and

Sports (2007b). This process of clinical rotation continues until the nursing student graduates. The introduction of nursing students to the clinical settings occurs after completion of the first theoretical component which includes basic sciences, foundations of nursing and application to the clinical context (Gaberson & Oermann, 2010). Nursing students have rotational attachments for a period lasting between two and four weeks in different hospital wards or units. This ensures that all areas of nursing specialisation, according to the nursing educational level, are covered before the end of the training period (Benner, 1982; Ministry of Education and Sports, 2007b). While on rotation in the clinical settings the pre-registration nursing students receive clinical guidance and teaching from the nurses, most of whom have no formal training in preceptorship.

Nursing students, in common with other health professional students, gain experience by working in allocated day, evening and night shifts under the supervision and guidance of preceptors; this process is similar to apprenticeship (Stalmeijer, Dolmans, Wolfhagen, Muijtjens, & Scherpbier, 2010). The objective of attaching nursing students to clinical areas is to enable them to develop the professional skills and knowledge needed to practice as nurses (Ali, 2012; Chisengantambu et al., 2005; Rahnavard et al., 2013).

In an effort to promote the acquisition of skills, the Ugandan preceptors guide nursing students to complete a set of clinical records books and tools also referred to as clinical log books in other countries, which include assessment tool books, midwifery case record books and ward reports. Details and protocols relating to the required nursing competencies are outlined in the clinical case record books to ensure that the student can perform step-by-step practice under the guidance of the preceptors. Preceptors have a primary responsibility to ensure that nursing students effectively utilise these books during their clinical training.

Reports from Uganda nurses and midwives examination board have indicated that there are gaps in how preceptors guide the students to utilise the clinical book (Mukakarisa, 2017). She reported that preceptors made vague and inappropriate comments in the students' clinical books. These comments do not assist the student to develop the required skills. It is not certain why the preceptors make vague or inappropriate comments in the students' clinical books. However there is evidence that pedagogical training of preceptors greatly improves their competence in the management of clinical teaching (DeCicco, 2008).

Competent mentoring and role modelling is required at this stage (Gaberson & Oermann, 2010; Hallin & Danielson, 2009; Happell, 2009) and appropriate presentation of content should be taught using the required resources. However, this does not generally apply in the case of nursing preceptors in Ugandan teaching hospitals, who also have to contend with large numbers of students; the preceptor to student ratio can be as high as 1:15, which places further constraints on clinical teaching and supervision (Mukakarisa, 2012; Uys, Matua, Mwizerwa, & Erejo, 2010). In order to ensure quality in nursing education in Uganda, there is an urgent need to address the training of preceptors.

1.3 Rationale for the Study

In Uganda, there is no formal training programme for nursing preceptors. However, it is an occupational requirement that preceptors teach the nursing students allocated to their wards, so that these students acquire nursing skills. The only tutor training college in the country does not offer preceptor training programmes. The college trains only a limited number of clinical instructors who are based at the educational institutions; thus, hospital preceptors lacking the required expertise in clinical teaching take on the responsibility for clinical teaching for the many nursing students who rotate in their wards and clinical units. In

addition to their preceptor role, nurses are faced with the challenges of high student numbers, inadequate resources, severely ill patients, lack of resource materials and low staff morale (Andersson, Danielsson, Hov, & Athlin, 2013; Miceli et al., 2012; Nyoni & Barnard, 2016; Ulrich, 2006; Uys et al., 2010). The Uganda health services are constrained by poor physical and technical resources, inadequate human resources, high patient acuity and patient loads (Museene, 2010).

Jeggels et al. (2013) argue that developing an effective model for clinical teaching, such as the preceptorship model, is the best way to improve preceptors' clinical teaching competencies. A number of clinical teaching models were reviewed in this study but were found not suitable for the Ugandan context. For example the supervisory clinical teaching and collaborative clinical teaching models could not be utilised because implementation demands significant human resources to implement them (Gaberson & Oermann, 2010; Hall-Lord, Theander, Athlin, 2013). Other clinical teaching models required high technologic setup in the clinical areas and in the nursing school computer laboratories (Rush Walsh, Guy, & Wharrad, 2011,). These models have heavy financial outlays as well as ongoing maintenance and support. It was evident to the researcher that clinical teaching and preceptorship models which emanated from better-resourced, high income countries were not suitable for the Ugandan context. During the design of the structured and collaborative clinical teaching training programme (SCCTTP), reference was made to the best practices identified in these models to suite the Ugandan context. The experiential and adult learning theories provided the theoretical framework for the program (Knowles, 1980; Kolb, 1984).

The Stufflebeam context, input, process and product (CIPP) model (Zhang et al., 2011) was used to evaluate the SCCTTP. The CIPP evaluation model was used in preference

to other evaluation models as evaluation of the SCCTTP focused on the design and training processes. Other evaluation models which focus on the analysis of the learning effectiveness (Bates, 2004) are discussed in chapter three of this study. An understanding of the context of needs and conditions of the intended setting, the inputs and processes involved and description of the final product was imperative. In order to develop a suitable training programme for Uganda, the researcher first described the current clinical teaching practices; this was followed by the development and implementation of a structured and collaborative clinical teaching training programme.

1.4 Aim of the Study

The aim of the study was to describe the current clinical teaching practices and then design, implement and evaluate a preceptors' structured and collaborative clinical teaching training programme (SCCTTP) for clinical teaching of pre-registration nursing students at a national referral hospital in Uganda.

1.5 Objectives of the Study:

1. Describe the current nursing preceptors' clinical teaching practices at a National Referral Hospital, Kampala.
2. Design a structured and collaborative clinical teaching training programme (SCCTTP) for training nursing preceptors in clinical teaching.
3. Implement the training programme for preceptors at the national referral hospital, Kampala.
4. Evaluate the influence of the training programme on the preceptors' knowledge and self-reported competence and confidence in conducting clinical teaching using a pre-test post-test research design.

1.6 Research Questions

1. What are the nursing preceptors' current clinical teaching practices?
2. What knowledge, skills and attitudes should be included in the design of the programme?
3. How should such a programme be implemented?
4. What is the influence of the training programme on the preceptors' knowledge and self-reported competence and confidence in conducting clinical teaching?

1.7 Study hypothesis

A structured and collaborative clinical teaching training programme improves the nursing preceptors' knowledge and self-reported competence and confidence in performing clinical teaching.

1.8 Summary

This chapter provides the background to the study and an overview of health care systems in Uganda. This chapter also provided an overview of nursing education in Uganda and how it evolved over time. The rationale, study aim, objectives, questions and hypothesis are also presented in this chapter. The next chapter will review the literature relating to clinical teaching and clinical teaching strategies, preceptorship and other clinical teaching models, learning theories and their application in nursing education and provision of the rationale, objectives, questions and hypothesis of the study. Chapter Three provides the theoretical framework underpinning the study and Chapter Four details the methodology and design for each phase of the study. The results of the study are presented in Chapter Five and the discussion, limitations and recommendations are presented in Chapters Six and Seven.

Chapter 2: Literature Review

2.1 Introduction

The purpose of any literature review is first to determine how and to what extent the topic under investigation has already been studied and then to assess the extent to which the results of those previous studies can be of help to the current study (Ward-Smith, 2016). In this study, the literature search was conducted for the period between 1960 and the present (2017), with emphasis on the last eleven years (2006-2017). The University of Cape Town online Libraries and databases were the main sources; these included Medline via EBSCOhost, Africa wide via EBSCOhost, Google Scholar and Science Direct. Local policy documents on the training and practice of nursing in Uganda were sourced. The Population Intervention, Comparative intervention, Outcome (PICO) approach was utilised in the review (Bettany-Saltikov, 2012). The structured collaborative clinical teaching training program and its influence on the nursing preceptors' self-reported competencies and confidence is the topic for this study. The main question which guided the literature review was: "what approach/model can be used to train nursing preceptors to conduct clinical teaching in Uganda". The key words that were utilised in the search are listed in the table 2.1.

Table 2.1: Key words for the study

PICO	Key words
Population	Nursing preceptors Clinical teachers Nursing mentors Clinical nurses
Intervention	Training / teaching Developing/designing
Comparative intervention	Clinical teaching models
Outcome	Training program

In this literature review, the search concentrated on sources which provided literature on nursing and health profession preceptorship programs, clinical teaching, programme design and development, competencies for clinical teaching, clinical teaching challenges, learning theories and evaluation models. Studies done in developed countries, Africa and other developing countries were reviewed. The search was confined to articles and other material written in English. The literature was reviewed by asking these questions (Table 2.2) in relation to the three phases of study.

Table 2.2: Guiding questions for literature search

Phases	Questions
Phase one	<ul style="list-style-type: none"> How are nursing preceptors prepared to conduct clinical teaching? Who are nursing preceptors? How are various clinical teaching strategies used? What are clinical teaching challenges? What stakeholders are involved in clinical teaching? What has been done in Uganda to improve nursing preceptors' clinical teaching competencies? How has nursing education evolved in Uganda?
Phase two	<ul style="list-style-type: none"> What are clinical teaching training programmes? How can a preceptorship training program be designed? What mechanism can be put in place to ensure effective implementation of a preceptorship training program? What learning theories can be utilised for training nursing preceptors? What evaluation models are applied in nursing
Phase three	<ul style="list-style-type: none"> What steps can be followed to training nursing preceptors to conduct clinical teaching? How can this training be evaluated?

Information obtained from the review articles and documents formed the basis for the review and critique of the literature presented in this chapter. Seven sub-sections were generated: the preceptor in the clinical setting; clinical teaching models and approaches; and, strategies and methods used in clinical teaching; challenges of clinical teaching; preceptor training and development programmes from other settings; preceptor competencies and qualities of conducting clinical teaching and learning theories as applied in clinical teaching for nurses.

2.2 The Preceptor in the clinical setting

A number of scholars have explained the meaning of the term preceptor. Thus, the term refers to a practitioner who performs not only his or her job duties but also performs the role of teaching, mentoring, guiding, providing continuous feedback, modelling and supervising students within the work environment (Atakro & Gross, 2016; Carlson, 2012; Cele, Gumede, & Kubheka, 2002; Happell, 2009; Heffernan, Heffernan, Brosnan, & Brown, 2009; Jeggels et al., 2013; Kelly & McAllister, 2013; Mingpun, Srisa-ard, & Jumpamool, 2015; Smith, 2006).

A review of the literature on the concept “preceptor” was done, to critically examine the various definitions. A preceptor is a registered nurse who provides individualised day to day support to nursing students; that support includes teaching, reflection, feedback and evaluation to bridge the theory-practice gap (Hallin & Danielson, 2009). Carlson, Wann-Hansson, and Pilhammar (2009, p. 522), defined a preceptor as “a nurse who teaches and support the students and is seen as a pivotal to student learning with in the clinical setting”. Ryan & McAllister, (2017, p. 268) described a preceptor as “a buddy, a mentor, a facilitator of clinical learning, a promoter of professional development and a provider of students’ pathways for orientation and socialisation into the nursing discipline”. Happell (2009, p. 375) offered the following definition of the term “preceptor” as “a role model with the responsibility to inspire students to develop clinical skills and to appreciate the importance and inherent values of nursing practice”.

Preceptors generally support nursing students to apply their knowledge, skills and attitudes in the clinical setting and assist in helping the student to familiarise him/herself to the environment. Performing the preceptorship role requires development of preceptorship

competencies which are attained through training and practice (Heffernan et al., 2009; Kelly & McAllister, 2013). The key skills required to perform the preceptorship role include clinical expertise, leadership skills, communication skills, critical thinking and problem solving skills as well as positive thinking about one's own profession, teaching skills and interpersonal skills (Happell, 2009; Mingpun et al., 2015; Smith, 2006). The willingness to share one's knowledge and skills with others is another paramount factor for success in this role (Smith, 2006). Training as well as experience is mandatory for the development of preceptorship competencies (Happell, 2009; Jeggels et al., 2013; Wade & Hayes, 2010). Effective preceptors are people who encourage, teach, evaluate, coach, protect, socialise, support and act as role models to the nursing students under their supervision (Ulrich, 2006). They should be easily approachable by students and available for student consultations. To enhance the preceptorship role, it is important for preceptors to develop a person-centred personality which is gained through self-training (Heffernan et al., 2009). In Uganda, preceptors improve their preceptorship skills through self-training, however the person-centred personality, as proposed by Happell (2009) supports the preceptor/preceptee relationship. It enables the preceptors to understand the students' experiences from their point of view and value them as capable beings with full capacity to learn. Students require time, understanding and support to acquire the clinical teaching skills and knowledge.

The motivation to assume a clinical teaching role is both intrinsic and extrinsic. The self-satisfaction gained by the preceptors as they contribute to the development of future nurses and midwives is one of the intrinsic benefits of clinical teaching. Rewards and teaching allowances are examples of the extrinsic benefits of being a preceptor (Logan, Kovacs, & Barry, 2015). Smith (2006) and Frattarelli and Kasuya (2003) illustrated some of the benefits of being a preceptor, both direct and indirect: positive preceptorship benefits

included self-improvement through the acquisition of personal skills to provide nursing care as well as the creation of opportunities for recognition in the provision of nursing education. The lack of such motivation impacts negatively on preceptors' willingness to conduct clinical teaching.

Numerous reasons have been cited in an attempt to explain why registered nurses are not consistently involved in clinical teaching and supervision of nursing students. For example, reasons reported by Myrick and Yonge (2005) included inadequate staffing, challenging working environments and work overload. As a measure to improve the situation in Canadian hospitals, clinical preceptors were introduced in selected hospitals during the 1960s and 1970s (Myrick & Yonge, 2005; Richards & Bowles, 2012). The introduction of the practice led to the development of the 'preceptor' concept which means "a professional nurse, identified from the existing nursing team of each hospital ward/unit to accompany student nurses" (Cele et al., 2002, p. 41).

According to Gaberson and Oermann (2010) the appropriate role of a preceptor in the clinical setting is competent guidance, stimulation, support and facilitation of learning through designing learning activities in an appropriate setting. The preceptors provide mentorship, supervision, instruction and role modelling to students as well as nursing care to the patients (O'Brien et al., 2013; Weitzel et al., 2012). They are also helpers, challengers, researchers and colleagues in the profession (Cele et al., 2002).

One of the most important roles of nursing preceptors is that of clinical teaching of pre-registration nursing students: a process that commences at an early stage in training when the trainees are still at the novice stage and which continues until they become experts

(Benner, 1982; Burns, Beauchesne, Ryan-Krause, & Sawin, 2006; Dorcas, 2007; Myrick & Barrett, 1992; Ulrich, 2006). Preceptors conduct clinical teaching in a manner that promotes simple to complex learning and the known to unknown approach (Benner, 1982). This approach is guided by various clinical teaching models.

2.3 Clinical teaching models and approaches

Globally, clinicians and nurse educators have developed and used various clinical teaching models (Taylor & Hamdy, 2013). Newton, Jolly, Ockerby and Cross (2012, p. 15), in their book “Student centredness in clinical learning: the influence of the clinical teacher”, explained the use of five models of clinical teaching: supervision, preceptorship, a dedicated education unit, the clinical nursing development unit, and the clinical education unit. The model that has been widely utilised in nursing education since the early 1980s is that of Benner entitled “from novice to expert” (Benner, 1982, pp. 402-406). It emphasises the processing of learning through stages. The other models that can be applied in clinical teaching of nursing students are traditional apprenticeship, one-minute preceptor and the collaborative clinical education models (DeCicco, 2008; Furney et al., 2001). The following Table 2.3 provides a brief overview of the relevant models. Each of the models is thereafter discussed in more detail.

Table 2.3: Clinical teaching models

Type of Model	Reference	Brief Description	Applicability of the model to Ugandan Context
The Supervision Clinical Teaching Model	Hall-Lord, M. L., Theander, K., & Athlin, E. (2013). A clinical supervision model in bachelor nursing education - purpose, content and evaluation. <i>Nurse Education in Practice Journal</i> , 13(6), 506-511.	Nursing students are supervised by professionals at four supervision levels: the personal preceptor, main preceptor, clinical nurse and senior clinical nurse.	This model has heavy human resources demand; in the Ugandan context this model may not be possible due to human resources limitations. The majority of Ugandan hospitals are understaffed and resource constrained
The Collaborative Preceptorship model	Gaberson, K., & Oermann, H.(2010). <i>Clinical teaching strategies in nursing</i> . Retrieved from http://books.google.co.ug/books?id=UHoZd9SN5FAC	This model operates in a structured partnership between the health care agency and tertiary training institution.	The collaboration described in this model was modified to suit the Ugandan context. The SCCTTP is yet to formalise the relationship between the health facility, educational institution and other concerned clinical teaching stakeholder.
The five steps micro-skills clinical teaching model	Neher, J. O., Gordon, K. C., Meyer, B., & Stevens, N. (1992). A five-step "micro skills" model of clinical teaching. <i>Journal of the American Board of Family Practitioners</i> , 5(4), 419-424.	This model helps the learner to learn and also enables the clinical teacher to teach, assess, instruct and provide feedback effectively.	The five steps micro skills clinical teaching model is widely used in medicine. It is also applied in nursing. the SCCTTP made reference to the model during its design and implementation
The Novice to Expert Model	Benner, P. (1982). From novice to expert. <i>The American Journal of Nursing</i> , 82(3), 402-407.	This model recognises the importance of incremental skill performance based on experience and education. It states that becoming an expert requires gaining experience through the five levels.	Benner's model provides a universal approach to nursing education. In Uganda nursing students are graded as pre-introductory period (PTS) then senior level students after the first year. This grading recognises varying competence levels which is a key issue in Benner's Model of novice to expert. Reference was made to this model during the design of the structured and collaborative clinical teaching training program.
The Clinical Teaching Associate Model	Rahnavard, Z., Nodeh, Z. H., & Hosseini, L. (2013). Effectiveness of clinical teaching associate model in nursing education: Results from a developing country. <i>Contemporary Nurse: A Journal for the Australian Nursing Profession</i> , 45(2), 174-181.	In this model the qualified nurses who are also known as clinical teaching associates take on the responsibility of clinical teaching. They conduct teaching, resolve students' learning problems and facilitate students' achievement of educational goals.	The approaches in this model are not dissimilar to other preceptorship models. Reference was made to this model during the design phase of SCCTTP.
The Clinical Practice Teaching and Learning Observatory (CP-TLO)	Rush, B., Walsh, N. J., Guy, C. J., & Wharrad, H. J. (2011). A clinical practice teaching and learning observatory: The use of videoconferencing to link theory to practice in nurse education. <i>Nurse Education in Practice</i> , 11(1), 26-30.	It is used to manage the issue of limited space and limited time for exposure to all clinical experiences.	Although the CP-TLO model is very good in managing space and patient privacy, it is very expensive to implement. It requires additional resources to manage the technological focal points in the school and hospital. The SCCTTP did not utilise this approach.
The Preceptorship Model	Happell, B. (2009). A Model of PRECEPTORSHIP in Nursing: Reflecting the Complex Functions of the Role. <i>Nursing Education Perspectives</i> , 30(6), 372-376	The preceptorship model focuses on the relationship between the preceptor (experienced clinical nurse) and preceptee who is a nursing student.	This model is widely used in the United Kingdom. The models which strongly advocates for collaboration between educational institutions and training facilities. The SCCTTP utilised its strong point on collaboration.

The Supervision Clinical Teaching Model is a model that has become customary in many nursing programmes worldwide (Chisengantambu et al., 2005; Hall-Lord, et al., 2013). It involves nursing students being supervised by professionals at four supervision levels. These are coded level A for a personal preceptor, level B for main preceptor, level C for clinical nurse lecturer and level D for senior clinical nurse lecturer (Hall-Lord et al., 2013). The personal preceptor at level A in this supervision model provides bedside supervision and supports skills acquisition through a one-to-one student encounter. A main preceptor, level B, is more qualified than the personal preceptor and acts in a way similar to that of a supervisor of the group of between five and seven nursing students; the main preceptor also provides support to the personal preceptor in her daily role. The clinical nurse lecturer at level C takes on the link role between the hospital and the nursing college. That person serves as pedagogical expert and guides educational goal attainment. The senior clinical nurse lecturer, level D, has the overall responsibility for clinical teaching and educational goal attainment. The compensatory mechanism from the higher levels of supervision is another demonstrated advantage of this model (Hall-Lord et al., 2013). It is anticipated that the academic competencies of level D are better than all the other levels and therefore level D supervises all the other levels. In this model the nursing education institutions meet the cost of training.

This supervision clinical teaching model provides a well-structured approach to clinical teaching. It requires competent and adequate numbers of preceptors who are aligned at the various supervision levels (Hall-Lord et al., 2013). It is also cost effective as a contract is made between the schools of nursing and the various preceptors. The need for an adequate number of preceptors at different levels of supervision and the call of commitment to meet the preceptors' allowances may limit its implementation. This applies especially to the low

income economies where staffing and funding are major limitations. However its implementation may be modified to suit the situations in the developing countries.

The dedicated education unit, clinical nursing development unit and clinical education unit models, also referred to as the **collaborative or partnership model**, are clinical teaching models that operate on a structured partnership between the health care agency and tertiary institution (Gaberson & Oermann, 2010; Newton et al., 2012). The advantages of this model include the fostering of collaboration between clinicians and academia, availability of opportunities for training clinicians/preceptors, encouragement of peer teaching and extended placement of students in the clinical areas. The dedicated education unit is advantageous because it provides a full unit specifically for the purpose of educating nursing students. That unit is managed through a collaborative relationship between the academic faculty, staff and the students (Ukot & Eti, 2015). The limitation of this model as reported by Happell, (2009) is the emphasis it puts on clinical teaching rather than patient care. Preceptors requested to be released from patient care duties in order to focus on students teaching and support (Happell, 2009). This has an impact on patient care and may require more staff. Nevertheless the principles in the collaborative/partnership model are good for clinical teaching.

The **five steps micro-skills clinical teaching model** helps the learner to learn and also enables the clinical teacher to teach, assess, instruct and provide feedback effectively. This model, according to Neher, Gordon, Meyer and Stevens (1992), promotes clinical teaching and learning, commitment, probing for evidence, teaching of the general rules, reinforcing and correcting of mistakes. The main advantage of this model is the promotion of learning in the busy clinical setting using a simple structured guided approach. According to Neher et al. (1992), the five step micro-skills model was developed for beginner teachers,

senior residents, new faculty members and community attending physicians who were not regularly conducting clinical teaching.

Health professionals usually only require one or two hours to master the use of this model (Neher et al. (1992), whereafter it can be practiced immediately and used lifelong. The model is commonly used in faculty development, especially in situations where time for implementation is limited (Neher et al. (1992). Similar to this model is the One Minute Preceptor (OMP); this was designed for the development of faculty staff working in busy ambulatory settings (Aagaard, Teherani, & Irby, 2004; Furney et al., 2001). The OMP is a popular model for clinical skill improvement (Furney et al., 2001, p. 620) and is widely used in many countries. The limitation of OMP is its minimal scope of application to a wide range of clinical settings.

The **novice to expert model** (Benner, 1982) is another model which is widely used in nursing clinical teaching. It recognises the importance of incremental skills performance based on experience and education. The essential premise of this model is that the process of becoming an expert requires that the learner gain experience through the five levels: novice, advanced beginner, competent, proficient and expert. The advantage of this model is the promotion of proportional learning until a whole in-depth understanding is acquired (Taylor & Hamdy, 2013). According to Benner (1982), the model provides for clinical knowledge development and career progression in clinical nursing. The novice to expert model is used in both developed and developing countries especially when teaching clinical skills to beginners.

The **Clinical Teaching Associate** (CTA) model (Rahnavard et al., 2013) is a model in which registered nurses, also known as clinical teaching associates (CTAs), assume responsibility for clinical teaching. They conduct teaching, resolve students' learning problems and help them towards achieving their educational goals. The CTAs report student progress to the faculty. In the pursuit of their clinical teaching role, the CTAs are free to consult nursing faculty members for any clinical teaching need or guidance. This CTA model is similar to the preceptorship model, discussed below. The CTA model is mainly used in the USA and Iran, where it is used to support the acquisition of nursing skills by students while demonstrating the modelling and assessing roles of the preceptors (Rahnavard et al., 2013).

The Clinical Practice Teaching and Learning Observatory (CP-TLO) is a clinical teaching model which was introduced in the United Kingdom to manage the issues of limited space and limited time for exposure to all clinical experiences. This model operates with data points which are allocated in the visual learning laboratory of the university and connected to the clinical settings to enable video conferencing to take place (Rush et al, 2011). The CP-TLO allows the business of clinical teaching to be conducted without the distraction of having students physically present and it addresses the space issue (Rush et al, 2011, p. 29). An advantage of the CP-TLO is that it includes the option of teleconferencing (classroom and clinic); this enables students to interact with the patients (care users), through questioning and discussion, as a student in a learning context rather than as a nurse in the clinical setting. The other important advantage of this model is the role shift; thus, a patient is used as a teacher in nursing education. The shift in roles creates a positive benefit for patients, as they obtain information and knowledge through interactions and discussions with the students and as they respond to student questions (Rush et al., 2011). The CP-TLO is mainly utilised in the United Kingdom, where it is used to link student teachers in university classrooms with experienced

teachers working in state founded schools (Rush et al., 2011). The major limitation of this model is the demand for high technological provision.

The Preceptorship Model focuses on the relationship between the preceptor (experienced clinical nurse) and preceptee who is a nursing student (Gaberson & Oermann, 2010; Happell, 2009). In this model, the preceptor acts as a role model who is responsible for inspiring students to develop clinical skills and to appreciate the importance and inherent values of the nursing practice. The advantages of this model include: enhancement of self-esteem and confidence, promotion of the development of critical thinking and judgement skills, promotion of personal and professional satisfaction and reduction of staff turnover (DeCicco, 2008; Gaberson, Oermann, & Shellenbarger, 2014; Myrick & Yonge, 2002; Nordgren, Richardson, & Laurella, 1998). However, it should be acknowledged that the ideal preceptor-student ratio in this preceptorship clinical teaching model is one to one (1:1). Some clinical settings have modified and adopted the preceptor-student ratio of one to eight (1: 8), which is seldom the norm in understaffed settings. The preceptorship model is widely used in both developed and developing countries. Australia, Sweden, Brazil, Ghana, Hong Kong, Pakistan, USA and South Africa have all adopted the model (Happell, 2009; Heffernan et al., 2009; Jeggels et al., 2013; Myrick & Yonge, 2002). The preceptorship model is also used in the United Kingdom where it is known as the mentorship model (Myrick & Yonge, 2002).

The clinical teaching models, as discussed above, provide a framework for clinical teaching. In all these models, emphasis is given to the provision of mentorship, role modelling, appropriate presentation of content and use of suitable learning resources (Benner, 1982; Hallin & Danielson, 2009; Happell, 2009). Also emphasised in all these models is the importance of collaboration, consultation and resource sharing. Development of the

pedagogical and patient care skills is essential for effective preceptorship. These competencies are developed through training of clinical nurses in the conduct of clinical teaching.

2.4 Strategies and methods used in clinical teaching

Frenk et al. (2010), in their independently commissioned report on the global education of health professionals for the 21st century, identified several challenges associated with health care delivery. These included the emergence of new infections, escalating environmental and behavioural risks, rapid discoveries and developments in technology, additional demands made upon health workers to ensure upkeep of professional standards and a mismatch between competencies and the actual needs of patients and the general population. It was argued that the existing science-based curriculum based on the 1910 Flexner Commission report could no longer address, adequately; current health needs (Frenk et al., 2010). It was therefore recommended by this Commission that reforms be made to those health science educational curricula that use the systems approach to improve the performance of health systems. The competencies to be included in all health professional curricula which were proposed by Frenk et al. (2010, p. 1924), were “...the ability to mobilise knowledge and to engage in critical reasoning and ethical conduct.....and formulation of learning which is about socialising health professional students around values with a purpose of producing professionals rather than experts”. The proposed reforms involved three fundamental shifts:

- i. A shift away from curricula that emphasise the memorisation of facts, towards those that encourage searching, analysis and synthesis of information for decision making.
- ii. A shift from seeking professional credentials towards achieving core competencies for effective team formation in the health system.

- iii. A move away from the non-critical adaptation of educational models towards creative adaptation of global resources to address local needs.

These proposed reforms concurred with the views of Wade and Hayes (2010), who encouraged students to focus their attention on issues that influence health and illness from a community-oriented approach rather than from an individualised disease and its treatment approach. Nurses and midwives in the 21st century need to fit into this framework. Therefore, preceptors require preparation in order to adopt the strategies that promote learner-centredness, teamwork-centredness and critical reasoning and judgement. The preceptors of the 21st century should use teaching methods, procedures and strategies which facilitate learning by doing, reasoning and reflection rather than by imitation. This was considered at the design stage of the SCCTTP programme

The approaches, methods and procedures that a clinical teacher uses to deliver the prepared content and skill are referred to as teaching strategies. According to Carlson et al. (2009), learning and teaching form a continuous and cyclic process; this starts with the discovery of how much the students know and ends with the confirmation of how much they have learned after the interaction. This information is useful when setting learning outcomes or scaffolding (Taylor & Hamdy, 2013).

A number of clinical teaching strategies have been documented. Since the beginning of this century, learner-centred strategies have been promoted more than the teacher-centred strategies (Frenk et al., 2010; Taylor & Hamdy, 2013). Strategies reported in the literature include the ‘sink or swim’, the ‘manipulative structured approach’ and ‘questioning technique’. Carlson et al. (2009), in a study of teaching clinical skills, used the reflective

questioning technique as a means of promoting critical thinking and reasoning. They also reported that the 'sink or swim' approach was mainly used by preceptors; this applied especially when they perceived that the student had an independent approach to learning.

Other teaching strategies include demonstration, role modelling and role play. Schupbach (2012) encourages use of role play and role modelling especially in the area of character formation.

2.4.1 Demonstration as a clinical teaching strategy

Demonstration, also known as simulation, is a teaching strategy in which a teacher explains, illustrates and/or displays how an action is to be completed (Tomlinson, Thomlinson, Peden-McAlpine, & Kirschbaum, 2002, p. 165). Demonstration is described by Schupbach (2012) as a strategy whereby a preceptor performs a skill while the students observe; the preceptor then requests students to do the same while she/he observes, and if necessary, corrects them to ensure that the skill is learned. The demonstration strategy has been reported to be the most appropriate one to use wherever safety is paramount (Sanford, 2010). For example, it is mainly used in training medical doctors, nurses and pilots. It has been applied in nursing for some time and is seen in use whenever nursing procedures such as injection administration, catheterisation and conducting a delivery, are taught. This strategy is believed to be the most utilised teaching method in nursing education, especially in the skills laboratories and in clinical settings (Perry, 2009; Sanford, 2010; Schupbach, 2012; Tomlinson et al., 2002).

Tutors, clinical instructors and preceptors use the strategy to teach novice and senior nursing students how to perform nursing functions. The strategy is utilised, for example, when oranges or sponges are utilised to practice intramuscular injection administration, or

learning to conduct a baby delivery using a manikin or practicing to insert a nasal gastric tube on a manikin. All of this is done in order to ensure that the student gains the required level of skill before attempting the procedure with a patient. This ensures safety, allays anxiety and builds the students' confidence to practice.

Demonstration has some similarities to role modelling; however there is a difference in the communication made by the teacher to the students about the demonstration. The teacher also prepares the students to repeat the procedure as he or she watches and corrects where necessary. During demonstration, the students learn from a skilled person and they are also allowed to practice (Sanford, 2010). As they practice, the manipulative and scientific aspects of the procedure are emphasised but this is unlikely to take place if other strategies are used. For example, in role play, the emphasis is on utilising the drummer, music and fun to illustrate the various steps and processes of the procedure (Joyner & Young, 2006).

One advantage of demonstration is that it allows students to develop the skill in a simulated non-threatening environment before they are exposed to the real clinical setting (Norman, 2012; Sanford, 2010). This strategy can also be used to simulate rare conditions which may seldom be encountered in the clinical settings. The disadvantage of this strategy is the cost of the simulators. High fidelity simulators are usually very expensive and this factor may limit the availability of simulators of the required quality (Sanford, 2010). The demonstration strategy also requires preparation time and illustration of the scenarios. Nevertheless, demonstration has proven to be one of the most appropriate clinical teaching strategies for clinical settings as far as assuring safety to the preceptor, student and patient is concerned.

2.4.2 Role modelling as a clinical teaching strategy

Role modelling is a strategy in which the preceptor demonstrates good character and professional behaviour to the learners in a passive manner (Dyer & Pardue, 1999). It is a teaching strategy which emanates from the role modelling theory. The role modelling theory proposes that individuals perceive their identity in relation to those with whom they associate and those who have related roles (Amalba, Abantanga, Scherpbier, & van Mook, 2017). Role modelling is a tool that helps exemplary clinical nurses to translate theory into practice and to share their skills with junior health professionals (Amalba, et al.,2017; Perry, 2009). Role modeling which is a passive teaching strategy can lead to learning of effective or ineffective skills. It is urged that preceptors do not need to alert the learners to learn a skill being modelled; because through their exemplary positive practice, the learners automatically copy the skill being demonstrated. (Leep Hunderfund, Dyrbye, Starr, Mandrekar, Naessens, Tilburt, Reed, 2017).

The modelling strategy is used to teach professional thinking, social and leadership skills and empathy and compassion. Studies have demonstrated that positive role modelling facilitates the learner's development of belief and practice which ensures future provision of quality care (Amalba, et al.,2017; Perry, 2009; Tomlinson et al., 2002). That emphasises the rationale for demonstrating positive skills which include craft knowledge, outstanding psychomotor skills, as well as technical and interpersonal skills. Conversely, Schupbach (2012) and Leep Hunderfund, et al, (2017) caution preceptors not to display negative practices to learners, because, the displayed negative practices may be copied by learners. Examples of negative behaviour, according to Amalba, et al. (2017) which should be avoided in the presence of students include behaviours of laziness, arrogance, late arrival at work, self-centredness, and untrustworthy, dishonest and bad interpersonal relationships.

Schupbach (2012) encourages preceptors to make sure that they demonstrate only positive practices and professional behaviour to the learners.

The influence of the role model in acquiring professional and ethical skills is more powerful than reading a text book or learning through a teaching session (Passi & Johnson, 2016). This implies that qualified nurses must be mindful and willing to demonstrate clinical skills to the nursing students under their care. Perry (2009) reported that nurses who are exemplary role models intentionally talk to the patient throughout a procedure. The preceptors make this conversation seem as if they are communicating with the patient however they are also including the student in this learning conversation, thus demonstrating the skills. By doing this, the patient feels valued and the students learn the skill as they listen and observe a senior nurse performing the procedure.

In role modelling, attention must be given to the little things done, the things that are said, how they are said and how they are done; all this may constructively promote or hinder modelling (Perry, 2009). For example, role modelling good time management to students may require the preceptor to provide information about the dangers of arriving late for duty. Then she/he models timely performance of activities. In this example, performance of activities is a small but meaningful strategy to create a very positive influence in the learner with respect to time management (Perry, 2009).

Exemplary role modellers make meaningful connections with their patients, colleagues and subordinates (Perry, 2009). Meaningful connection in this context means that the person modelling understands his or her personal strength and weaknesses, and can relate these to those of the students for whom he/she is the role model. Meaningful connection helps

the role model to apply the various factors needed for effective modelling. In order to have meaningful results from the connection strategy in role modelling, one has to develop an interest in others and a willingness to connect with them. This helps preceptors to appreciate others' weaknesses and strengths.

2.4.3 Role play as a clinical teaching strategy

Joyner and Young (2006, p.225), conducted a study entitled 'teaching medical students using role play,' in which they used Kiger's 2004 definition of role play. In their work, role play was defined as "an experiential learning technique in which students act out roles in actual case scenarios in order to provide targeted practice and feedback to learn skills". Role play is used to teach and practice a broad range of nursing skills ranging from communication, history taking, interpretation of patient data and laboratory results to the provision of basic and advanced nursing interventions. It can cater for promotive, preventive, curative and rehabilitative nursing interventions. Joyner and Young (2006) reported that role plays were appropriate for helping students to practice skills, explore sensitive issues, and expose behaviour as well as to sensitise participants to other ideas, attitudes and values.

2.4.4 Reflection and journaling as a clinical teaching strategies

Legare and Armstrong (2017) write that Dewey, an American psychologist and philosopher was the first scholars to publish work on reflective processes in 1933. According to Legare & Armstrong, (2017) Dewey conceptualized the difference between routine thinking about something and reflective processes. Dewey's work suggested that reflective thoughts are deliberate processes that lead a solution of a challenges or perplexing situations (Legare & Armstrong, 2017). In nursing education, reflective learning as a learning strategy was introduced by Donald Schon, another American philosopher through his work of thinking on

your feet and reflection in action (Schon, 1983). Schon (1983) believed that competent practitioners knew more than what they say. This belief was based on observations made during practice, especially when practitioners were faced with a unique and conflict situation. Their interventions in such situations were always appropriate.

Reflection and journaling as clinical teaching strategies are used concurrently in the clinical setting. The action of reflection which begins immediately after an incident occurs, draws upon past experiences to clarify what has just happened, hence providing the content for journaling. Smit and Tremethick (2017, p. 286) define “reflection as being mindful of self either with in or after an experience ... in order to confront, understand, and move towards resolving a contradiction between one’s vision and actual practice”. Branch and Paranjape (2002, p. 1187), defined reflection as “a thought, idea or opinion formed, or a remark made, as a result of meditation”: thus reflection is a means of processing thoughts and feelings about an incident or a difficult day, for example, for the purpose of learning from those events. These definitions recognise the thoughtful processes in the mind and the occurrence of an event in terms of timing and learning. Exploration and explanation of the events and allowing time for the process of reflection to take place are all critical (Pierson, 1998). The period required for reflection depends very much upon the issue being reflected upon.

Reflection is about revealing anxieties, errors and weaknesses as well as strengths and successes. It is aimed at reaching a better understanding and gaining new learning. Time is required for the reflection processes to take place and with this in mind, writing a journal facilitates and enhances the utilisation of time in reflection (Pierson, 1998). When reflection is used in learning it integrates a combination of knowledge, skills, attitudes and values with

a learner's cognitive framework. It allows assimilation and reworking of the concepts, knowledge, skills, attitude and values into the learner's pre-existing knowledge structure (Branch & Paranjape, 2002). This process supports deep learning which requires critical thinking and critical reasoning to take place.

Reflective journaling is a three step process with critical appraisal as the first step. In critical appraisal, students are given freedom to include descriptions of, and emotional reactions to, their experience (Riley-Douchet & Wilson, 1997). In critical appraisal, the students conduct a critical analysis of those important clinical events which had a significant impact on their personal and professional learning. The critical events are called critical incidents (Serrat, 2017). Serrat, (2017, p. 1077) clarifies the concepts of critical incidents and reflective learning through this phrase; "in words, organisations are often challenged to identify and resolve work place problems. Critical incidents provide a starting point and a process for advancing organizational development through learning experience. It helps them to study what people do in various situations." The unknown situation or event which lead to learning is what Serrat, (2017) is describing as a critical incident or a starting point to a serious inquiry. An example of such a critical incident in a clinical area is: medical emergencies which are unusual to the preceptor or nursing student. These medical emergencies form a critical incident when the preceptor or student develops a feeling that she/he had provided exceptionally successful or unsuccessful management; and wishes to understand what led to the difference in management as compared with similar situations.

The second step in reflective journaling involves peer group discussion (Riley-Douchet & Wilson, 1997). Here, the students discuss the scope, practicability and reality of the clinical event. They are expected to share questions which they formulated from the self-

reflection and other experiences during the post clinical conference. The post conference stage is a period which follows the student-patient encounter. During this period preceptors convene with the students to evaluate the clinical experiences of the day (Cheshire, Montgomery, & Johnson, 2017). In this clinical teaching strategy, the preceptor acts as a facilitator as well as a resource, responding to needs expressed by the student. The preceptor encourages the students to express their concerns which form the basis to relate and integrate the theoretical aspects of the emerging issues. The preceptor as a resource also provides answers to questions that may not have been fully answered during the discussion.

In the third step of reflective journaling, the student analyses his or her self-awareness into self-evaluation. This step is completed after the post-conference and is done independently by the student. At this stage the students documents their own learning as an outcome of their earlier reflections and that of the group discussion. Riley-Douchet and Wilson (1997) describe this stage as the most critical one because it allows thinking and critiquing, reasoning and judgement, followed by the evaluation and formation of conclusions. This represents a higher level of learning which must be encouraged and supported by clinical educators. In this process, nursing students are competently prepared to work comfortably in parallel, and in collaboration with other health professionals (Taylor & Hamdy, 2013). The reflective and journaling teaching strategy is best applied when training learners in critical thinking, reasoning and judgement. However, it should be noted that this strategy may not be appropriate for junior students with undeveloped critical reasoning skills.

2.4.5 Self-directed learning, assignment directed learning and problem based learning as clinical teaching strategies

Self-directed learning (SDL) is not a single teaching method but an approach that involves learners in the activities of planning and implementation of their own learning (Riley-Douchet & Wilson, 1997). SDL was first introduced from the principles of adult learning (Abdullah, 2001). This is because in adult learning education, learners are viewed as owners and managers of their own learning processes. Learners are self-directed, using self-motivation to plan and mobilise resources for learning, including their allocation of time (Parsell & Bligh, 2001). They also monitor, and then self-evaluate their learning processes (Knowles, 1980).

In SDL, control over learning shifts from the teacher to the learner (Abdullah, 2001). Learners exercise a great deal of independence in setting learning goals and also when deciding what is worth learning (Abdullah, 2001; McGrath et al., 2015). Teachers facilitate learning by making learning objectives visible and also modelling learning strategies then working with students to develop them for use. In this process a high sense of collaboration is achieved through sharing responsibility for learning and facilitation.

The benefits of SDL include the promotion of learner independence and the creation of learners' awareness of their responsibility to make learning meaningful. There are several powerful factors that can motivate the learners; these include being curious and willing to learn new things as well as having a desire to change and to make learning enjoyable. Exposure to SDL creates citizens who are motivated, persistent, independent, disciplined, confident and goal oriented. Many educational programmes for health professionals have adopted SDL and problem based learning. Assignment-directed reading and problem based

learning are other self-directed strategies that are used in clinical settings (Carlson et al., 2009; Gaberson et al., 2014; Nielsen, Stragnell, & Jester, 2007).

2.4.6 The One Minute Preceptor (OMP) as a clinical teaching strategy

Another clinical teaching strategy used in nursing is the One Minute Preceptor (OMP) technique (Furney et al., 2001; Gaberson & Oermann, 2010; Schupbach, 2012; Weitzel et al., 2012). This teaching strategy also known as a model (Furney et al., 2001) was designed for use by preceptors working in a busy ambulatory setting. Although OMP is presented here as teaching strategy, it is mostly used as a clinical teaching model (Furney et al., 2001). In this strategy the preceptor facilitates clinical teaching through the use of the five micro-skills which were described by Neher et al. (1992). Those five micro-skills help the preceptor to guide the clinical interaction, especially where time is limited (Furney et al., 2001). The strategy helps to focus the preceptor-student encounter on the decision making process and helps the student to assess and appreciate the collection of facts (Neher et al., 1992). The five micro-skills are: get commitment, probe for supporting evidence, teach the general rules, reinforce what was done well and correct errors. The description of the five micro skills is presented in table 2.4.

Table 2.4: The five micro-skills for clinical

The five micro-skills	
The micro-skill	Description
Get a commitment	The student should be encouraged to commit to a diagnosis, workup or therapeutic plan. This helps the student to feel responsible for the patient's care. Getting committed helps the student to process information collected during the patient encounter. At this level the preceptor is encouraged to make students own their decision about the patient, rather than assisting. The student formulates a decision based on the preceptor's competencies. For example, a question such as "what do think is going on with this patient?" is good enough to stimulate the student's analysis and commitment. At this stage the preceptor asks the student to articulate his or her own diagnosis or plan.
Probe for supporting evidence	Once the student has made a commitment, the preceptor helps the student to reflect on the mental processes that led to the diagnosis/workup/therapeutic plan. By doing this, the preceptor and the student will be able to discover what the student does or does not know. At this stage the preceptor is cautioned against making a judgement and instead, should ask for evidence that supports the student's commitment. By doing this the preceptor is evaluating the student's knowledge or reasoning.
Teach general rules	From the information provided in micro-skills 1-2, teaching points will become apparent from the gaps, mistakes in data, knowledge or missed connections. Whenever the student performs well in micro-skills 1 and 2, this skill may be omitted. At this stage, the major issue is to teach the student common take home points that can be used in future cases, aimed preferably at areas where the student shows weakness.
Reinforce what was done well	Some strength discovered in the student might be real while some apparent strength might be attributable to 'luck.' In order to enhance the firm establishment of learned competencies, reinforcement and reward are required. Praise as well as criticism is required. This is termed positive constructive feedback.
Correct errors	Although it is good and advisable to provide both positive and negative feedback as soon as possible after the event, correcting errors is the last step in the five micro-skills. This allows a preceptor to evaluate the student's performance. Also, it allows preceptors to establish whether students are aware of their mistakes. If they are not aware, then preceptors must prepare to discuss what was wrong and to describe the potential negative consequences of the event. By doing this, the preceptor provides constructive feedback with recommendations for improvement.
Source: Furney, S. L., Orsini, A. N., Orsetti, K. E., Stern, D. T., Gruppen, L. D., & Irby, D. M. (2001, pp 620). Teaching the one-minute preceptor Neher, J. O., Gordon, C., Meyer, B., & Stevens, N. (1992, pp 420-422). A five-step "micro-skills" model of clinical teaching	

The OMP has advantages as it requires a limited amount of clinical teaching behaviour and is suitable in situations where time is limited, such as busy ward rounds primary care settings. It can also be used in a case study format. Originally a medical education strategy, it has been adopted for use in nursing education.

2.4.7 Coaching as a clinical teaching strategy

Coaching is a strategy in which the preceptor guides the student verbally through a test or procedure that they have not yet mastered (Schupbach, 2012); for example, when teaching nursing and midwifery students to insert an Intra Uterine Device (IUD). The preceptor will first use a model with the students; then, with guidance and positive feedback, the student will practice until the preceptor is sure that the student is competent. Afterwards, the student will be allowed to perform the procedure in a clinical setting. Coaching is very useful in situations which require reinforcement and close supervision while a skill is being learned.

2.4.8 SNAPPS technique as a clinical teaching strategy

SNAPPS is an abbreviation for **S**ummarise history and findings, **N**arrow the differential, **A**nalyse the differential, **P**robe preceptor about uncertainties, **P**lan management and **S**elect case related issues for self-study (Barangard, Afshari, & Abedi, 2016; Wolpaw, Papp, & Bordage, 2009). SNAPPS is a learner-centred approach with six steps which students follow to learn clinical skills. In steps one and two, students are taught how to briefly summarise the history and findings and narrow the differential diagnoses to two or three relevant possible diagnoses. In step three students are taught to analyse the diagnoses by comparing and contrasting the possibilities. In steps four and five students learn how to probe the preceptor through asking questions about ambiguities and alternative approaches, and plan for the patient's medical problem. In the final step, students are required to select case related issues for their self-directed learning. Institutions that use this approach orient the students how to use it early in training; subsequently students independently use the strategy as they learn the skills.

In summary, the use of the teaching strategies, techniques and styles discussed in this section will depend on several factors such as: the learner's learning styles, the cognitive capability of the learner, the preceptor's ability to maintain a positive interpersonal relationship with the learner, the type of clinical setting, the type of content to be presented and the preceptor's pedagogical comfort level and clinical skills base (Taylor & Hamdy, 2013). There is no single clinical teaching strategy for teaching all clinical nursing skills. A combination of strategies and methods is required. For example, role play, role modelling, demonstration and reflection can produce excellent results when teaching manipulative nursing procedures. Role modelling paired with case presentations are excellent strategies for teaching soft skills. It is therefore recommended experts in clinical teaching that nursing educators concurrently use multi-clinical teaching strategies for influencing effective clinical learning.

2.5 Challenges of clinical teaching

Nursing studies have documented several challenges associated with clinical rotation and clinical teaching (Chang, Lin, Chen, Kang, & Chang, 2015; Chen, Duh, Feng, & Huang, 2011). Challenges in clinical teaching and preceptorship originate from the association with and interactions of the patient, preceptors, students, faculties and the system in which clinical teaching occurs. Chen et al. (2011) found that preceptors perceived that being a preceptor could be a burden. This feeling was attributed to difficulties originating from role/mandate conflict, fear of failing as a preceptor, excessive paper work and lack of collegial support. Hallin and Danielson (2009, p. 162) stated that the challenges of clinical teaching range from individualised needs of particular students to those of handling severely ill patients in facilities with high staff turnover, high care technology and a high demand for cost

effectiveness. Other challenges of clinical teaching are precepting large numbers of students, understaffing, and limited resources (Uys et al., 2010).

2.5.1 Student related clinical teaching challenges

Students may have some specific learning needs which may not be clearly communicated to the preceptors. Learning needs should be identified and prioritised accordingly; however, inexperienced or incompetent preceptors may fail to identify and appreciate these. Students may be incorrectly labelled as stubborn or negligent because of the inability of the preceptor to understand their learning needs. This misinterpretation of the students' learning needs poses a challenge to clinical teaching and learning. Sutkin, Wagner, Harris, and Schiffer (2008) suggested a powerful non-cognitive approach which teachers can use to appreciate their students' needs. In an effort to describe what makes a good clinical educator Sutkin et al. (2008) acknowledged that good teachers recognise their students' needs and they have the ability to arouse, understand and excite students to learn while at the same time, not judging their characters. Any such judgement could lead to inadequate preparation of future nurses. It is therefore important for preceptors to be prepared pedagogically and also supported to attain appropriate clinical skills for handling and teaching students in clinical settings.

2.5.2 Staffing related clinical teaching challenges

Ideally, a good standard of clinical teaching depends upon adequate staffing levels. In this situation, teaching can take place without compromising patient care and the quality of teaching. However, even when there are adequate numbers of preceptors in the clinical settings, patient care is prioritised (Gaberson et al., 2014). It is ethical as well as correct procedure for preceptors to prioritise care for severely ill patients, over conducting clinical teaching. One might perceive that a preceptor's lack of attention to the students when

prioritising attention to the patient demonstrates a lack of interest in clinical teaching. Understaffing and a high demand for care, especially in the management of severely ill patients, are considered to be major clinical teaching challenges (Hallin & Danielson, 2009; Ministry of Education and Sports, 2010; Nguyen et al., 2008). Heffernan et al. (2009) and Chang et al. (2015) also reported that one of the major clinical teaching challenges was understaffing, which had serious psychological and physical complications for preceptors who worked extended hours and suffered burnout.

Caring for patients is demanding in terms of both energy and emotions. Clinical teaching requires the same inputs as those of caring for the patients (Hyrkas & Shoemaker, 2007; Jamshidi, 2012). Patient care should always be prioritised over the clinical learning needs of the students. In situations where there is understaffing, preceptors may not be able to perform the clinical teaching role. Chen et al. (2011, p. 135) found that “preceptors reported feeling burdened by their role when difficulties arose because of role conflict”. Fear of failing as a preceptor, paper work overload, feeling pressure of training progress and lacking colleague support. This feeling of guilt for not being able to meet their expected patient needs in addition to their precepting role had the effect of preceptors sacrificing their personal time to care for the patients. Work overload such as that reported by Chen et al (2011) complicates the preceptor’s role. Preceptors may not have adequate time to provide constructive feedback to the nursing students. The presence of large student numbers combined with understaffing further complicates clinical teaching and learning (Chen et al., 2011; Kiguli et al., 2011). With all these challenges, deliberate efforts should be made not to compromise clinical teaching. Skills such as delegation, collaboration, teamwork and work portioning should be used by preceptors to ensure efficiency and effectiveness in nursing practice and clinical

teaching. Advocating for recruitment and even deployment of registered nurses is equally important (Ministry of Finance Planning and Economic Development, 2013).

2.5.3 Funding and financing related clinical teaching challenges

The Ugandan Constitution provides for fundamental human rights. Chapter four, Article 30 of the Constitution provides that all persons have a right to education (Uganda Government, 1995). In Uganda, higher education, including nursing education, is subsidised but there is still a significant cost payable by the learner. Financial responsibility has shifted from the Department of Higher Education to individual students and their families; this shift particularly affects students from lower income households (Millett, 2016; Ministry of Education and Sports, 2012). In Uganda, the public health training institutions have adopted the policy of 40 %:60 % vacancies for government and private sponsorship respectively; therefore, only 40% of the students admitted to health training institutions are government sponsored. However, this policy does not allow free tertiary education to every qualifying student. Uganda still experiences the challenges of underfunding, inadequate infrastructure and high costs associated with education (Ministry of Education and Sports, 2012). All these challenges complicate the implementation of ideal clinical teaching and preceptorship.

In an effort to assist students who meet the tertiary admission criteria and are not able to afford the fees, the Ugandan government passed an Act of Parliament: the Uganda Students Higher Education Financing Board (USHEFB) Act No. 2 of 2014. This Act introduced a financing board for funding the higher education of students, which is known as the loan scheme (Ministry of Education and Sports, 2012). This is a new education financing approach but with only minimal funding, and as a result it enables only a limited number of students to enrol into tertiary institutions (Ministry of Education and Sports, 2016). The

USHEFB provides for very few places in health training institutions. These Government interventions are not enough to cater for all potential students who would want to enrol in health training institutions. More than half the students in nursing schools are self-sponsored and many of them are unable to meet the fees payment deadlines; this can lead to temporary denial of access to educational facilities including the clinical settings. Also, it has the effect of impeding clinical learning and the development of competence. Preceptors need to be able to identify those students with such challenges so that they can manage their clinical learning needs appropriately.

2.5.4 Environmentally related clinical teaching challenges

According to Dunn and Burnett (1995), a clinical learning environment is a clinical setting with an interactive network of forces in place which influences students' clinical learning achievements. These interactive forces originate from physical, social and intellectual factors. Through these interactive forces nursing students acquire psychomotor, attitudinal, knowledge and skills in solving clinical nursing problems. It is therefore important for the clinical environment to be conducive and safe for clinical teaching and learning. The maintenance of such a clinical environment is one of the core responsibilities of the nursing preceptor and nurse educators (Dunn & Burnett, 1995; Killam & Heerschap, 2013; Schupbach, 2012). Factors which make the clinical environment safe and conducive include the following: the preceptors' personality and interpersonal relationships, the atmosphere and attitudinal factors, adequate availability of equipment and sundries, supportive clinical teaching policies and guidelines and appropriate facility arrangement and organisation (Dunn & Burnett, 1995; Muldowney & McKee, 2011; Nguyen et al., 2008).

2.5.4.1 The preceptor's personality

The preceptor personality is an important factor to consider in clinical teaching. Their personalities vary; some preceptors are approachable while others lack interest and are less skilled in working with students. Personality has either a positive or negative implication on the strength of the preceptor-preceptee relationship. The success of any preceptorship programme depends on the strength of the relationship between the preceptor and the preceptee (Happell, 2009; Muldowney & McKee, 2011). A strong and positive relationship promotes clinical teaching and learning. The opposite is also true: when the preceptor-preceptee relationship is weak, clinical teaching and learning is hindered. For example, Kiguli et al. (2011) conducted a situational analysis of teaching and learning of medicine and nursing students at one of the universities in Uganda and found that preceptors who are rude make the clinical environment unsafe for clinical learning. Such preceptors create a threatening environment which limits learning. Students may avoid contact with the preceptor and absenteeism may increase.

The preceptor's personality is also pivotal when handling students with unsatisfactory clinical performance. Preceptors should feel not guilty about a negative assessment of student performance if the students do not meet the clinical requirements. Luhanga, Yonge & Myrick, (2008) in their study on "Precepting an unsafe student: the role of the faculty" reported that preceptors go through a variety of feelings when dealing with a failing student. Preceptors also experienced fear, self-doubt, anxiety, and resentment (Luhanga, et al. 2008). This uncomfortable feeling was felt when the preceptors' decisions were not supported by the faculty (Luhanga, et al. 2008). Such feelings are stressful and if not well managed may be displaced onto the already affected student. It is therefore important that preceptors learn effective inter-personal skills and learn to value students as human beings. Valuing and

respecting students as they practice in the clinical areas promotes a positive preceptor-student relationship and enhances more clinical learning (Henderson, Briggs, Schoonbeek, & Paterson, 2011). Having a listening ear, being supportive and following up students with clinical learning challenges is as important as providing psycho-social care to patients.

2.5.4.2 Availability of equipment and sundries

The availability of equipment and sundries is another important factor which makes the environment conducive for learning. Equipment and sundries such as beds, surgical instruments, drip stands, resuscitation equipment, surgical gloves and linen should be adequate for patient care and clinical teaching. The equipment should be available for patient care and facilities should provide such materials for the preceptors to demonstrate to the students in an ideal learning situation. In studies conducted in Uganda, researchers have reported that nurses often lack equipment and sundries for clinical work (Frenk et al., 2010; Leffers et al., 2014; Nguyen et al., 2008). For example, there were instances when nurses lacked gloves and masks to protect them from harmful body fluids and organisms (Nguyen et al., 2008). In Uganda such occurrences are normally due to stock out which may result from poor planning, limited budget provision for equipment and weak management and administration. Situations such as this complicate the preceptorship role and potentially create an unsafe environment unsafe for clinical teaching (Nguyen et al., 2008).

2.5.4.3 Supportive policies and guidelines for clinical teaching

A policy statement indicates how the organisation or government intends to conduct its services, action and business (Summers, 2007). Such a statement provides for a set of guiding principles which help employees and other stakeholders in the organisation when making decisions and performing their duties. The clinical setting environment presents numerous

risks, ranging from infections to legal and even sexual harassment. In high risk environments, where patient care and clinical teaching occurs, policies and guidelines to direct and safeguard the preceptor-student interactions and actions are required. Such policies may include guidelines regarding clinical rotation periods, dress codes, and lines of communication. Other areas that require guidelines include issues of student safety and immunisation requirements, facility arrangement and organisation and ways of how and when students interact with patients (Missen, McKenna, & Beauchamp, 2016).

The managers of nursing schools and hospitals are required to prescribe when and how the school has to communicate to clinical wards about the intention to attach students in the clinical areas for clinical rotation. Such a guideline enables the clinical facility to be appropriately prepared to receive the students. Non-compliance with this guideline is likely to result in confusion and disorganisation in the clinical settings and is a potential clinical teaching challenge. It has been reported that clinical sites in Uganda lack guidelines for practicum training (Ministry of Education and Sports, 2010). This has potentially serious consequences as it may lead to role conflict between the tutors and preceptors and confuse students.

Therefore a statement needs to be formulated by the tutors from the education institution describing the clinical objectives and learning outcomes which the school expects the students to achieve from their clinical learning activities (Schupbach, 2012). The clinical learning outcome guidelines are included in the study curriculum and these documents should be available to preceptors. A summary of the learning outcomes should also be provided to the preceptors as this guideline provides the preceptors with an understanding of the students'

learning needs (Basavanthappa, 2009). Lack of guidelines on expected clinical learning outcomes may impact negatively on effective clinical teaching.

Resources are often very limited, especially in the health facilities in developing countries (Nguyen et al., 2008) and yet clinical teaching and learning must take place. In order to manage this challenge of scarce resources, some nursing schools require nursing students to provide their own resources such as gloves, clinical thermometer and stethoscope. Training schools and training hospitals may develop a list of materials and equipment to be provided by the student.

Appearance and dress are important for the portrayal of professionalism; this promotes a patient's confidence (LaSala & Nelson, 2005). The appropriate appearance and presentation of a nurse projects a positive image which communicates that the nurse cares about him/herself and therefore would be in position to care for others. Preceptors should role model for students in this respect. They will then be in position to guide and advise the student on proper dressing and appropriate presentation. A policy statement should be available which addresses dress code, hair styles and personal hygiene for students in the clinical facilities. Such a policy provides for the assurance of patients as well as for students' safety (LaSala & Nelson, 2005). Nurses' uniforms also serve as protective gear, and professionalism with respect to dress and appearance should be instilled as early as possible in training.

Guidelines need to be in place for the full vaccination of nursing students before any clinical rotation. Preceptors are encouraged to ensure that all junior nurses under their care are protected. Nursing students and health professionals are at risk to many occupational

hazards (Shin, Yoo, Lee, & Park, 2006; Yamazhan et al., 2011). Students are required to be vaccinated against all commonly encountered diseases including tuberculosis, hepatitis B and yellow fever. The administrators for nursing education and preceptors in the clinical settings are the cardinal enforcement centre for this guideline.

The other essential guideline is the prescription of the length of time that a nursing student spends per rotation. Okanga, Ogur & Arudo, (2017) in their study which investigated the institutional characteristics influencing bachelor of science nursing student performance in the nursing council of Kenya licensure examinations, they found that performance was better in institution which enforced the attendance policy. With the introduction of the liberalisation policy in education, business proprietors have ventured into nursing education with an intention of making a profit. In doing so, they try as much as possible to maximise the costs for training. Adhering to the adequate standard length of time for clinical rotation may sound costly to a business proprietor especially when such standard is not enforced. Therefore the rotational length could be prescribed in terms of hours, days or weeks. Likewise there is a need for guidelines on the type of shifts; these could involve a day shift, evening shift or night shift (Missen et al., 2016). Ideally professional and regulatory bodies should set standards for the various nursing curricula and these standards should be provided to the students and preceptors for proper planning and appropriate guidance to clinical teaching and learning.

It is therefore important for the ministries responsible for nursing education and regulatory bodies together, nursing education institutions and health facilities to develop and ensure that clinical teaching policies and guidelines are in place. This provides guidance to clinical teaching and control the likely occurrence of clinical teaching challenges.

2.6 Preceptor training and development programmes from other settings

Nursing educationists have reported that a lack of preparation for the preceptor role, inadequacy in the assessment and evaluation skills and a lack of clear guidelines for preceptorship are key concerns in preceptorship (Chang et al., 2015; Weitzel et al., 2012). Health professional councils worldwide, recommend preceptorship training of all clinicians involved in clinical teaching (Jeggels et al., 2013). In some countries preceptorship training programmes have been established and operationalised. In this study six clinical teaching programmes were analysed. It was observed that the development and design of the six clinical teaching programmes presented in this section was based on particular type of clinical teaching model. Involvement of key stakeholders in the planning process (DeCicco, 2008; Dyer & Pardue, 1999; Jeggels et al., 2013) as well as in the implementation and evaluation processes was adhered to. The stakeholders were involved in the designing of the programmes for purposes of providing input of their institutional philosophy and preferred teaching and learning methods into the programme (DeCicco, 2008; Dyer & Pardue, 1999; Frattarelli & Kasuya, 2003; Jeggels et al., 2013). The SCCTTP considered the inclusion of the institutional philosophy. This catered for acceptance of the core values, belief, attitude, ideas and practice of the institution involved. In Uganda, the practice is that all nursing curricula should have a section on program philosophy, objectives and scope practice (Ministry of Education and Sports, 2007). The design also considered the involvement of students especially in evaluating the effectiveness of the programme.

The ‘resident as a teacher’ training programme focused on resident doctors rather than on registered nurses, and was designed with reference to the key points discussed above. A limited training period of four hours and 30 minutes was allocated for its implementation

(Frattarelli & Kasuya, 2003). The resident doctors expressed immediate positive feelings of attainment on completing the programme but no major improvement in competency was observed by the facilitators. The cost of implementing the resident as a teacher programme was low but the programme attracted very few (17) residents, but patient care was not compromised.

The emphasis of the New England University Preceptor programme is on understanding the concepts of facilitation, role modelling, mentoring and how to contribute to the educational process, learning styles, critical thinking and conflict resolution (Dyer & Pardue, 1999). The duration of this programme is 14 weeks and it entails three phases of instruction, practice and evaluation. This programme seems to be well-structured, although one limitation is that it prepares the preceptor to cater for only one student per semester and it is implemented for a longer period of time (a full semester). This practice is probably not scalable to facilities in clinical settings with human resource constraints and large student numbers; nevertheless, this preceptor programme has an advantage over others. The strength of this programme is that it caters for the observation of the various learning modalities and communication styles in its content. It utilises the Myers –Briggs Type of Inventory (MBTI), Kolb learning style inventory (KLSI) and hemispheric mode indicator; all these are key factors in gaining insight into and understanding the processes of teaching and learning. It is therefore, very important to consider and apply the positive practiced in the New England preceptorship programme as one designs clinical teaching program.

The two-week preceptor training programme at the University of the Western Cape, South Africa, was developed based on the relationship between that academic institution and key stakeholders in health provision and education. This development was in response to the

recommendations presented in a research report by the Director of Nursing services. The main recommendation was to strengthen the clinical teaching expertise of the nurses to provide support to nursing students under their care (Jeggels et al., 2013). The programme emphasised collaboration, experiential learning, and a top-to-bottom approach to policy formation. Sustainability of the programme was facilitated by appropriate seed funding and political support from both key stakeholders: the University and the Provincial Nursing directorate.

The following three programmes considered the institutional philosophy, students' evaluation and the interactive facilitation strategies as prescribed by Frattarelli and Kasuya (2003). These programmes are: the preceptorship programme for south west Ireland; the preceptorship programme for registered nurses in Jordan; and, the preceptorship programme for St Elizabeth Health Care in Ontario. In all these programmes, the main issue to be considered is the availability and accessibility of resources for implementing the programme. The preceptor - student ratio is another important factor for consideration. In practice, however, the ratio of 1:8 is not implemented in developing countries; this is mainly because of inadequate staffing and high demand for nursing care for the very ill patients (Andersson et al., 2013; Miceli et al., 2012; Uys et al., 2010). This situation calls for a critical analysis of all these factors and at the same time highlights the need for the development of a programme that can address the stated challenges.

The prescribed duration of the preceptor training programme is another important factor. In the case of the programmes reviewed, the duration varied considerably, ranging from hours to weeks or even months. For example, the South African clinical teaching model requires two weeks of training (Jeggels et al., 2013) while the Hawaii programme was only

4.5 hours in length (Frattarelli & Kasuya, 2003). The duration of the programme affects issues such as staffing levels at the facility and cost of training (Heffernan et al., 2009; Jeggels et al., 2013; Taylor & Hamdy, 2013). It is therefore essential to determine the context in which the programme is to be implemented (Frenk et al., 2010).

Other factors also need to be considered during programme design and these include the following: how learners can be encouraged to articulate their prior competence levels; various learning styles and their implications; the stage of learning development of the learner; the learner's motivation; the resources required for the programme including time; and, the session/programme tasks to be accomplished (Frattarelli & Kasuya, 2003; Taylor & Hamdy, 2013). An outline of the six clinical teaching programmes is summarised in Table 2.5. For each programme the rationale, focus and approaches, target group and training period and limitations are listed.

Analysis of the six clinical teaching programmes reveals strength and weaknesses of applying them in the Ugandan context. Some of the issues that may align with the Ugandan context include: demand to adhere to particular preceptor to student ratio; length of time for training the preceptors; the type of target population; the equipment and resources required to implement the programme; institutional settings and values. Therefore the need to design clinical teaching training programmes to suit the Ugandan context was prioritised over the adaption of those other programmes which are met for developed countries.

Table 2.5: Preceptorship training programmes

Programme & Place	Rationale, Focus and approaches used	Target and Period of training	Limitations	References
The resident as a teacher programme, Hawaii	To improve clinical teaching skills. Its development was based on the institutional philosophy (Problem Based Learning) and students' evaluation reports. It used interactive teaching approaches and was implemented off station.	Obstetrics and gynaecological resident doctors 4.5 hours	Duration only 4.5 hours. This seems to be too little time for pedagogical skills improvement.	Frattarelli, L. C., & Kasuya, R. (2003). Implementation and evaluation of a training program to improve resident teaching skills. <i>American Journal of Obstetrics and Gynecology</i> , 189(3), 670-673. doi:10.1067/S0002-9378(03)00879-2
The New England University Preceptor programme	The programme used Benner's model of Novice to Expert. Organised using three strategies: one-day workshop for educational theories and workshop expectation, followed with a 14-weeks hands-on and a half-day workshop to evaluate the whole process.	Nursing preceptors working in rehabilitation nursing and community units. A workshop of one day then practice of 14 weeks and lastly a one-and-a-half day evaluation of the training.	The programme used only one day to provide all the educational competencies and learning style. This was a lot of content to be provided in only one day.	Dyer, J. A., & Pardue, K. (1999). Preparing preceptors to precept <i>Journal of Creative Nursing</i> , 5(4), 12. Retrieved from http://web.b.ebscohost.com.ezproxy.uct.ac.za/ehost/pdfviewer/pdfviewer?sid
The preceptorship programme for St. Elizabeth Health Care – Ontario	To meet the unique needs of home health care nurses in order to develop community health care nurses. The programme has a service delivery centre manager who is responsible for the programme, especially in the areas of recruitment, selection and recognition at all levels. A clinical resource nurse/ educator coordinates and manage the programme.	Home health care nurses with 2 years' working experience. Trained for two days. Attended workshops and conferences as part of ongoing professional development. Attended an online community course.	This programme was prepared for qualified home health care nurses and ignored the trainees.	DeCicco, J. (2008). Developing a preceptorship/mentorship model for home health care nurses. <i>Journal of Community Health Nursing</i> , 25(1), 15-25. doi:10.1080/07370010701836310
The preceptor training programme for University of Western Cape, South Africa	Improve the clinical teaching expertise of professional nurses to provide support to nursing students in service settings. Planning of this programme was based on the preceptorship model. Focus was on collaboration between a higher education institute and the nursing directorate of the Provincial government of Western Cape. Used interactive lectures, small group activities and preceptor-student encounters in simulation and real clinical settings.	Registered nurses Two weeks	Conflict and abuse of the collaboration mechanisms especially in relation to application and release of applicants. does not used the recommended 1:1 preceptor-student ratio	Jeggels, J. D., Traut, A., & Africa, F. (2013). A Report on the development and implementation of a preceptorship training programme for registered nurses (0379-8577). Retrieved from University of Western Cape, Bellville, South Africa: http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2012328761&site=ehost-live

Programme & Place	Rationale, Focus and approaches used	Target and Period of training	Limitations	References
The preceptorship programme for registered nurses -Jordan	Preceptorship programme to promote knowledge of preceptorship among Jordanian nurses. Used the preceptorship model and King's theory of goal attainment.	Registered nurses One week		Al-Hussami, M., Saleh, M. Y., Darawad, M., & Alramly, M. (2011). Evaluating the effectiveness of a clinical preceptorship program for registered nurses in Jordan. <i>Journal of Continuing Education in Nursing</i> , 42(12), 569-576. doi:10.3928/00220124-20110901-01
The preceptorship programme - South West Ireland	Established to improve the preceptors' competencies in clinical teaching and assessment of learning in the clinical areas. It focused on communication, interpersonal skills and nursing skills. Used participative and practical teaching and learning strategies such as lectures, discussion, interactive forum and group activities	Two weeks	Costly in terms of facilitation, staff recruitment and replacement	Heffernan, C., Heffernan, E., Brosnan, M., & Brown, G. (2009). Evaluating a preceptorship programme in south West Ireland: Perceptions of preceptors and undergraduate students. <i>Journal Nursing Management</i> , 17(5), 539-549. doi:10.1111/j.1365-2834.2008.00935.x

2.7 Preceptor competencies and qualities for conducting clinical teaching

Clinical teachers (preceptors) must have a wide range of clinical knowledge including knowledge of their patients and the environment where they practice (Parsell & Bligh, 2001). In addition, preceptors require an understanding of the general principles of teaching and learning. They need the ability to translate their clinical knowledge into teachable content. According to Parsell and Bligh (2001), it is the preceptors' possession of clinical knowledge and an understanding of their patients that offers clinical practice credibility and knowledge transfer to others. The preceptors' clinical teaching authority is enhanced by their possession of clinical teaching competencies and their ability to apply these in the clinical teaching/learning situation. Preceptors who engage in clinical teaching need to possess various skills in order to manage their preceptor role effectively (Parsell & Bligh, 2001). These skills include: communication skills, ability to manage personal emotions, knowledge of the curriculum being implemented, knowledge of the health care organisations, knowledge of ethical, legal and professional issues and knowledge of health care costs (Parsell & Bligh, 2001). Effective preceptors know how and when to apply their clinical and teaching competencies appropriately (Parsell & Bligh, 2001).

Heshmati-Nabavi and Vanaki (2010) conducted a study in Iran which examined professional approaches with reference to the key features of effective clinical educators. They identified five key features: personal traits/characteristics, meta-cognitive characteristics, characteristics that make learning enjoyable, characteristics that make a clinical educator the source of support and characteristics which make a clinical educator a role model. A description of some of the qualities and competencies required for effective clinical teaching is given below.

2.7.1 Personal qualities and preceptorship

The personal qualities required by all preceptors include the following: kindness, warmth, compassion, commitment, honesty, integrity, flexibility, enthusiasm, empathy and dependability (Burns et al., 2006). Such personal qualities promote interpersonal relationships. According to Heshmati-Nabavi and Vanaki (2010), the key qualities included empathy, affection for the nursing profession and reflective thinking; when preceptors apply these qualities, they promote effectiveness in clinical teaching and learning. Heshmati-Nabavi and Vanaki (2010) found that empathy was one of the most noted characteristics of an effective clinical educator. Sutkin et al. (2008) also emphasised the role of empathy in clinical teaching and learning. Other non-cognitive characteristics which are displayed by an effective clinical teacher include possession of good interpersonal skills, preceptor's ability to maintain a stable emotional state and personality type (Sutkin et al., 2008).

The personal qualities identified in this section guide the behaviours of preceptors during their interactions with students and patients. Preceptors with empathy appreciate their patients as well as their students (Cruess, Cruess, & Steinert, 2008; Heshmati-Nabavi & Vanaki, 2010). They understand the psychological processes manifested by their patients and students. For example, the sight of a septic, dirty wound and the dressing thereof may not only be unpleasant and anxiety-provoking for the patient, but also for the student. If not handled professionally, the patient may experience self-stigma and shame. An empathetic preceptor in this situation recognises the fears and discomfort experienced by the novice student and also is aware of the patient's need for comfort and reassurance. The preceptor therefore has a dual role to support the patient and encourage the student.

2.7.2 Role modelling as a competence for clinical teaching

Role modelling as teaching strategy has already been discussed in section 2.4.2. Personal qualities in this aspect improve effectiveness in clinical teaching.

2.7.3 The counselling and guidance competence

It has been reported that clinical rotation during nurse training is stressful (Sharif & Armitage, 2004; Timmins & Kaliszer, 2002). The documented challenges experienced by students in the clinical settings include: fear of handling patients, dealing with death and dying, handling emergencies, nursing very ill patients, interpersonal relations, academic challenges, and socio-economic stress. Academic challenges include failure to complete assignments timeously and lack of preparation for examinations. Socio-economic challenges include insufficient funding and stressful social relationships. These challenges lead to states of anxiety and fear which may impact on academic and clinical performance which may lead to increased attrition rates. (Sharif & Armitage, 2004). Preceptors need, therefore, to possess counselling skills to identify such challenges and to manage them effectively (Ooms, Fergy, Marks-Maran, Burke, & Sheehy, 2013).

Studies have confirmed that nursing students benefit from counselling from their tutors and preceptors (Courtney-Pratt, Pich, Levett-Jones & Moxey 2017; Gilchrist & Rector, 2007; Ooms et al., 2013). Ooms et al. (2013) reported that the students greatly appreciate the support provided by their tutors and preceptors and as a result the attrition rate is reduced. It is therefore imperative that clinical preceptors possess counselling skills so that they can respond appropriately to students' learning needs and clinical rotation challenges.

Techniques such as active listening, dealing with difference, reflective feeling, mediation,

empathy, intuitiveness and problem identification are required for effective counselling and support to students in clinical settings.

2.7.4 The collaborative competence

In many clinical settings and especially in the developing countries, resources are sometimes inadequate; nevertheless, patient care as well as clinical teaching to students has to continue. For this reason preceptors need to possess competencies for collaboration. Collaboration is a process of facilitating and operating in a multi-professional environment to solve problems that cannot be solved by single profession or individual (O'Leary, Yujin, & Gerard, 2012). The attributes needed for successful collaboration in the clinical setting include: being open minded, patient, self-confident, risk oriented, flexible, persistent, empathetic, trustworthy and respectful.

2.8 Learning theories as applied in clinical teaching for nurses

A theory is a scientifically acceptable set of principles offered to explain a phenomenon (Schunk, 1996). Theorists, researchers and educationists have various definitions of the concept of learning which are made according to their own view of this phenomenon. Schunk (1996) defines “learning as an enduring change in behaviour or the capacity to behave in a given fashion which results from practice or experience”. Fosnot and Perry (1996) perceive learning as development which requires invention and self-recognition of the learner. Braungart and Gramet (2010, p. 56) define learning as “a relatively permanent change in mental processing, emotional functioning and/or behaviour as a result of experience”. In all these definitions, in one way or another, learning is being viewed as a perceived change in affection, cognitive and psychomotor behaviour resulting from experience and manipulation.

Similarly, a learning theory is a coherent framework of integrated constructs and principles that describes, explains or predicts how people learn (Braungart & Gramet, 2010, p. 57). According to Ertmer and Newby (1993) a learning theory is “a conceptual framework that describes how information is absorbed, processed and retained during the learning processes”. Researchers mostly describe four main paradigms of learning theories and these are behaviourism, cognitivism, constructivism and humanism (Schunk, 1996; Taylor & Hamdy, 2013). These four main learning theories are outlined below.

2.8.1 The behavioural learning theorists

The behaviourism learning theorists include J.B. Watson, Ivan Pavlov, B.F. Skinner, E. L. Thorndike and Albert Bandura. These theorists perceive learning as a change in behaviour as a response to provided environmental stimuli (Taylor & Hamdy, 2013). The key elements in behaviourist learning theory are the stimuli, the response and the association between the stimuli and the response. Learning depends on how the association between the stimuli and response is made, strengthened and maintained (Ertmer & Newby, 1993). These theorists provided for the rise of positive and negative reinforcements in learning. They believe that positive reinforcement promotes sustainability of the learned skill and the reverse is also true. It is therefore important that educators (preceptors) provide appropriate stimuli in the environment, use appropriate strategies and also create appropriate stimuli and associations for learning. In nursing education, behavioural learning theories are mainly applied in situations where standardisation of outcomes is required. The competency based curricula and training programmes use this theoretical framework.

2.8.2 Cognitive learning theorists

The cognitive learning theorists include Jean Piaget, Jerome Brunner, Mariner David Merrill, Charles Reigeluth, Robert Mills Gagne and Roger Schank. These theorists relate learning to discrete changes between the states of knowledge rather than changes with the probability of response (Ertmer & Newby, 1993). The key issues in cognitive theory are the conceptualisation of the students' learning process and an interest in how information is received, organised, stored and retrieved by the mind. The cognitive theorists believe that learning is an internal process that depends on the mental activities which entail internal coding and restructuring by the learner (Ertmer & Newby, 1993). This puts emphasis on what learners know and how they do it, which is far beyond what the behaviourists believe in. The learner in the cognitive theoretical framework is considered to be an active participant, whose brain is actively processing, storing and retrieving information for the purposes of learning. The principles of the cognitive learning theories are applied in almost all the learning situations that arise in nursing education. These principles are applied in situations where use of the five senses, use of critical reasoning and highly skilled manipulation are all prerequisites. The learner-centred curricula use this framework.

2.8.3 The constructivist learning theories

The constructivism learning theorists include Lev Vygotsky, John Dewey and David Kolb. The constructivists relate learning to how active the learners are in the learning process. They state that people construct their own understanding and knowledge of the world through experiencing things and reflecting on these experiences (Kolb, 1984; Packer & Goicoechea, 2000). The key issue in the constructivism paradigm is the active process to discover principles, concepts and the learners themselves. The constructivists perceive the learner as an information constructor and they view learning as an active contextualised process of

constructing knowledge rather than acquiring it. This is another theory that is frequently used in nursing education. Nursing is a vocation where learning takes place through doing. In nursing education, constructivist principles are applied whenever nursing procedures and skills are being taught. As Brooks and Brooks (1999) explain, the main responsibility of the educator (preceptor) is to create an environment in which the preceptors and their students are encouraged to think and explore. Therefore, the preceptors are encouraged to emphasise practice and decision making based on putting forward a critical analysis of events to their students.

2.8.4 The humanistic learning theories

The humanistic learning theorists include Abraham Maslow, Carl Rogers and Malcolm Knowles. These theorists view learning as a personal act to fulfil one's potential. Their focus on learning is on human freedom, dignity and the learner's potentials. The humanistic theorists place the student at the centre of learning and totally discourage the behavioural approach of an authoritative teacher in the learning process (Khatib, Sarem, & Hamidi, 2013; Taylor & Hamdy, 2013). In this learner-centred approach, a learner is considered first as a human being and then second as a student. This implies that a learner's basic physical and psychological needs must be met in order to create a physical and psychological environment for learning (Khatib et al., 2013). This approach to learning embraces the inner world of the student and it places the individual's thoughts, feelings and emotions at the forefront of human learning. As Taylor and Hamdy (2013) state, the goal of this learning approach is to produce an individual who is internally motivated and self-directed with a potential for self-actualisation. The preceptors are therefore encouraged to allow students to develop their potentials fully. The humanistic approach is one of appropriate learning theories recommended for application in nursing and professional education (Taylor & Hamdy, 2013).

2.9 Summary

In this review the preceptor concept and its related meaning as a relationship which exists between an experienced nurse and a novice or trainee, in the clinical areas, for the purpose of learning clinical skills has been examined. The various clinical teaching models and approaches were discussed; these included the preceptorship model, collaborative clinical teaching model, the micro-skill clinical teaching model, the novice to expert clinical teaching model and the supervisory clinical teaching model. Strategies and challenges for clinical teaching were discussed and various training programmes were elaborated upon. It has been recognised that involvement of key stake holders, inclusion of institutional philosophy, recognising the local context and structuring the preceptorship training is important in designing a preceptorship programme. Adequate staffing, long duration for preceptorship training, the need of high technological equipment and internet connectivity as mentioned in some preceptorship programmes was observed as a major limitation to adapt such programmes for developing countries.

Lastly, the learning theories and their implications for the structured and collaborative clinical teaching training programme (SCCTTP) were described. This section has provided an insight into clinical teaching and a link to theoretical framework for the development of the SCCTTP. The next chapter will offer the theoretical framework of this study.

Chapter 3: Theoretical Framework

3.1 Introduction

This study aimed to describe the current clinical teaching practices and then design, implement and evaluate a preceptors' structured and collaborative clinical teaching training programme (SCCTTP) for clinical teaching of pre-registration nursing students at a national referral hospital in Uganda. The influence of the SCCTTP programme on preceptors' self-reported competencies, knowledge and confidence in conducting clinical teaching was evaluated. For this study, behavioural, cognitive and humanistic learning theories were reviewed (See chapter two). The theoretical framework selected which underpins this study has drawn on Kolb's Experiential and Knowles' Adult Learning Theories (Knowles, 1980; Kolb, 1984). Their approach to learning emphasises how the student actively creates/constructs knowledge from an experience, reflection and interaction rather than a just change in behaviour (Fosnot & Perry, 1996). Both Kolb (1984) and Knowles (1980) also emphasise the core aspects of adult education, which are relevant to nursing education: experience, practice, exploration, reflection, respect and the individual's perceived need for learning.

Evaluation of any educational intervention is fundamental to understanding its influence and applicability to the change anticipated. The Kirkpatrick and Context Input Reaction Output evaluation model which analyses the effectiveness of teaching (Bates, 2004). The Context Input Process and Product (CIPP) model provides a theoretical framework which guides determination of the programme overall quality and merit (Lippe & Carter, 2017). The CIPP model provides analytical and rational basis for programmes decision making on a cycle of planning, structuring, implementing, reviewing and revising

decision. The CIPP provided a framework for evaluating designing processes and determination of the influence of the SCCTTP on the preceptors' reported clinical teaching competencies.

3.2 The Kolb experiential learning cycle

The Experiential Learning Theory (ELT) offers a view of learning that differs from that of the observational theorists (Kolb, 1984). It relates learning to actual experience, reflection, abstract conceptualisation, work and active experimentation and construction of knowledge. This type of knowledge is termed experiential, because it emphasises the role of experience in the process of learning (Kolb, 1984). Relating learning to experience differentiates the ELT from the cognitive theorists, who primarily emphasise the acquisition, manipulation and recall of abstract symbols. It also differentiates this theory from the behavioural learning theories, all of which deny the role of consciousness and subjectivity experience in the learning process (Kolb, 1984).

According to Kolb (1984), the ELT illustrates learning in four phases: concrete experience, reflective observation, abstract conceptualisation and active experimentation. The relevancy of these phases to the SCCTTP is shown in table 3.1.

Table 3.1: Relevancy of ELT to SCCTTP

ELT phases	Name of phase	Relevancy to SCCTTP
One	Concrete experience	The SCCTTP applied this phase by using the results of the survey and information gathered from the other studies on preceptorship and clinical teaching. The survey results and information gathered from the literature review all provide a focal point for learning the current preceptors' position and capability in clinical teaching. This provided the beginning of the cycle for SCCTTP (phase one of SCCTTP)
Two	Reflective observation	The SCCTTP utilised the previous experiences of clinical teaching to relate them to the survey findings. (Phase one of SCCTTP)
Three	Abstract conceptualisation	The SCCTTP applied this phase through the collaborative manner to mobilise resources for the development of the SCCTTP manual which related to abstract conceptualisation. The activities involved in development of the SCCTTP were in their sense abstract conceptualisation (Phase two of SCCTTP)
Four	Active experimentation	This phase of the ELT was actually the manual (product) of the SCCTTP process. This product was put into active experimentation during phase three of the study.

3.2.1 Concrete experience

The concrete experience phase is when the student involves itself openly and without bias with the new experience (Sugarman, 1985). This is the first phase of Kolb's ELT model which he defines as the basis/focal point for learning (Kolb, 1984). During this phase, learners experience concrete tangible felt qualities of the phenomenon as result of relying on their senses and immersing themselves into the concrete reality. The open involvement by the learner leads to reflective observation which is the second phase of the ELT model.

3.2.2 Reflective observation

In the reflective observation phase, the learner recalls previous experiences and relates these to the current experience (Sugarman, 1985). Kolb (1984) refers to this process as reflective observation. This reflective observation phase precedes abstract conceptualisation, which is the third phase of ELT model.

3.2.3 Abstract conceptualisation

During this third phase, the learners must understand the reflective observations made at phase two and integrate them into logically sound theories. Here, the learners grasp or perceive the new information and synthesise it into symbolic representation; Kolb (1984) terms this process abstract conceptualisation. This phase of synthesis leads to the active experimentation phase which is the fourth phase of the ELT model.

3.2.4 Active experimentation

During this fourth phase, the learner tests or experiments with the new information or occurrence and uses it in decision making or problem solving (Sugarman, 1985). Kolb refers to this actual experimentation of the developed theories as active experimentation. This phase leads back to the first phase of the ELT model.

These processes are continuous and may occur concurrently, depending on the experience that the learner is encountering. These continuous processes led Kolb (1984) to derive his definition of the concept of learning. Thus, Kolb (1984, p. 38) defines “learning as a process whereby knowledge is created through the transformation of experience”. He states that “knowledge is a result of a combination of acquisition and transformation of experience”. According to Kolb (1984), this definition puts emphasis on the process of adaptation as opposed to content or outcome. Knowledge is a transformation process which is continuously created and recreated as opposed to being an independent entity which is acquired. Learning transforms experience in its objective and subjective forms. Kolb’s definition of learning also emphasises that in order to understand learning, one must understand the nature of knowledge and vice-versa.

In Kolb's ELT model, learning is focused on two major dimensions: perception and processing. These are viewed as intersecting axes with two poles also known as a continuum (Kolb, 1984). According to Borun, Schaller, Chambers and Allison-Bunnell (2010) and Kolb (1984) one of the poles connects concrete experience and abstract conceptualisation (perception) and the other connects reflective observation and active experimentation (processing).

It is believed that the ELT provides a useful framework for understanding the learning phases/stages used by teachers and educators providing and developing appropriate learning opportunities (Kolb, 1984). According to Kolb (1984), the ELT explains various factors which are believed to have an important influence on the individual's learning style preference; these include social environment, education experience and basic cognitive structures. The choice of the individual's learning style is the product of the two continuum pairs: the processing continuum and perception continuum.

The processing continuum refers to how people approach a task and it is represented by the east-west axis of the ELT model. The perception continuum refers to the emotional responses; in other words, how people think or feel about a task. This continuum is represented by the north-south axis. This relationship between the two axes is well illustrated in the Modified Experiential Learning Cycle shown in Figure 3.1 below.

The ELT is also described in terms of four learning styles: converging diverging, assimilating, and accommodating.

- a) The converging learning style: doing and thinking (abstract conceptualisation and active experimentation). People with this learning style apply their ideals practically.

They solve problems and use their learning to find solutions to practical issues. They are relatively unemotional and prefer dealing with things rather than with people.

Many engineers, physical scientists and pathologists are in this category.

- b) The diverging learning style: feeling and watching (concrete experience and reflective observation). People with this learning style view concrete situations from many perspectives and organise many relationships into meaningful products. Kolb referred to this group of people as the divergers because they perform better in situations that require generation of ideas (Kolb, 1981). They are emotional, imaginative and interested in people. Teaching methods such as brain storming and discussion suit this group very well. These people tend to specialise in industrial art, counselling and organisational management.
- c) The assimilating learning style: watching and thinking (abstract conceptualisation and reflective observation). People who use this learning style prefer logical and concise approaches. They consider ideas and concepts to be more important than people. They require clear explanations rather than practical opportunities. Kolb referred to this group as the assimilators because they are less focused on people and more interested in ideas and abstract concepts (Kolb, 1981).
- d) The accommodating learning style: doing and feeling (concrete experimentation and active experimentation). People who use this learning style are hands-on in their approach and rely on intuition. They are attracted to new challenges and experiences. This type of style is common in the general population.

It is important to note that these styles do not occur in isolation; thus, their application depends on the learning situation of the student. In education and training, the learning goals and objectives are set in accordance with the intended learning outcome. These goals and objectives prescribe the method or learning strategies to be used. Kolb's learning cycle

accommodates most of the learner-centred strategies such as brain storming, discussion, problem based learning, as well as observational, manipulative and interactive methods.

Kolb's learning theory is demonstrated in a cyclic manner and as such, provided a good framework for the SCCTTP. The cycle begins with the concrete experience which accommodated the existing preceptors' clinical teaching experience. This provided an opportunity and laid the basis for the preceptors to reflect on, while they were learning the clinical teaching strategies. The environment that was created through structured interactive, interpersonal and constructive learning strategies provided a basis for conceptualisation and for drawing conclusions that formed new experiences. The new experiences facilitated the subsequent use of the strategies as the preceptors interacted with nursing students.

In this study, the researcher used the ELT phases and cycle of learning as a theoretical framework for the study. This framework provides for learning as a process whereby knowledge is created through the transformation of experience. It also provide for learning as a continuous process which can take place in any setting.

The model for this study is illustrated in Figure 3.1. Thus, at the first concrete experience phase, the survey results and information gathered from the literature review all provide a focal point for learning the current preceptors' position and capability in clinical teaching. Through reflective observation, the previous experiences of clinical teaching were related to the survey findings. Then, in a collaborative manner, resources are mobilised to develop the SCCTTP manual which related to abstract conceptualisation. The product of this process was the SCCTTP which was put into active experimentation. In this study, the term 'active experimentation' refers to the implementation of the SCCTTP. Kolb's ELT model

was used in this study from the time of conceptualisation of the idea of developing a clinical training programme and the adult learning principles incorporated in the implementation of the SCCTTP. The integration of the preceptor's experience and knowing that the preceptors were adults were two of the important principles that were observed in this study. The ELT formed a framework for determining the techniques of conducting clinical teaching and avenues for acquiring and using clinical teaching resources as well as the allocation of time for clinical rotation. The principles of adult learning, as discussed below, strengthened the foundation for the SCCTTP.

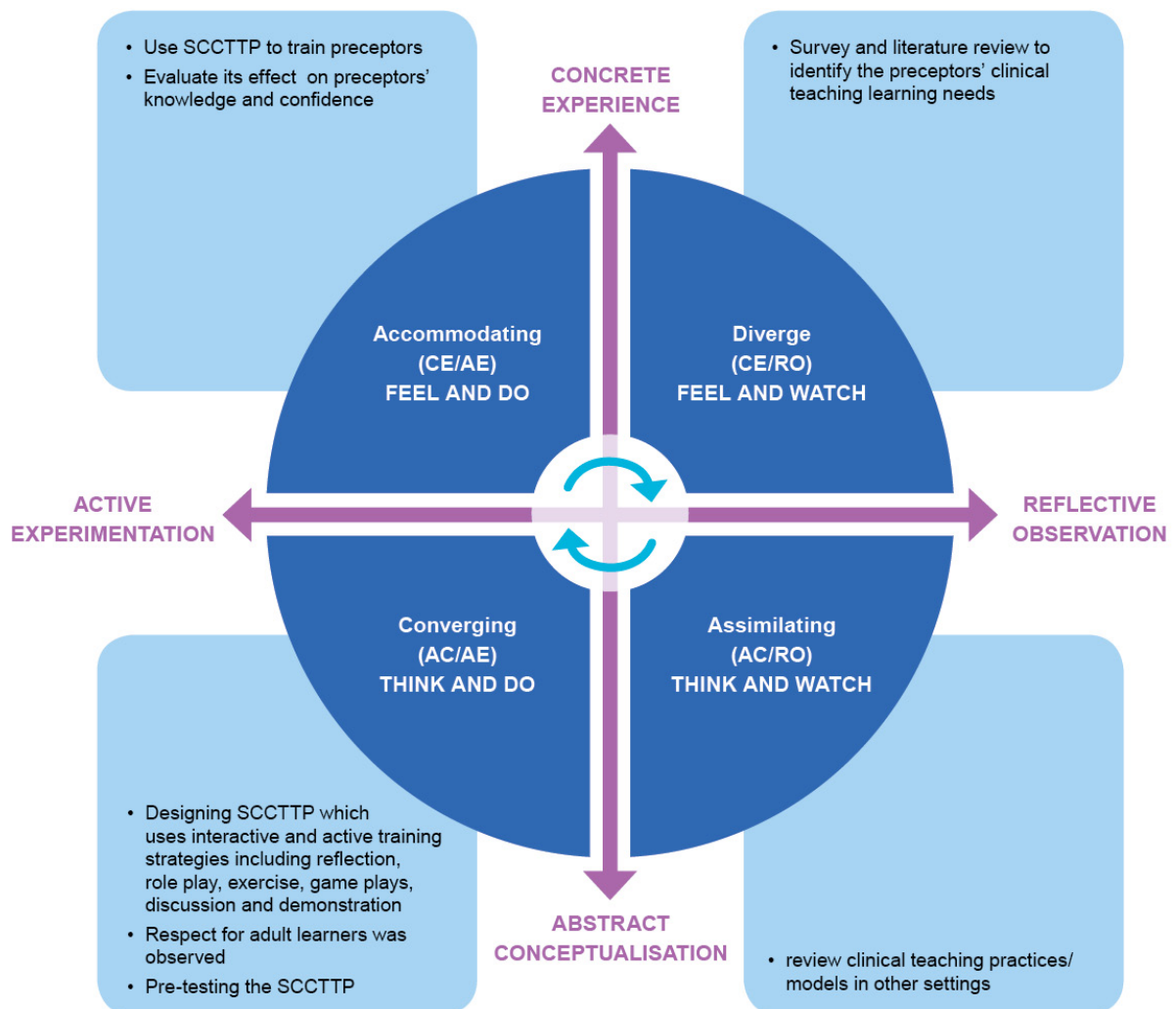


Figure 3.1: Modified experiential learning theory model

Sources: (Kolb, 1984)

3.3 Adult learning theory

The study of adult learners began after World War II as a response to challenges faced by teachers who were teaching in institutes of adult education (Knowles, 1980). The mode of education that was being used up to the 20th century was known as pedagogy, which means the art and science of teaching. In the 1960s, Knowles introduced a new concept to education termed andragogy, which means the art and science of helping the adult learner (Knowles, 1980). The introduction of this concept of andragogy gave rise to the adult learning theory. This learning theory contains propositions that are characteristic of adult learning behaviour as opposed to pedagogical learning characteristics. Adult learning is based on four principles: the concept of learning, the role of learner's experience, the readiness to learn and the orientation towards learning.

3.3.1 The concept of learning in adult learning theory

Two terminologies are discussed here; the self-concept to learning and the teacher concept to learning. In pedagogy, children are perceived to have only one role which is the role of a learner. This places them in a dependant situation as far as learning is concerned and therefore they require the service of another person to teach them to learn (Knowles, 1980). In contrast, adults view themselves as doers or producers and regard learning as a source of self-fulfilment which acts as a basis for performing the various adult roles. This self-perceived ideal may either promote or hinder learning, depending how the teacher or facilitator manages the learning process. Knowles (1980, p. 43), stated that "people normally move from dependency to increased self-directness as a process of maturation and in various dimensions of life". Teachers have the responsibility of nurturing and encouraging this movement. Sometimes adults take on the dependant role in particular situations of learning;

however it is important to note that the adult learner uses the self-directed approach towards learning. Therefore, it is very important, when designing learning for adults, to create an environment and resources that support the self-directed approach and learner-centredness.

3.3.2 The role of learner experience in adult learning theory

Adults enter educational institutions with a relatively vast amount of experience gained from their life histories. This experience is in the form of accumulated events and experiences which have resulted from their specific ways of living; their experience also relates to the responsibilities they incur in their communities and their responsibilities for the welfare of others. The adult experience is not the same as that of children. Children's experiences are external through what they see and hear others do. In contrast, most adult experiences are internal, and Knowles (1980) terms this as self-identity or lived experience. Adults accumulate experience over time, which becomes a very rich resource for themselves and others. With time, adults start to value the lived experience they have gained more than the experience they have acquired passively. Putting their experience to use makes them happy and the reverse is true because this makes them feel rejected. From an educational perspective, adults contribute greatly towards other people's learning as well as towards their own learning. Sometimes, adults acquire habits and thought patterns that make them less open; this might compromise learning of new competencies. It is therefore very important to utilise adults' experience in a positive manner, while identifying learning limitations, and then use training strategies that support experience sharing.

3.3.3 The concept of readiness to learn in adult learning theory

Adults learn best when their acquired learning is responding to a self-perceived lack of knowledge or competence. People are most ready to learn when there is an expressed need.

This need may emanate from their social life, developmental stages or may be job or occupation related (Knowles, 1980). When designing an educational programme, strategies to identify learners' self-perceived gaps should be catered for. Similarly, educators of adults should appreciate the need to use the readiness to learn factor, especially when they are scheduling time tables and grouping learners in discussion groups. Proper time tabling and appropriate grouping of learners, according to their learning needs, prevents emotional tension and promotes learning.

3.3.4 The concept of orientation to learning in adult learning theory

Adults perceive education as a process for developing competencies to achieve their full potential in life. Knowles (1980) states that they want to apply the knowledge and competencies they have acquired to make their tomorrow better. Knowles then adds that because adults are performance centred in their learning, any design of a curriculum for adults should be based on competencies.

3.4 Adult learning theory in health professional education

The students taking part in nursing and health professional education programmes are adults, but with different foundation levels (Taylor & Hamdy, 2013). Thus, some students are high school leavers while others are post-graduate but with only basic nursing or medical education competencies. Other students are working staff who are recruited for continuous professional development and post-graduate education (Taylor & Hamdy, 2013). It is believed that all these adult students join nursing and health professional schools willingly and from an informed position. Therefore, these students are considered to possess high levels of motivation and the willingness to learn the clinical competencies and skills required for their profession.

Liu, Yin, Ma, Lo, and Zeng (2009) and Affara (2009), validated competencies for registered nurses at the Macao Polytechnic Institute in China; these writers listed the core competencies for a registered nurse at qualification. According to Liu et al. (2009) the competencies for registered nurses included: the ability to provide quality clinical care; leadership and management; interpersonal relationships and professional development. During their training, nursing students are provided with competencies in legal and ethical practice, critical thinking and evidence based practice, safe environment and safety of care, health promotion, inter-professional health care and continuous professional development. These nursing competencies are all inclusive. They can be categorised as attitudinal or affective, psychomotor or manipulative and cognitive. These competencies are broad and require organised approaches if they are to be acquired. Taylor and Hamdy (2013) believe that adult learning principles, when applied in nursing education, provide a suitable foundation for gaining the required nursing competencies.

As already noted, a fundamental tenet of adult learning principles is that adults are motivated to learn and that they also demand respect as they learn. The adult learning theory recognises that prior experience acts as a frame of reference for adults in their learning. The principle of active participation and full involvement in objective and goal formation are other key factors in adult learning. It is therefore important to emphasise the importance of observing the principles of adult learning in any preceptorship training programme and also to build learning on the student's past experience (Dyer & Pardue, 1999).

The adult learning principles were utilised in the SCCTTP study, mainly to cater for interactive learning strategies. Those strategies included: group discussion; critical incident processes; simulation, consultative reflection, demonstration and role plays. Also, the adult

learning principles enabled the facilitators to utilise the preceptors' existing clinical teaching experience.

3.5 Context Input Process Product (CIPP) evaluation model

Stufflebeam's Context, Input, Process and Product (CIPP) evaluation model was used in relation to the ELT framework to evaluate the effect of the intervention for improving clinical teaching competencies for nursing preceptors. The Stufflebeam CIPP model is mostly used for evaluating education programmes (Stufflebeam, 1994). The CIPP cyclic approaches were utilised to evaluate the extent to which the study objectives were met.

The aim of the context evaluation, according to Stufflebeam, "is to assess the overall environmental readiness, to examine whether the existing goals and priorities are tuned to needs and assess whether proposed objectives are responsive to assessed needs" (Zhang et al., 2011, p. 64). A survey was conducted to determine the current preceptors' practices and techniques when conducting clinical teaching of pre-registration nursing students at the National Referral Hospital. The literature search provided additional best practices from other settings in conducting clinical teaching to nursing and health profession students. These formed reference points for evaluation.

The input evaluation in Stufflebeam's evaluation model illustrates "the use of inputs to prescribe the project that addresses the identified needs" (Stufflebeam, 1994, p. 329; Zhang et al., 2011, p. 64); this answers the questions of how and what arises during implementation. A SCCTTP manual was developed and this was based on the needs identified from the literature and survey results. The manual utilised experiential and adult learning theories that focused on: reflection, respect, interactive and active learning. All the needed resources, (human, material, budget, implementation room and schedule) were prescribed.

Process evaluation monitors the process of implementing the project processes (Stufflebeam, 1994; Zhang et al., 2011, p. 65). The main aim of process evaluation is to ascertain whether the project is worthwhile, significant, and has merits. Product evaluation identifies and assesses the project outcome and asks the question “Did the project succeed” (Stufflebeam, 1994; Zhang et al., 2011, p. 66). It answers the question of to what extent the needs of the project are met; this was incorporated in the process evaluation of the SCCTTP. During phase three of the study, the SCCTTP was implemented. After implementation, immediate and follow up evaluations were done. These evaluations were done to ascertain the influence of SCCTTP on the preceptors’ self-reported clinical teaching competencies and confidence. This is illustrated in the figure 3.2 below.

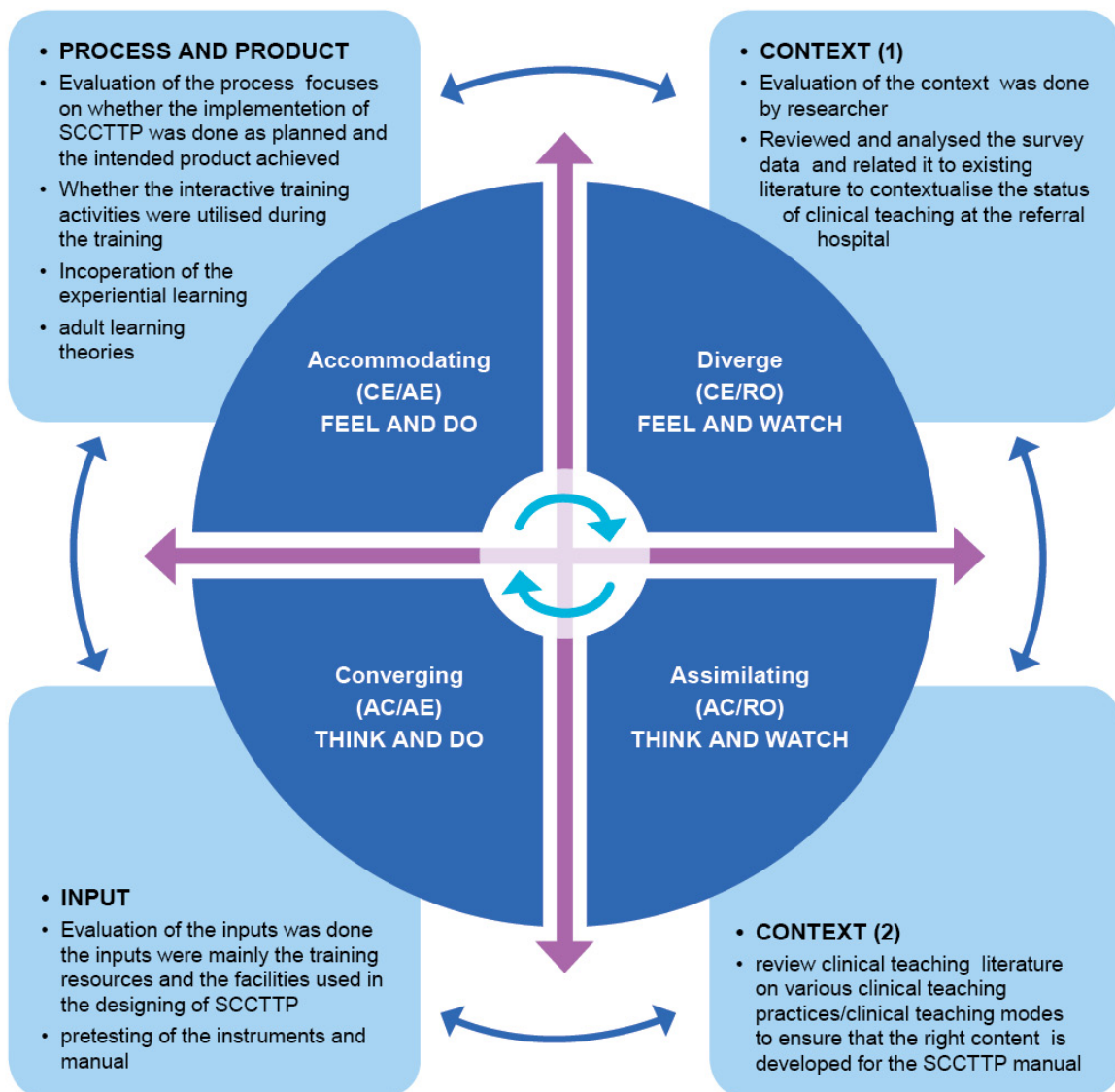


Figure 3.2: Evaluation of the SCCTTP Model as modified from ELT and CIPP evaluation model

Source: (Kolb, 1984)

3.6 Summary

Kolb’s experiential learning and Knowles’s adult learning theories formed the framework for the implementation of the SCCTTP study. The study utilised interactive teaching strategies branded with adult learning principles in the implementation of the SCCTTP. The researcher

also recognised the existence of preceptors' clinical teaching experiences as a foundation and a resource for implementing the SCCTTP. Interactive methods of teaching were used such as: group discussion, case studies/scenarios, critical incident processes, simulation exercises, role play, skills practical exercises and demonstrations. These methods promoted critical thinking and reasoning and active learning. The CIPP model provided a framework to evaluate the influence of the SCCTTP on the preceptors' clinical teaching knowledge and confidence. The next chapter will provide the design and methodological approaches to this study.

Chapter 4: Research design and methodology

4.1 Introduction

Quantitative designs are used when the researcher aims to examine the relationship between and among variables which are central to answer study questions and hypotheses (Creswell, 2014). Quantitative methods include: survey designs which provide numerical descriptions of trends, attitudes, or opinions of a studied population and experimental designs which test the impact of the intervention on an outcome. The design selected for this study which aimed to describe the current clinical teaching practices and then design, implement and evaluate a preceptors' structured and collaborative clinical teaching training programme (SCCTTP) for clinical teaching of pre-registration nursing students at a national referral hospital in Uganda was a survey and a pre and post intervention study. This was conducted in three sequential phases. The first of these was a cross-sectional survey, which was followed by the design of the structured and collaborative clinical teaching training programme (SCCTTP). The third phase was the implementation and evaluation of the SCCTTP. Figure 4.1, below, provides a study flow chart.

In phase one objective one was addressed which was to describe the current nursing preceptors' clinical teaching practices at the National Referral Hospital (NRH). A cross-sectional survey was utilised in order to ascertain the current preceptors' clinical teaching practices.

In phase two: the focus was on objective two, which was to design a structured and collaborative clinical teaching training programme (SCCTTP) for training nursing preceptors

in skills needed for clinical teaching. The design process was supported by the survey results, preceptorship experiences from other settings and consultative meetings.

Phase three addressed objectives three and four which were to implement and evaluate the SCCTTP. A pre- and post-intervention and follow-up design was utilised in phase three. The detailed methodology for each phase is described separately under the relevant sections below.

4.2 Study setting

The study was conducted at a National Referral Hospital (NRH) located in the Kampala Capital City Authority (KCCA), Uganda. The NRH is in the northern part of the KCCA, in the central region of Uganda. It is one of the oldest national referral hospitals in the country (Leffers et al., 2014) and was established in the early 19th century by Dr. Albert Ruskin Cook to provide general and specialist services for adults and children in various medical disciplines.

This hospital is the main national referral hospital for the entire country as well as the main teaching hospital for universities and nursing schools, including the Mulago School of Nursing and Midwifery and the Makerere College of Health Science (Leffers et al., 2014; Ministry of Health, 2016; Uganda Nurses and Midwives Council, 2016). The hospital's vision is to be a leading centre of health care delivery in Africa. Its mission statement is to provide super-specialised health care, training and to conduct operational research which is in line with the requirements of the Ministry of Health. The hospital offers primary medical services and super-specialised services in the areas of obstetrics and gynaecology, surgery, medicine, diagnostic, paediatrics and child health and private patients. Its bed capacity is

1500 (Leffers et al., 2014; Mulago Hospital, 2016). The hospital accommodates more than 400 nursing and medical students on a daily basis.

The nurses working at the NRH provide clinical care and they also support nursing students and other health profession students in acquiring nursing and leadership skills during their clinical rotations. As a national referral hospital, it plays a supervisory role in respect of the lower-ranking facilities. The nurses at the NRH also support the coordination and collaboration of nursing activities not only within the NRH but also all over the country. This study setting provides the specialised clinical rotation site for the 30 pre-registration nursing institutions in country. This is because the Uganda Nurses and Midwives Council (UNMC) prescribes that all pre-registration nursing students must have a specialised clinical rotation at this NRH (Uganda Nurses and Midwives Council, 2016). It was against this background that the researcher selected the NRH as the study site for the SCCTTP project. The location of the NRH on the map of Uganda is indicated in **Appendix O**.

4.3 General ethical considerations

The study proposal was approved by the Human Research Ethics Committee of the Faculty of Health Sciences, University of Cape Town, protocol number HREC/REF: 888/2014 (**Appendix A-i**). Approval was obtained from the Uganda National Council for Science and Technology, protocol number SS 3662 (**Appendix A-ii**). Other approvals were obtained from the MNRH Research and Ethics Committee MREC: 672 (**Appendix A-iii**) and Jinja Regional Referral Hospital (**Appendix A-iv**).

The researcher respected all ethical principles; for example, this entailed observing the principles of beneficence, confidentiality, justice and informed consent (World Medical

Association, 2013). All information collected from participants was kept confidential. The information letter and informed consent form were written in English which is the official and language of communication and instruction in Uganda. The information sheet was read by all participants, any requested clarity was provided and the researcher or research assistants witnessed the signing of the consent form (**Appendices B, C, E, F, G, and H**). Information was provided which explained the purpose of the study as well as its potential benefits. Respondents were informed that they were free to withdraw at any time and could refuse to participate in the study, with no penalty. Thus, no participant was penalised for withdrawing from the study. The contact details of the researcher, supervisor and chairpersons of the three ethics committees were provided to the participants.

The questionnaires for phase one required 35 minutes to complete, while the pre-post-test and self-evaluation questionnaires for phase three required 30 minutes. Prior to the implementation of the teaching sessions of the SCCTTP, arrangements to cover the wards and ensure patient safety were made with the ward or area managers respectively, as well as with the Assistant Commissioner Health Services in charge of nursing for the NRH.

The researcher also completed the online ethics course on protecting human research participants (NIH Office of Extramural Research, 2012) and throughout the study complied with the principles of the World Medical Association Declaration of Helsinki 2013 (World Medical Association, 2013). Details of ethical considerations are provided for each phase of the study, in the respective sections of this thesis.

4.4.1 Study implementation - logical flow

This study comprised three defined phases. Phase one entailed a descriptive cross-sectional survey of the clinical teaching practices. In phase 2, the survey results formed the basis for the design of the SCCTTP. Those results pertained to the competencies and preceptorship techniques including clinical teaching skills, clinical supervision skills, and assessment in the work place. Relevant literature was incorporated and local training needs and guidelines on preceptorship preparation were considered. In phase 3, preceptors were trained over a 6-day period. A pre- and post-test intervention design was used to evaluate the influence of the training. Figure 4.1 outlines the study implementation logical flow.

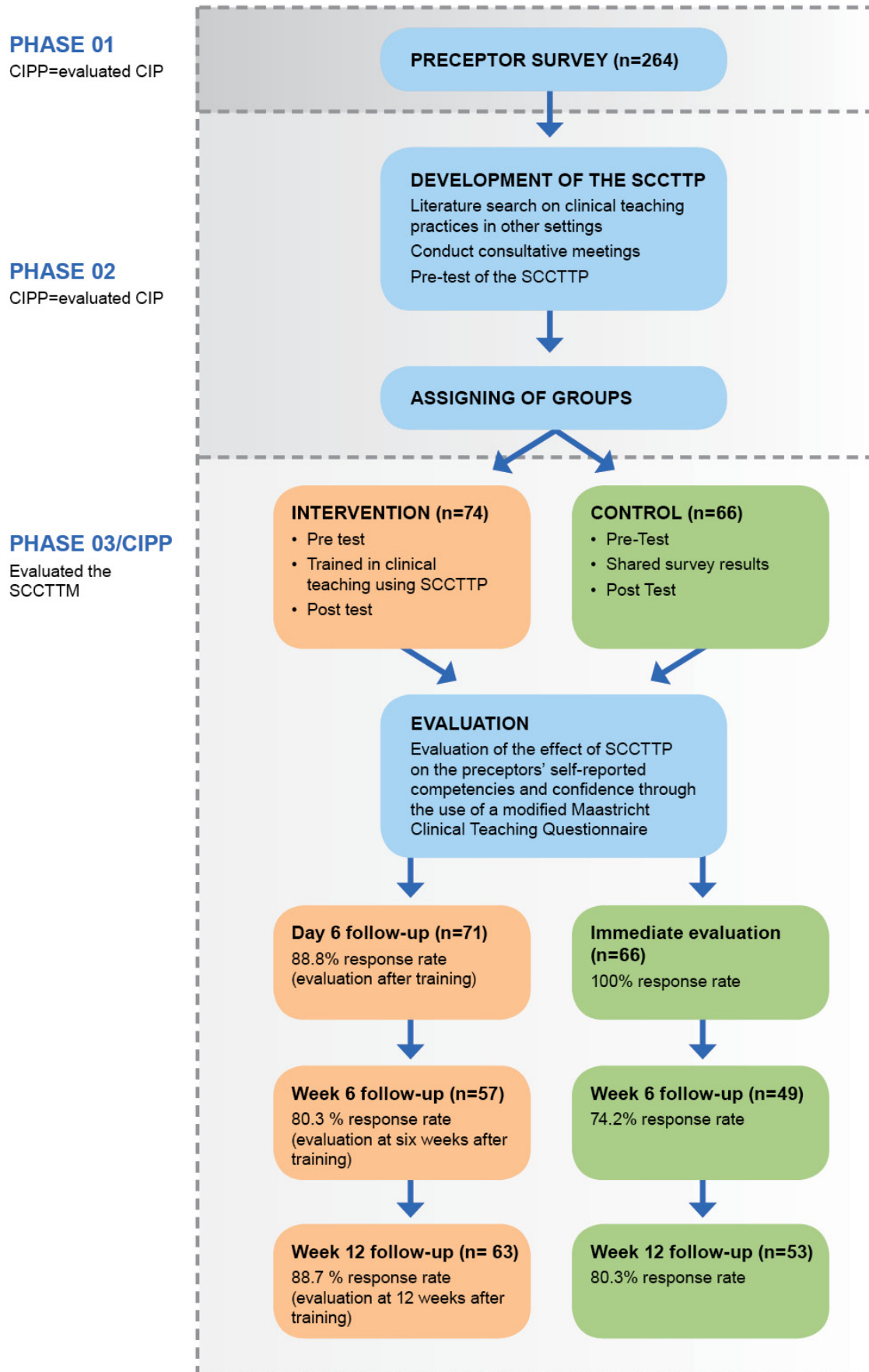


Figure 4.1: Study implementation - logical flow

4.4.2 Study design, sample size and data management

This study comprised two sub-studies which were conducted sequentially in three phases. In phase one, a survey was conducted among a random sample of 264 preceptors from the wards and units at the National Referral Hospital in Kampala between January and March 2015. The aim of the survey was to describe the current nursing preceptors' clinical teaching practices. The survey used a descriptive cross-sectional design.

Descriptive cross-sectional surveys have the advantage of allowing the researcher to study a large population with respect to its characteristics, opinions, attitudes and previous experiences (Grimes & Schulz, 2002; Leedy & Ormrod, 2010). Surveys are normally conducted in the natural settings of the population where random sampling of willing participants can easily be done. Surveys are conducted when the researcher's aim is to describe a sub-population with respect to an outcome or a set of risk factors (Levin, 2006). Descriptive cross-sectional surveys are very appropriate in studies which do not require longitudinal data and where time in the field is limited. The participants' responses are presented in percentages and frequency counts, while statistical indexes are utilised to draw inferences. The use of statistical indexes makes conduct of the research uncomplicated and increases the validity and generalisation of the findings to a bigger population. This however, does not mean that descriptive surveys are less demanding; on the contrary and despite their many advantages, some disadvantages have been reported; these include an absence of clear, specific and reproducible case definitions and data interpretations that overstep the data (Grimes & Schulz, 2002). Critical reasoning and careful planning by the researcher at the design stage is essential.

In phase two, the researcher designed the structured and collaborative clinical teaching training programme (SCCTTP). The design process was as follows:

- Review the literature on the existing programmes for preceptor clinical teaching and on competence improvement in clinical teaching.
- Interpret the data obtained from the phase one survey which provided the baseline data.
- Hold consultative meetings with content and English language experts.
- Utilise a graphic designer to format the manual
- Pre-test the SCCTTP programme at Jinja School of Nursing and Midwifery.

This was done from December 2014 to June 2015.

In phase three, a pre- and post-test intervention design was utilised to train the preceptors using the SCCTTP. A follow-up evaluation was conducted six and twelve weeks post-intervention to determine the influence of the training on the preceptors' clinical teaching knowledge and confidence. Pre- and post-intervention studies are considered to produce quality and objective results. Those intervention studies are mainly conducted whenever a researcher is interested in determining the effectiveness of an intervention or treatment (Concato, 2004). These are highly recommended and are considered to be superior study designs. However, they have high ethical limitations and the results from a single trial may lead to biased implications. Use of other trials and use of well-designed cohort/observational studies are essential.

The selected design was appropriate for the current study because it allowed the researcher to describe the status quo in relation to clinical teaching at the national referral

hospital. It was also possible to compare the influence of intervention using the pre- and post-test approach in the two groups.

4.5 Phase one: Survey of the current preceptors' clinical teaching practices at the National Referral Hospital

4.5.1 Survey population and sample

Those preceptors who participated were all registered nurses and midwives employed at the National Referral Hospital and who supervised and precepted nursing students. Information on the numbers of registered nurses and midwives working at the NRH was obtained from the Assistant Commissioner Health Service - Nursing (ACN) who was the head nurse of the hospital. At the time of the study, 402 nursing preceptors were available for recruitment to the study.

4.5.2 Inclusion and exclusion criteria

Inclusion:

All nursing preceptors (registered nurses and midwives) who were working at the NRH were included.

Exclusion:

Nursing preceptors who were absent (annual leave or off site for official duties) and were not available during the data collection period were excluded.

4.5.3 Survey sample size and power analysis

Using the formula of Gorstein, Sullivan, Parvanta, and Begin (2007), the sample size for the survey was calculated, based on 95% confidence intervals, expected prevalence/coverage

levels closest to 50%, desired absolute precision of 0.5%, and at an estimated design effect of one. This gave a total sample of 280 participants (preceptors) out of the available nursing preceptor population of 402. The sample of 280 was maintained because the population for the survey was easily accessible with clear prescribed shifts of day evening and night duties. It was therefore easy to make a follow up in case of non-response. Nevertheless response rate was 94% far beyond the expected response rate reported in survey studies (Cunningham, Quan, Hemmelgarn, Noseworthy, Beck, Dixon, Jette, 2015; Yimeng, Kopec, Cibere, Li, & Goldsmith, 2016).

4.5.4 Recruitment of respondents for the survey

The recruitment of respondents to participate in a study involves identifying eligible candidates. An up-to-date list of the nursing staff on the wards and units at the NRH was obtained from the ACN prior to the commencement of the study. From the list, the researcher was able to identify all the registered nurses and midwives on the wards and units of the NRH who formed the preceptor population for the study. Recruitment was based on the preceptors' willingness to participate in the study and possession of the inclusion characteristics. Those nurses working in the units of the NRH during the period of data collection and who met the eligibility criteria were provided with the study information. All preceptors who consented were recruited into sub study 1.

4.5.5 Data collection tools and instrumentation for the survey

A self-administered instrument was developed in order to ascertain the current clinical teaching practices and preceptors' views on the content and strategies to be included in the clinical teaching training programme. The instrument used a Likert scale, multiple-choice and open-ended question formats. It was verified by nursing experts for face and content validity.

It was constructed with the use of published information on preceptorship (Benner, 1982; Creswell, 2009; Happell, 2009; Myrick & Barrett, 1992; Myrick & Yonge, 2005; Rahnavard et al., 2013).

The first section of the instrument collected demographic data which included age, department, ward, educational level, professional qualification and current administrative or clinical role at ward or unit level (**Appendix D**).

The second section of the instrument comprised questions which included descriptions of the current clinical teaching practices used by the preceptors, understanding of the concept of clinical teaching, involvement in clinical teaching, clinical teaching methods used, satisfaction level with the use of various clinical teaching methods and knowledge about various clinical teaching models.

A third section of the instrument provided a list of challenges which respondents were asked to rate, using a Likert scale. These challenges included high work load, lack of training in clinical teaching, lack of opportunity to update knowledge and skills, lack of incentives and reward for clinical teaching, poorly equipped facilities and a lack of teaching and learning materials.

The last section of the survey instrument related to the respondents' strategies to improve clinical teaching techniques and their preferred mode or programme for training preceptors in clinical teaching.

4.5.6 Reliability and validity of the survey instrument

The instrument was written in English, which is the language used for preceptors' instruction and communication with the nursing students in the Ugandan nursing schools and clinical settings. In order to ensure face and content validity, the instrument addressed the study objective number one which aimed to describe the current preceptors' clinical teaching practices. To ensure construct validity and reliability, the instrument was pre-tested at one of the regional referral hospitals which was not part of the study area. The hospital had similar training settings for pre-registration nursing students in Uganda (Uganda Nurses and Midwives Council, 2016). The purpose of pre-testing was to ensure clarity, validation, suitability and logical flow of the instrument. This enabled the researcher to identify errors and ambiguity and improve on the structuring of the instrument (Creswell, 2009; Leon, Davis, & Kraemer, 2011).

4.5.7 Piloting of the survey instrument

After obtaining approval to conduct a pilot of the instrument at one of the regional referral hospitals, 30 preceptors who had characteristics similar to those of the study population were sampled for pre-testing of the instrument. This process followed the stated data collection methods of requesting informed consent, distributing the instrument and ensuring that it was returned after completion. After permission from the supervisors was obtained, the questionnaires were personally distributed to the respondents every morning between 8.00 am and 11.00 am over a period of a week.

Amendments based on the pilot study

The period between 8.00 am and 11.00 am was found to be a difficult one for data collection as preceptors were busy with hand-over procedures and making plans for the day. This

challenge was noted and in response, the time for data collection was readjusted to commence at 11.00 am. Pens and an envelope in which to return the questionnaire were also found to be necessary to ensure efficient data collection. Omissions in the statements were noted and corrected as follows: the two programmes available (clinical instructor (one year) and tutorship (three years)) were not included as a basis for selection in addition to the stated SCCTTP proposed intervention; these two programmes were included as amendment to the questionnaire. Repetitions of the response strongly disagree in the Likert scale was noted and corrected in the amended questionnaire. All these corrections were made. The need for a sealed box for receiving completed questionnaires then became evident and so a suitable box was obtained and then provided to the ward and area managers in the main study. During the pre-testing it was noted that respondents discussed the questionnaire amongst themselves; this gave rise to the risk of data contamination. The lesson learnt from this experience was to ensure that respondents did not discuss the questionnaire during the main study. Therefore, precautions were taken such as cautioning the respondents not to discuss the questionnaire; and provision of a return envelope and pens was catered for during the data collection phase of the main study. Thirty five minutes was required for the preceptors to complete the questionnaire,

4.5.8 Research personnel

Two research assistants who were trained nursing tutors were recruited to assist in the data collection for the study. The assistants were trained on how to communicate with participants. They were instructed to obtain consent from every respondent, provide information and respond to queries raised by the respondents. They were also instructed always to wait for questionnaires and ensure that they were placed in the collecting boxes.

This procedure helped the researcher to re-emphasise the key issues for the research assistant to observe during data collecting.

4.5.9 Management of data collection for the survey and quality control

The Assistant Commissioner Health Services - Nursing of the NRH communicated the data collection schedule to the area and ward managers of the four general specialised areas in which the survey was to be conducted; these were the surgical, paediatric, medical and obstetric wards. All respondents consented to take part voluntarily and provided their written informed consent. All preceptors who were present in the selected wards of the NRH at the time of data collection were requested to take part in the survey.

On the days of data collection the researcher, assisted by the research assistants, distributed a self-administered questionnaire, a pen, as well as the returning envelope, to those preceptors (registered nurses/registered midwives) who were on duty in the study wards. The participants were cautioned not to discuss or to seek help in completing the questionnaire. A clearly-labelled box was provided to the ward managers for returning the completed questionnaires. 280 questionnaires were distributed and 264 completed questionnaires were returned.

The quality and safety of data was managed through proper numbering (pre-coding) of the questionnaire as well as by cross-checking the collected data for completeness and consistency while still at the study site. The questionnaires were kept under lock and key in data collection bags in separate cupboards in the researcher's office. The completed questionnaires will be kept for three years; in other words, until December 2018. As a security measure, the collected data were kept on two separate computers with password

protection and all information was kept confidential and was only utilised for the current study. Back-up flash drives shared by the supervisor were used to store data. All electronic data will be destroyed in accordance with the relevant ethics requirements of the University.

4.5.10 Statistical analysis for the survey

The data were analysed using Statistical Package and Service Solution (SPSS) software version 18 (Weaver & Wuensch, 2013). This was done by a statistician. Descriptive statistics (central tendency and variability) were used to describe the characteristics of the data, as recommended by Creswell (2009). In the descriptive analysis, all continuous variables were summarised using means (standard deviation), median, maximum and minimum values. Categorical variables were summarised using proportions and frequencies. Data are presented in tables and graphs.

4.5.11 Ethical considerations for the survey

The information about the study was provided to all the respondents and their informed consent was obtained before data collection. This was done by allowing the respondents to read the information sheet and ask for clarity or explanation when needed. This process was managed by the researcher or research assistants who also witnessed the signing of the consent form. Information was provided, explaining the purpose of the study and its potential benefits was provided. Respondents were informed that they were free to withdraw at any time or could refuse to participate in the study without any penalty (**Appendix B**).

The questionnaire required 35 minutes to complete. The researcher respected all the ethical principles: the principles of beneficence, confidentiality, justice and informed consent.

4.6 Phase two: Design of the structured and collaborative clinical teaching training programme (SCCTTP)

The design of the programme and manual was based on African and global best practices and guidelines regarding preceptors' competencies and knowledge of clinical teaching (Jeggels et al., 2013; Linfield Good Samaritan School of Nursing, 2013; Mohide et al., 2012; Ramani & Leinster, 2008). The literature described a number of clinical teaching models which were being used to train preceptors in other settings (Al-Hussami, Saleh, Darawad, & Alramly, 2011; Ali, 2012; Barker & Pittman, 2010; Burns et al., 2006; DeCicco, 2008; Frattarelli & Kasuya, 2003; Gaberson et al., 2014; Hallin & Danielson, 2009; Happell, 2009; Jeggels et al., 2013; Schupbach, 2012). Several issues were identified as being critical content for designing a clinical teaching training programme for the preceptors. These included: understanding the concepts of clinical teaching; gain and use various clinical teaching strategies; manage challenges of clinical teaching; assess learning of clinical skills; and, appreciate ethical and legal issues in clinical teaching (Gaberson et al., 2014; Happell, 2009; Jeggels et al., 2013).

The results of the survey (phase one) of the preceptors' clinical teaching practices at the NRH formed the foundation for the development of the structured and collaborative clinical teaching training programme (SCCTTP). The survey provided three important results which formed the basis for designing the SCCTTP. These were:

- i. Most preceptors were diploma holders who had not completed any formal clinical teaching training.
- ii. Many of the preceptors had difficulties in explaining the various clinical teaching models and clinical teaching strategies.

- iii. All the preceptors at the NRH agreed that they were experiencing several clinical teaching challenges when providing clinical teaching to the pre-registration nursing students.

The SCCTTP project adopted the collaborative approach in recognition of joint involvement by the hospital and the school of nursing in supporting activities of preceptorship. Bridges (2014, pp. 404-405), defines collaboration as “a situation where there is true partnership; thus, partners value each other’s power with acknowledgement and acceptance of combined and separate fields of responsibility and activity”. This study made reference to Bridges’ (2014) definition of the concept of collaboration and that writer’s explanation of its importance in health care delivery. Thus, the SCCTTP utilised this concept in the area of resource mobilisation and shared mandate of clinical teaching actions. The SCCTTP was intended to utilise working together, planning shared decision making and communication as the implementation took place. The SCCTTP manual was written in English. The design of the intervention (training manual) and power point presentation slides took place in four sequential processes explained below in 4.6.1 to 4.6.4.

4.6.1 Design of draft one of the manual

The designing of the manual was constructed on the premise of inter-institutional collaboration especially in the area of resource allocation and sharing for clinical teaching (Happell, 2009). Inter-institutional collaboration refers to ongoing interaction and sharing resources and ideas among the training hospitals, nursing training schools and clinical teaching stakeholders. The philosophy of sharing and collaboration was emphasised in recognition that the two institutions had resources that could be shared for the benefit of clinical teaching. These resources included: human resources (preceptors and tutors),

equipment and sundries, knowledge, policies and values and space. The experiential and adult learning theories guided the structuring of the learning activities and content (Kolb, 1984; Knowles, 1980). Competence based and active learning was emphasised.

Draft one of the SCCTTP manual was drafted by the researcher and comprised five sections. Section one: Preceptorship and its related concepts. Section two: Strategies for clinical teaching. Section three: Challenges of clinical teaching and strategies to overcome them. Section four: Assessment, evaluation and feedback in clinical teaching. Section five: Ethics and legal issues of clinical teaching. Each section had an introduction, learning outcomes, key concepts, focus questions, activities/exercises and additional reading notes.

An introductory paragraph in each section was included to provide an overall purpose of the section. The introduction was followed by a subsection with the stated learning outcomes. The number of outcomes for each section varied from section to section (table 4.1). The provision of outcomes in the each section was intended to give specific direction regarding what was expected to be achieved after exposure to the learning activities in the section.

Table 4.1: number of outcome per section

Number of sections	Number of stated outcomes per section
One	Four outcomes
Two	Three outcomes
Three	Three outcomes
Four	Two outcomes
Five	Three outcome

The exercises were structured in the form of assignments. The assignments were prepared to be done in plenaries or small groups or through individual reflections. This was aimed at facilitating active thinking and reflection. Teaching strategies included discussions, role play, practical presentation, brain storming and examination sessions, game and relaxation exercises. Some sections had diagrams which illustrated preceptorship in action. For example: the SCCTTP manual (*Appendix R*) in section two page seven, a diagram of a preceptor demonstrating insertion of a nasal gastric tube to a baby was provided.

The sections on assessment evaluation and feedback and on ethics and legal issues of clinical teaching were specifically designed to cater for the preceptors lacking competencies in these areas.

4.6.2 Presentation of the manual, amendment and adaption of drafts at the consultative meetings

Draft one was subjected to critique and improvement by a committee referred to as the consultative committee. This committee was established as per recommendations from the Nursing and Midwifery Board of Australia (2006) and Zhang et al. (2011), for the smooth design of any training programme. The Midwifery Board of Australia (2006) and Zhang et al. (2011), recommend that during the development of any training programme, consultation of key stake holders should be done. The consultation is done for purposes of obtaining ownership of the new programme and also to ensure that all the institution philosophy, policies and values are considered and observed. A consultative committee was formed to provide guidance in designing of the SCCTTP. The committee comprised nine members. They included content experts in nursing education, general education, clinical nursing, nursing leadership and nursing regulation. The committee comprised:

- One member from Uganda Nurses and Midwives Council (UNMC) who was responsible for ensuring inclusiveness of professional and regulatory content.
- One member from Uganda Ministry of Education and Sports (MOES). She was responsible for compliance to program requirements as per Ministry of Education and Sports program guidelines.
- One member from the Mulago National Teaching and Referral Hospital (MNRH), two clinical nurses and one member from the Jinja Regional Referral Hospital. These were responsible for ensuring inclusiveness of clinical teaching interests and experiences from the hospital.
- One member from the Department of Nursing, College of Health Sciences, Makerere University and two nursing and midwifery tutors. These members were responsible for ensuring inclusiveness of educational institutional needs for clinical teaching.

4.6.3 Consultative meetings and the SCCTTP

The development of the manual started in December 2014 and was completed in May 2015. In March 2015 the draft one document was edited by an expert in English. The draft was then presented to the consultative team for initial discussion and critique at the end of March 2015. Afterwards, the draft was corrected and updates included. Two consultative meetings were held: one in the first week of April 2015 and another in the last week of April 2015. The last meeting with the consultative committee was held at the end of May 2015. By then, all issues noted during the design processes had been incorporated into the document. These consultative meeting took place in the board room of one of the nursing schools in Kampala.

4.6.4 Pretesting the draft manual and teaching materials

In May 2015, the SCCTTP manual and Power point slides were pre-tested at one of the Regional Referral Hospitals in Uganda. Two groups of registered nurses who met the inclusion criteria for the main study were used to pre-test the manual; 15 were in the intervention group and 15 in the control group. At this stage the researcher conducted teaching sessions according to the stipulations in the manual and any structure and process issues were noted. Thus, errors were noted and corrected, inconsistencies identified and improvements made, during and after pre-testing. The English language expert again edited the document for second time. This was then followed by a discussion with and approval by the primary research supervisor. Thereafter, the document was sent to the graphic designer for final layout. At this stage the document (*Appendix R*) was ready for implementation.

4.7 Phase three: the research design for the SCCTTP intervention

4.7.1 Research design and rationale for the SCCTTP intervention

In this phase, the researcher used a pre- and post-test intervention design. Preceptors were trained using the SCCTTP and afterwards an evaluation took place to determine the influence of the training on the preceptors' self-perceived clinical teaching knowledge and confidence.

4.7.2 Population for the SCCTTP intervention

The population comprised all the registered nurses who were acting as preceptors and working on the wards and units of the NRH. At the time of the study, the NRH had 82 operational units (wards). These were randomly sampled from the four major departmental areas: medical, surgical, paediatrics and obstetrics and gynaecological.

4.7.3 Inclusion and exclusion criteria for the SCCTTP intervention

Inclusion:

All nursing preceptors (registered nurses and midwives) who were working in the sampled wards at the NRH.

Exclusion:

All nursing preceptors (registered nurses and midwives) who were not working in the sampled wards at the NRH. Moreover, those nursing preceptors who were normally working in the sampled wards but were not available during the scheduled days for the training were excluded.

4.7.4 Sample size and power analysis for the SCCTTP intervention

According to Hallahan and Rosenthal (1996) the power of a particular test is determined by three factors: the alpha level, the number of observations and the size of the effect. The researcher calculated the sample size to have an 80% power with a 5% alpha (two sided) to detect a 25% point difference in preceptors' knowledge on clinical teaching; that is, from 35% at base line (before intervention) to 60% at follow-up (after intervention). The estimated sample was 140 participants (70 preceptors for the intervention group and 70 preceptors for the control group). The actual sample studied at baseline level was 74 (106%) and 66 (94%) preceptors for the intervention and control groups respectively, giving a total of 140 (100%). There was non-response rate of 6% in the control group. Four of the 70 preceptors allocated to the control group were unable to attend because of unavoidable problems; two were ill and the other two had sick children.

4.7.5 Study setting / sampling strategy for the SCCTTP intervention

The NRH had 82 units which were situated in the upper and lower areas of the hospital. Originally, the units at the upper site formed the old National Referral Hospital and those at the lower site formed the units of new hospital. The units and wards in the lower site were structured in three major storeyed blocks (A, B and C) with six floors. The naming of the wards and units is in accordance with floor levels; for example, 1A, 1B, 1C. The structures at the upper site are generally in the form of individual blocks. The upper referral units mainly cater for outpatient services and inpatient services for paediatrics, obstetrics and gynaecology.

A stratified sampling strategy was used to select the sampling units for the National Referral Hospital as seen in the table below. Ward blocks were stratified and randomised into two equal groups (table 4.2); these were the intervention group (Block C) and control group (Block B) respectively. Each block comprised the following wards: medical, surgical, paediatrics and obstetrics and gynaecology. During the time of the study, the hospital was undergoing renovation and as such, Block A was merged with Block B; some obstetric and gynaecological units were relocated to the upper and lower sections. As a result of the relocation, the sub study 2 was conducted on Block B (intervention) and Block C (control) for medical and surgical wards. For obstetrics and gynaecology, the wards in the lower section of the NRH formed the intervention blocks while wards in the upper section of the NRH formed the control blocks. For the paediatrics wards; Prof Jereff and Acute Care Unit formed the intervention wards and Stanfield, Ward 11 and Sickle Cell Clinic formed the control wards.

Table 4.2: Ward strata for intervention and control groups

Specialisation	Intervention group	Control group
Medical	Block B	Block C
Surgical	Block B	Block C
Obstetrics and gynaecology	Lower referral section	Upper referral section
Paediatrics	Prof. Jereff and Acute Care Unit (upper section)	Stanfield, Ward 11 and Sickle Cell Clinic (upper section)

4.7.6 Selection of wards for the SCCTTP intervention

Once the sampling frame for the medical, surgical, paediatric and obstetric and gynaecological wards had been selected, the population of preceptors on these wards was documented. A stratified random sampling approach was used to ensure an equal numerical representation of all four major departments while identifying the intervention and control preceptors. Preceptors working on the selected wards were divided into groups. The preceptors working on the wards forming the intervention group were trained on a sequential basis, to ensure that patient safety and quality care were maintained when the preceptors were away from the ward. The preceptors working on the control group wards were invited to attend a one-day workshop at which feedback was given on the survey. The control group was not trained, but the researcher will offer this training to that group upon completion and submission of this thesis for examination.

4.7.7 Selection of preceptors for the SCCTTP intervention

The preceptors (nurses and midwives) working in the sampled units were selected to form the intervention and control groups for sub study 2. In order to be enlisted in sub study 2, preceptors needed either a minimum qualification at diploma level or else a registered nursing or midwifery qualification. They also had to have worked as nurses or midwives for six months or more. In order to avoid contamination of the assigned groups, the hospital

management issued a directive that required all the participating preceptors in both groups to stay on the assigned wards for the entire period of study implementation. The intervention group preceptors were requested to ensure that the wards were well covered while they went for training.

The researcher and research assistants obtained an up-to-date record of the clinical nurses who were working on wards and units of the NRH; this information was obtained through the Assistant Commissioner Health Services - Nursing (ACN), the Senior Principal Nursing Officer (SPNO) and the Principal Nursing Officer (PNO). Information sessions were held and information letters (**Appendices E and F**) were provided for all those preceptors who were recruited for the study. Informed consent (**Appendices G and H**) was obtained from all the participants prior to the commencement of the training.

4.7.8 Data collection tools and instrumentation for the SCCTTP intervention

4.7.8.1 Knowledge in respect of clinical teaching

A questionnaire (**Appendix L**) was administered to the preceptors by the researcher at the beginning of the training and also at the end (day 6). The objective of the pre- and post-training questionnaire was to establish the extent of learning and its influence on the preceptors' knowledge levels after undergoing the SCCTTP training. The questionnaire comprised three sections: Section one collected demographic data that included information relating to the participants' experience in years as nurses or midwives and as clinical teachers. Information was also collected on the participants' department, ward/unit, basic educational level, professional qualification, and current administrative/clinical role at ward/unit level. The second section of the questionnaire tested the participants' knowledge

and understanding of the concept “Preceptorship”, benefits of positive preceptorship, barriers to positive preceptorship, qualities of a good preceptor, roles of a preceptor in the clinical areas, goals of clinical teaching, clinical teaching strategies, factors considered in making a conducive clinical teaching environment, challenges of clinical teaching, methods of assessment used in the clinical areas and important legal and ethical issues in the clinical areas. The third section assessed the participants’ self-evaluation of their confidence in conducting clinical teaching. The questionnaire was administered at the beginning of day one of training; these were collected and immediately marked by the researcher and research assistants. The marking process was guided by a marking guide with answers to the questions (**Appendix M**). On day six of the intervention, the same questionnaire was administered again by the researcher and marked by the researcher and research assistants.

4.7.8.2 Preceptors ‘confidence and self-reported clinical teaching competencies

A self-administered Maastricht Clinical Teaching Questionnaire (MCTQ) (Stalmeijer et al., 2010) was modified to collect data which were used to evaluate the influence of the intervention. The questionnaire collected data on preceptors’ satisfaction levels in performing the role of preceptorship and their confidence levels in conducting clinical teaching (**Appendices I and N**). The questionnaire was used to collect data at baseline. In this evaluation, baseline met immediately after the administration of the post-test questionnaire; in other words, at the end of day 1 for the control group or at the end of day 6 for the intervention group. The MCTQ questionnaire was also used at week 6 and week 12 post-interaction/training. Permission to use the MCTQ in this study was obtained from Dr. Renee Stalmeijer, author of the MCTQ and Director of Health Professions Education at Maastrich University (Appendix P).

The Likert scale section comprised 23 statements which focused on the seven main clinical teaching competencies: modelling, coaching, scaffolding, articulation, reflection, exploration and provision of a safe environment.

4.7.9 Validity and reliability of the pre- and post-test evaluation questionnaires

In order to ensure face and content validity, the questionnaires were structured according to expected preceptor competencies at post-training; these included clinical teaching skills, clinical supervision skills, assessment in the work place, and use of simulators in clinical settings.

Reliability was managed by developing a marking guide to assess, consistently, the participants' knowledge in the pre- and post-test questionnaire. The questionnaire and marking guide were also pre-tested.

In research, fidelity is about incorporation into the study a mechanism for adherence to the original design and protocols of the planned intervention (Meyers & Brandt (2014). Intervention fidelity is important for maintenance of internal validity (Rew, Banner, Johnson, & Slesnick, 2018). In this study, intervention fidelity was observed through rigorous design of the intervention. Every step for the implementation of SCCTTP was documented and strictly followed by the researcher and research assistants. Facilitator training was conducted prior to the intervention. Training material was prepared and piloted prior to the training programme. This included PowerPoint presentations, handouts and the SCCTTP manual.

4.7.10 Piloting of the instrument for the SCCTTP intervention

Two groups, both comprising 15 preceptors (intervention and control), were used to pilot the instruments. This took place at the same regional referral hospital where the piloting of the instrument for sub study 1 (survey) was conducted. Thirty preceptors who had similar characteristics to the study population for sub study 2 were sampled for pre-testing of the instruments. The training procedures as stated below were followed. The six days of training took place at the nursing school which was adjacent to the regional referral hospital. During this training, the participants indicated that it was good for the training to take a short period of the six day. They reported that the testing helped them to understand the importance of preceptorship and they recommended that all the other nurses at the hospital should be trained using the SCCTTP. The structure of the questionnaires and manual was critiqued and revised accordingly.

4.7.11 Research personnel for the SCCTTP intervention

The research assistants who assisted in the data collection in sub study one were re-trained to the required competence level for assisting in sub study two. In order to be prepared as co-trainers for the SCCTTP project, the research assistants attended the pre-testing sessions for the SCCTTP. Immediately after those sessions, they were told that they were to act as co-trainers during the implementation of the SCCTTP sessions at the main study. They were to assist the research in the activities of training including: arranging the training venue, photocopying handouts, distribution of the evaluation questionnaires and marking the pre- and post- tests.

4.8 Description of the structured and collaborative clinical teaching training programme (SCCTTP)

At implementation stage, there was an intervention group and a control group and their modalities are described below;

After securing the training venue and obtaining permission for the preceptors to be away from clinical duties during the stated dates, the implementation of the SCCTTP commenced in June and continued till August 2015. Follow-up continued until November 2015 as indicated in the training and implementation schedule (**Appendix K**). A total of 74 participants were trained in four intervention groups:

- i. Group 1=18 participants
- ii. Group 2 =18 participants
- iii. Group 3 =19 participants
- iv. Group 4 = 19 participants

4.8.1 Training package for week 1 of the SCCTTP

The manual was arranged in five sections as follows:

- Key concepts that relate to preceptorship, the goals and objectives of clinical teaching, factors and practices of positive clinical teaching environment.
- Clinical teaching strategies and clinical teaching models.
- Challenges of clinical teaching.
- Assessment and evaluation strategies that are used in the clinical area.
- Ethics and legal issues and their implications for clinical teaching.

The five sections in the manual were further sub-divided into 31 sessions. Six days of training (Monday-Saturday) were required to implement the 31 sessions; this is evident from

the SCCTTP programme (**Appendix J**). Day 1 started with attendance registration, self-introduction, provision of study information and obtaining participants' consent. After these preliminaries, the content of the rest of the SCCTTP content was provided.

Before the SCCTTP content was provided, each preceptor in the four intervention groups was requested to complete a pre-test questionnaire which was designed to ascertain the baseline clinical teaching confidence and satisfaction levels of the preceptors. The same questionnaire was also completed by the preceptors at the end of the six days' training. The main learner-centred strategies used during the SCCTTP training were group discussion, reflection, role plays and demonstration of clinical teaching sessions and assessment of clinical learning. For most of the time during training, the preceptors were encouraged to hold open discussion in either one large group or in small groups of four or five participants. In these discussions, preceptors were encouraged to regard themselves as a team and to recognise the need to appreciate and respect one another.

The training was evaluated daily, using an end of day evaluation form (appendix Q), to determine the preceptors' most significant learning experience and also to obtain post-session feedback for the facilitators. The evaluation assessed the preceptor's satisfaction in relation to the training style, learning, venue comfort and material preparation. Evaluation was done at the end of each training day. Participants were asked to complete this form and return it to the researcher or her assistant before going home. Five questions were included in the evaluation:

1. What did you find **useful** about today
2. What was your **greatest learning**?
3. What is that **something** that you still need to learn/work on

4. What aspects of today could have been improved? Suggestions for future sessions
5. What **feedback** do you have for the facilitators regarding the **training style** (etc)
6. Any other comments, venue, timing

A daily evaluation of a programme allows the trainers to identify any issues that can be addressed to facilitate smooth running of a programme. Each evening the researcher and research assistant checked the remarks provided by the participants and attempted to take these into account as the training progressed. The responses to these questions are provided in table 4.3 below.

Table 4.3: Responses from Daily evaluation of the SCCTTP session presentations

What I found useful about the day	What was my greatest learning	Something still need to learn/work on	What aspects of today could have been improved?	Feed back to facilitators (training style)	Other comments
<ul style="list-style-type: none"> • Like the way she was trained and got know that in-charges are also called preceptors. • Came on time and used to the environment now. • Better class and sitting arrangement. • Participating in group discussion • Interaction with others • People are working had to improve the nursing profession • Role of preceptors 	<ul style="list-style-type: none"> • Definitions of terms, also able to distinguish from challenges and benefits to preceptors, tutors and students. • Learnt to handle students and fellow staff • Benefits of good preceptorship • Preceptorship increases productivity • Very body can preceptor so long as they are interested • Need of cooperation between preceptors, students and schools. • Perceiving the roles of the students, preceptors and tutors. • Helping preceptees leads to production of good nurses and midwives 	<ul style="list-style-type: none"> • Elaborating more on the qualities preceptor and a student • Skills of teaching as preceptors. • Good attitude towards students • Supervision of students • Improve experience in mentorship and fill gaps 	<ul style="list-style-type: none"> • Time management especially with group work and starting • Encourage participants to read after work • Simplify the language • Meals 	<ul style="list-style-type: none"> • More arrangement for such training • Always be time conscious • Facilitators doing well so far. • Continue the spirit of giving knowledge • Facilitators are good but need to keep time. • Giving students time for questioning. 	<ul style="list-style-type: none"> • This is a timely programme • Need to roll it to all preceptors.

Participants were provided with writing materials (note book, pens, and pencils) and well as with materials required for group discussion. Clinical equipment such as linen, equipment for performing clinical procedures, trolleys, beds, dummies and screen were also made available for use when needed. During the training, participants were served with refreshments.

On the last day of training (day 6), participants were asked to propose recommendations that could be used to improve clinical teaching and learning of pre-registration nursing students. On that last day, participants were also requested to complete the post-training evaluation questionnaire.

Upon completion of the training, the preceptors were encouraged to use their acquired knowledge in precepting the pre-registration nursing students on clinical rotation in their wards.

4.8.2 Management of the control group

While the intervention group was provided with the SCCTTP clinical teaching training, the control group had only a one-day interaction with the researcher and research assistants. That interaction was in the form of a meeting. At this meeting the researcher briefly presented the results of sub study 1. The meetings were arranged to take place during the alternate weeks of the SCCTTP training and were conducted on alternative Wednesdays until the four control groups had been addressed. The meeting procedures for the control groups also included registration and self-introduction of participants; moreover, informed consent was obtained from each of the preceptors in the control group before administering the pre-test. The questionnaire used for the control group was the same as the one used for the intervention

group. The pre-test was administered to the control group immediately after obtaining consent of the participants and the post-test was administered on the same day.

During the meeting, the researcher shared the results of the survey. The main findings relating to the challenges faced by the preceptors during clinical teaching were presented. Shortly before the end of the meeting, the participants were allowed to hold a discussion and propose recommendations to improve clinical teaching at Mulago National Referral Hospital. Finally, the researcher administered the baseline evaluation questionnaire and then requested participants to be available at week 6 and week 12 for discussions that were to support the project. Tea and lunch were served during the meetings

4.8.3 Evaluation at week 6 and week 12

In order to assess the impact of the SCCTTP, participants completed the baseline, week 6 and week 12 evaluation questionnaires. Three follow-up evaluation sessions per group were conducted after the initial training. The evaluation focused on the main clinical teaching competencies and self-rating of those competencies by the preceptors.

4.9 Management of data for the SCCTTP intervention and Quality Control

The quality of data was managed by proper numbering (pre-coding) of the questionnaire, cross-checking the collected data for completeness and consistency while still at the study site and appropriate training of research assistants. The collected data were stored in a locked cupboard and on two separate computers with password protection. A separate flash drive was used to back up data.

4.10 Data analysis for the SCCTTP intervention

The data was captured and crosschecked for completeness by the researcher and the research assistant. There after it was sent to the statistician for analysis.

4.10.1 Data analysis for preceptors' training (pre-and post-intervention measurements)

In order to compare proportions between intervention and control groups, logistic regression was performed and a Pearson chi-square test applied. In order to determine any difference in means between control and intervention groups, all continuous variables were regressed against the outcome variable using the Independent Samples t-test. Assumptions of equality of means with an assumption of equal variances between both groups were satisfied. A p-value of 5% or less was deemed statistically significant while the 95% confidence limits were constructed around the group means.

4.10.2 Data analysis for training and its influence on knowledge increase

Non-parametric tests were used. The Wilcoxon signed rank test was performed to establish if there were any differences in knowledge among the trainees with repeated measurements taken at day 0 and day 6 corresponding to pre-and post-training evaluations. The knowledge levels of participants were compared between the control and intervention groups, before and after the training.

4.10.3 Post SCCTTP intervention data analysis

In order to determine the influence of the training on the self-reported confidence and competencies of the preceptors, all categorical variables were cross-tabulated against the outcome variable. This was defined by the timing of the intervention for both control and intervention groups at baseline, follow-up at 6 weeks and 12 weeks respectively. In order to

facilitate the interpretation of the data, new variables were computed for all categorical variables on competencies, by merging the Likert scale items from five responses (strongly disagree, disagree, not sure, agree and strongly disagree) to three categories (agree, not sure and disagree). All missing values were excluded from the analysis. The component variables were then categorised further into major seven attributes under the heading composite variables as summarised in Table 4.4 below.

Table 4.4 Post-intervention analysis

Composite variable	Component variables
Modeling	V1. I consistently demonstrate how to perform clinical tasks V2. I clearly explain the important elements for the execution of a given task V3. I create sufficient opportunity for the student to observe me V4. I serve as a role model for the kind of nurse/midwife I would like to produce
Coaching	V5. I observe students multiple times during patient encounters V6. I give useful feedback during or immediately after direct observation of the student's patient encounters V7. I help students to understand which aspects they need to improve
Scaffolding	V8. I adjust my teaching activities to the level of experience of students V9. I offer sufficient opportunities to students to perform activities independently V10. I support students in activities that they find difficult to perform V11. I gradually reduce the support given to allow students to perform certain activities more independently
Articulation	V12. I ask students to provide a rationale for their actions V13. I help students become aware of gaps in their knowledge and skills V14. I ask students questions aimed at increasing their understanding V15. I encourage students to ask me questions to increase their understanding
Reflection	V16. I stimulate students to explore their strengths and weaknesses V17. I stimulate students to consider how they could improve their strengths and reduce their weaknesses
Exploration	V18. I encourage students to formulate learning goals V19. I encourage students to pursue their learning goals V20. I encourage students to learn new things
Provision of Safe Environment	V21. I create a safe learning environment V22. I take sufficient time to supervise students V23. I am genuinely interested in the students

4.11 Summary

This section described the design and methodology of the study. The study comprised three phases. Phase one was a cross-sectional survey of preceptors' clinical teaching practices. Phase two was the design of the structured and collaborative clinical teaching training programme (SCCTTP) and manual. Phase three used pre- and post-intervention methodology to implement and evaluate the SCCTTP. The next chapter will present the study results.

Chapter 5: Results

5.1 Introduction

This chapter presents the results of the survey, the pre- and post-test and follow-up analysis of knowledge, confidence and self-reported clinical teaching competencies. The results for phase two have been presented in chapter four, above.

5.2 Survey results: The nursing preceptors' clinical teaching practice at the National Referral Hospital

5.2.1 Demographic characteristics of survey participants

The population of registered nurses at the NRH was 406; 264 of these were included in the study. The number of A-level school leavers was 143 (54%) while 121 (46 %) were O- level school leavers. The oldest participant was 59 years of age and the average age of the respondents was 38 years. Eighty-five percent of the preceptors had diplomas in nursing/midwifery while only 13% and 2% had first and second nursing degrees respectively. With respect to specific disciplines, 62% (n=163) had a diploma in nursing, 26% (n= 68), had a diploma in midwifery, 6% (n=16) had a diploma in comprehensive nursing and 4% (n=11) had a diploma in mental health nursing. Please note that respondents had tertiary degrees and one of these qualifications. Only 13 % (n=36) of the respondents had bachelor's degree in nursing science and only 02 % (n=05) had obtained a masters in nursing degree. This distribution is shown in Table 5.1 below.

Table 5.1: The demographic characteristics of survey respondents

Characteristic	Frequency (n=264)	Percentage
Basic Education Level		
O' Level	121	46
A' Level	143	54
Professional Education		
Diploma in Nursing	163	62
Diploma in Midwifery	68	26
Diploma in Comprehensive Nursing	16	06
Diploma in Mental Health Nursing	11	04
Bachelor degree in Nursing	36	13
Masters in Nursing	05	02
Unit/Ward of Work		
Surgical	87	33
Medical	69	26
Obstetrics and gynaecology	55	21
Paediatrics	53	20

5.2.2 Preceptors' understanding of the concepts of clinical teaching and preceptorship

Most (89%) of the preceptors were able to state the meaning of the concept of preceptorship as helping, modelling and guiding nursing students to learn nursing skills in the clinical areas. Sixty-four percent of the preceptors were satisfied with the use of the lecture method in clinical teaching but very few (12%) were satisfied with case presentation and discussion as clinical teaching methods: details are illustrated in Figure 5.1 below. There was great variation relating to knowledge of the various clinical teaching models with a high percentage response rate to the supervisory model (79%) but only a 12% response rate to the one minute clinical teaching model. Refer to Figure 5.2 below.

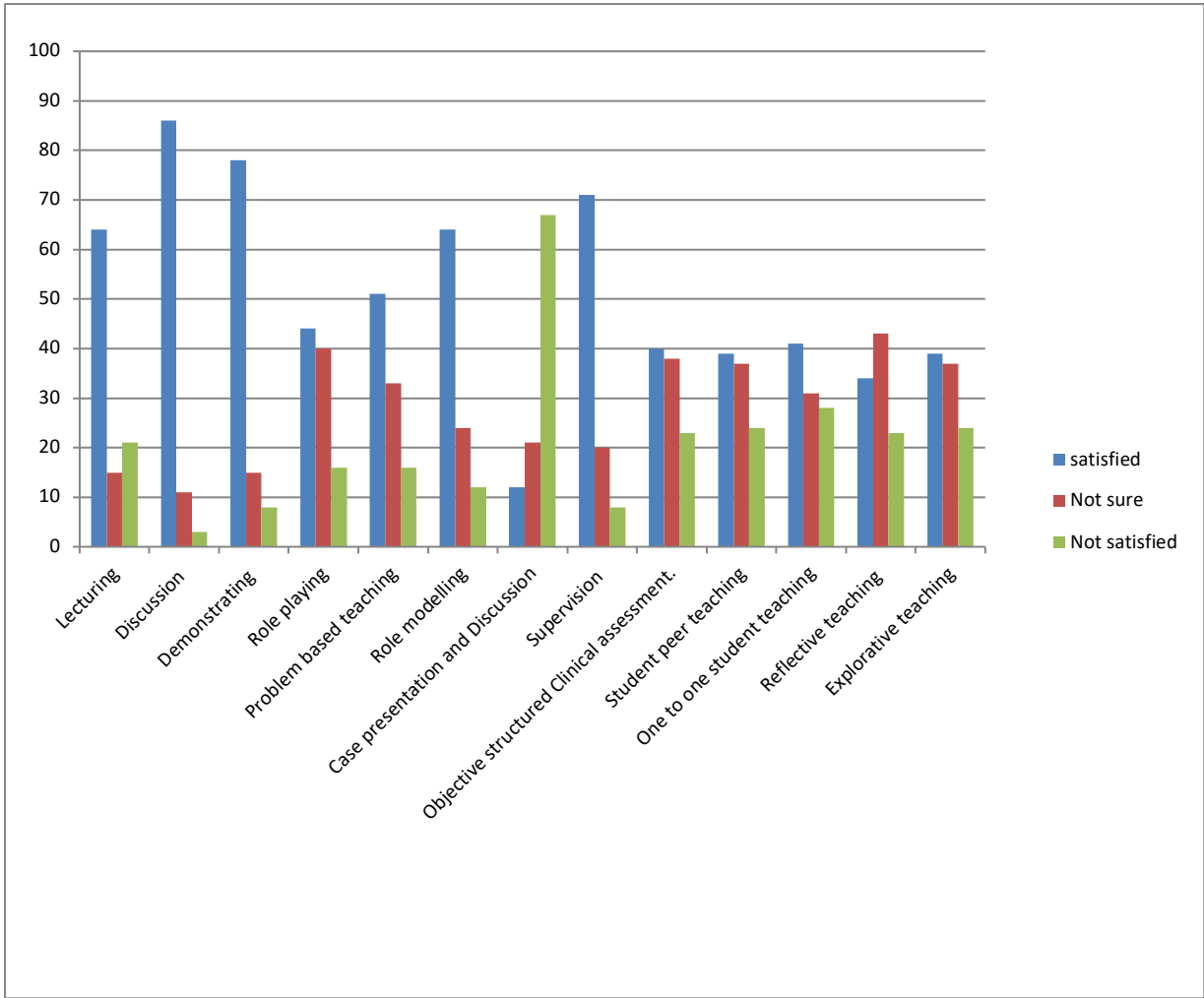


Figure 5.1 Satisfaction percentage levels in use of specific teaching methods by the preceptors

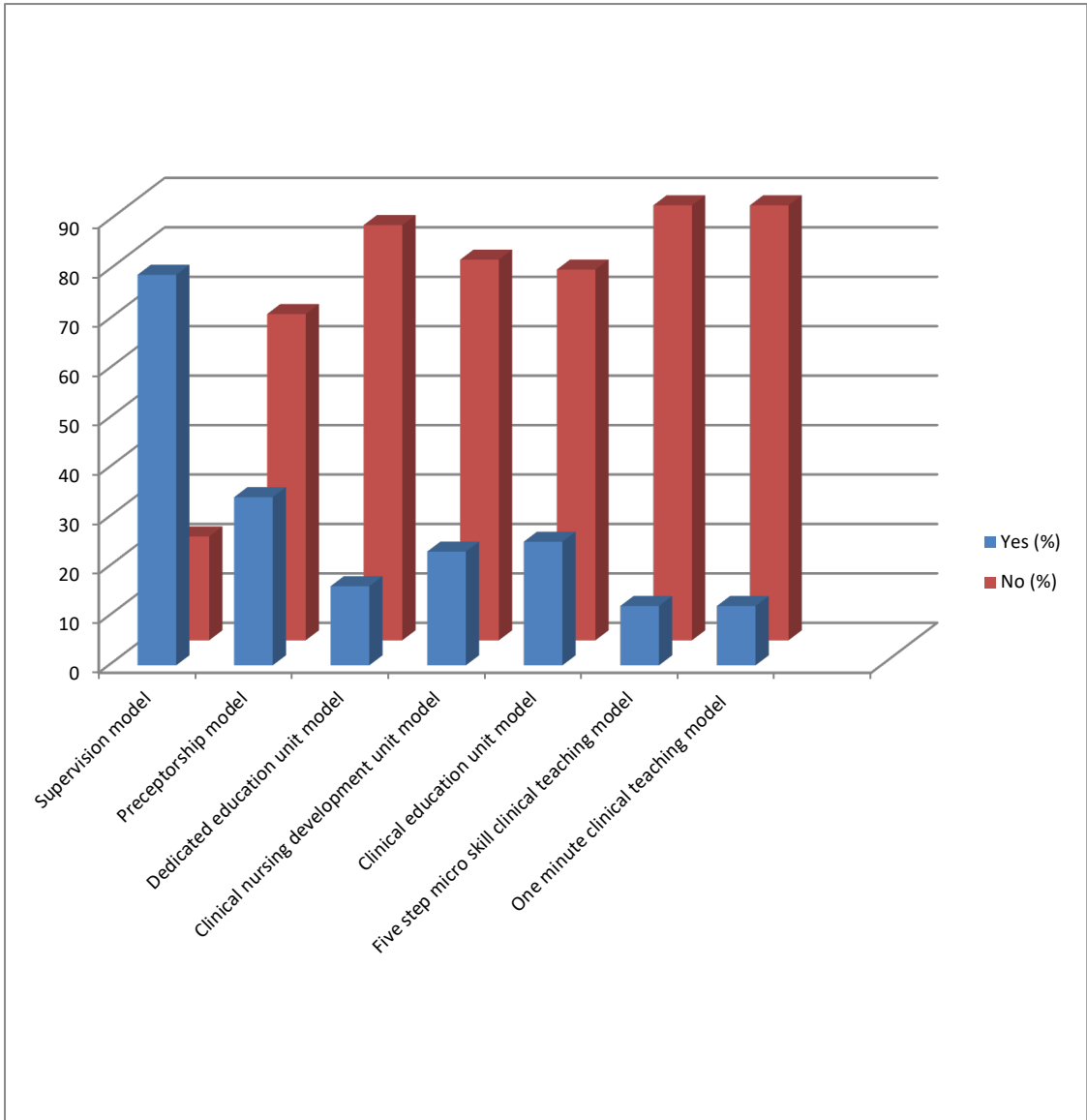


Figure 5.2: The respondents’ knowledge of use of the various clinical teaching models

5.2.3 Challenges of clinical teaching as reported by the preceptors

The respondents were asked to report on the challenges associated with their role of conducting clinical teaching. One of the main challenges cited was the apparent unwillingness of patients to agree to student teaching; this was reported by 63%. Among the other challenges noted were acuity or severity of illness in the hospital (53%), lack of training in clinical teaching (48 %,) few opportunities for updating knowledge (43%) and large

student numbers (41%). Interestingly, very few (20%) of the respondents mentioned limited time for clinical teaching as a challenge for clinical teaching. Figures 5.3 and 5.4 depict all the challenges as they were mentioned by the preceptors.

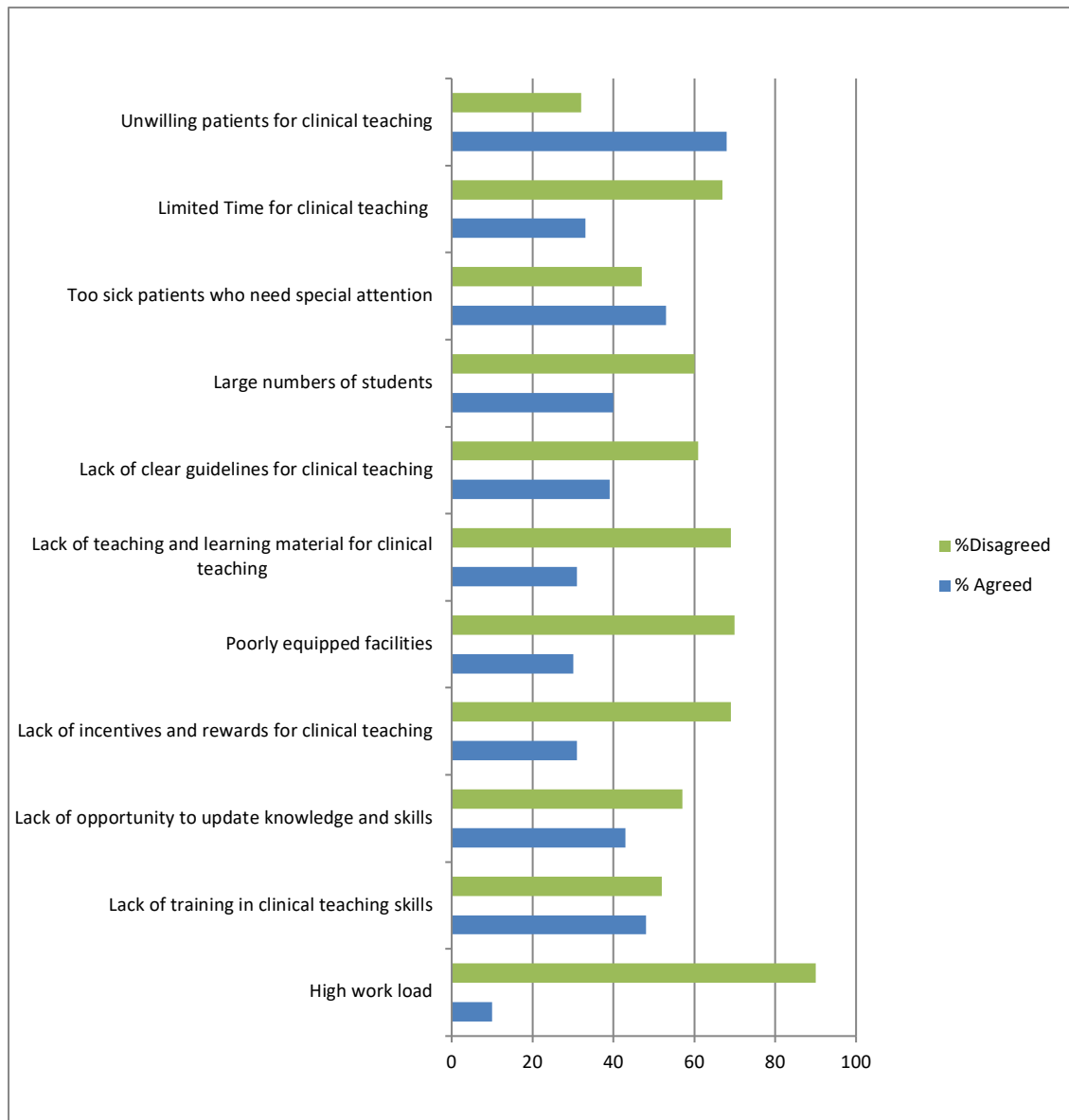


Figure 5.3: Challenges of clinical teaching as perceived by the preceptors

The respondents were asked to comment on areas which are not fully provided for by the end of the nursing students' rotation in the clinical settings. In response, 186 (70%)

preceptors reported that students had not fully mastered the required competencies at the end of the clinical placement. One hundred twenty one (121 = 46%) preceptors reported that the equipment on their wards was inappropriate for effective clinical teaching. One hundred twenty two (122 = 46%) preceptors stated that they had not been trained to conduct clinical teaching. The lack of a uniform teaching model for clinical teaching was identified by 106 (40%) preceptors. Seventy four (74 = 28%) preceptors raised concern about the nursing students' inappropriate attitudes towards their practice.

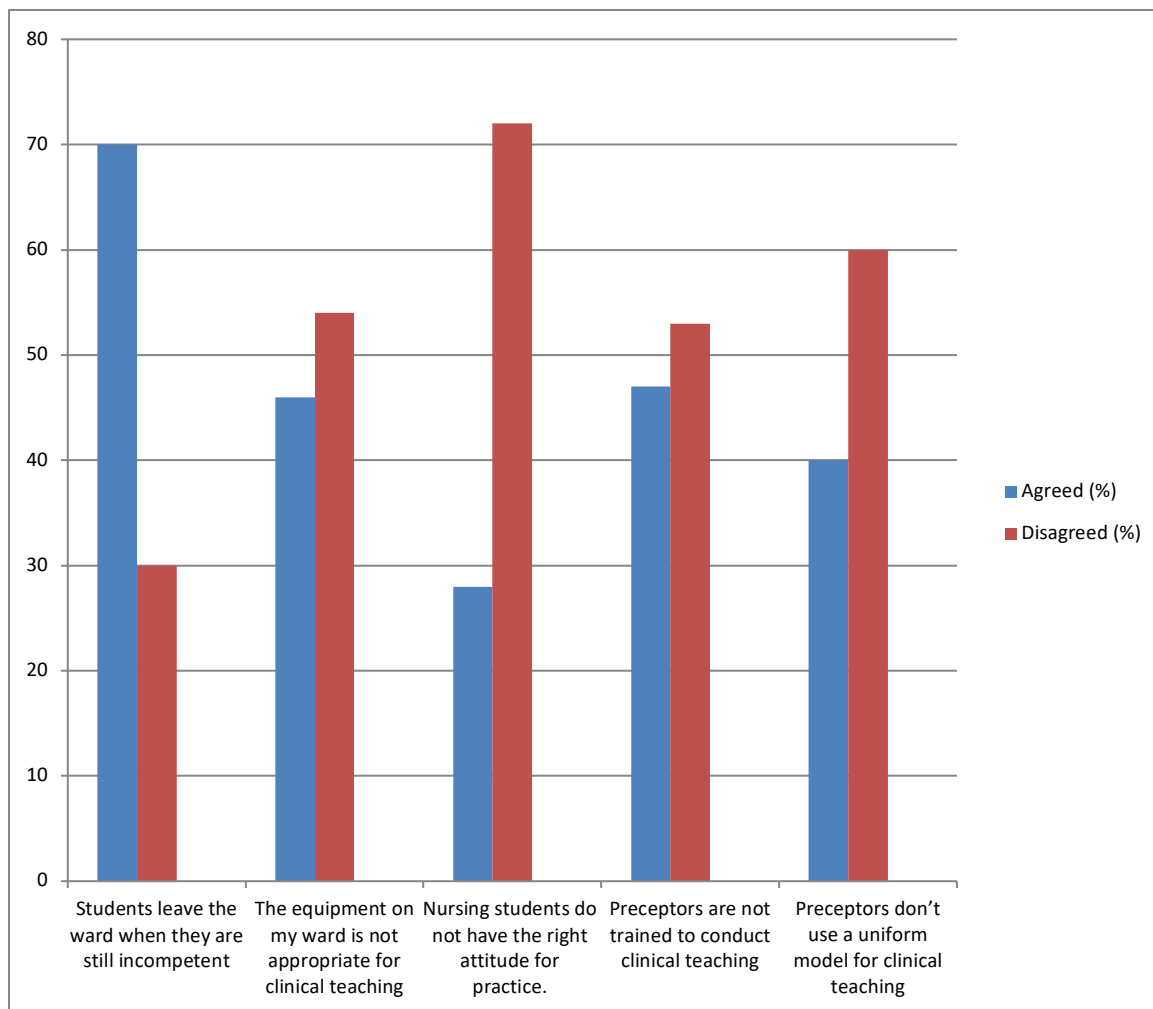


Figure 5.4: Observed limitations as perceived by the preceptors at the end of nursing students' clinical rotation

5.2.4 Clinical teaching improvement approaches previously used by the preceptors

Preceptors were provided with a list of various modes that could be used to improve clinical teaching competencies and they were requested to indicate whether they had ever used the listed modes to improve their clinical teaching skills. The results indicated that most preceptors used ward meetings (77%), self-study (64%) and workshops (52%) as modes to improve their clinical teaching competencies. It was also reported that 77% of the respondents had not been trained in tutorship, 71% had not been trained in clinical instruction and 71% had never heard of journal reading as a means of developing their clinical teaching competencies. Details are illustrated in Figure 5.5 below.

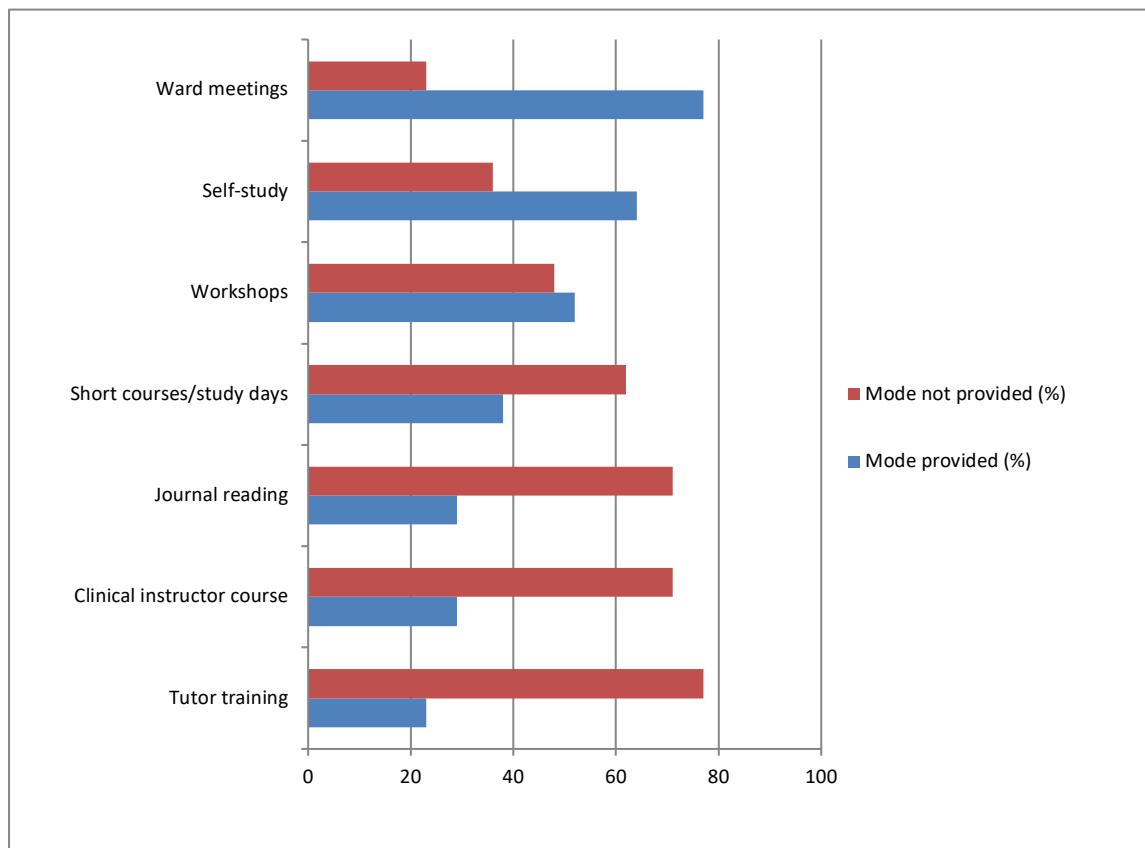


Figure 5.5: Preceptors' previous exposure to competency training in percentages.

5.2.5 Suggestions made by the preceptors to improve clinical teaching

The respondents were presented with options regarding their preferred mode of further training. More than half (64%) of the preceptors supported the use of a structured short-term clinical teaching programme which could allow them to remain in practice while receiving training to improve clinical teaching competencies, 17 % supported the nine-month clinical instructor’s course which was offered at the Tutors College, 14 % supported the three-year programme at Tutors College and 5% would like to have enrolled for a two-year mentorship course offered at one of the universities. Other strategies proposed included: provision of incentives (59%) and regular orientations of preceptors (59%). Details are presented in Table 5.2 below.

Table 5.2: Interventions to improve competencies in clinical teaching

Interventions to improve competencies in clinical teaching	Frequency	Valid Percent
Attend a structured short-term clinical teaching training programme while working	79	64
Attend nine-month clinical instructor’s course at Tutors College, Mulago	21	17
Two years of mentorship training at one of the universities	6	05
A three-year tutorship training at Tutors College, Mulago	17	14
Total	123	100

In addition, the respondents recommended that: clinical settings should be equipped with material for patient care (15%), preceptors should be regularly updated with skills (59%), incentives and rewards for clinical teaching should be initiated and sustained (59%), reference materials should be provided (10%) and a model for clinical teaching should be designed and used (19%). The details are illustrated in Figure 5.6 below.

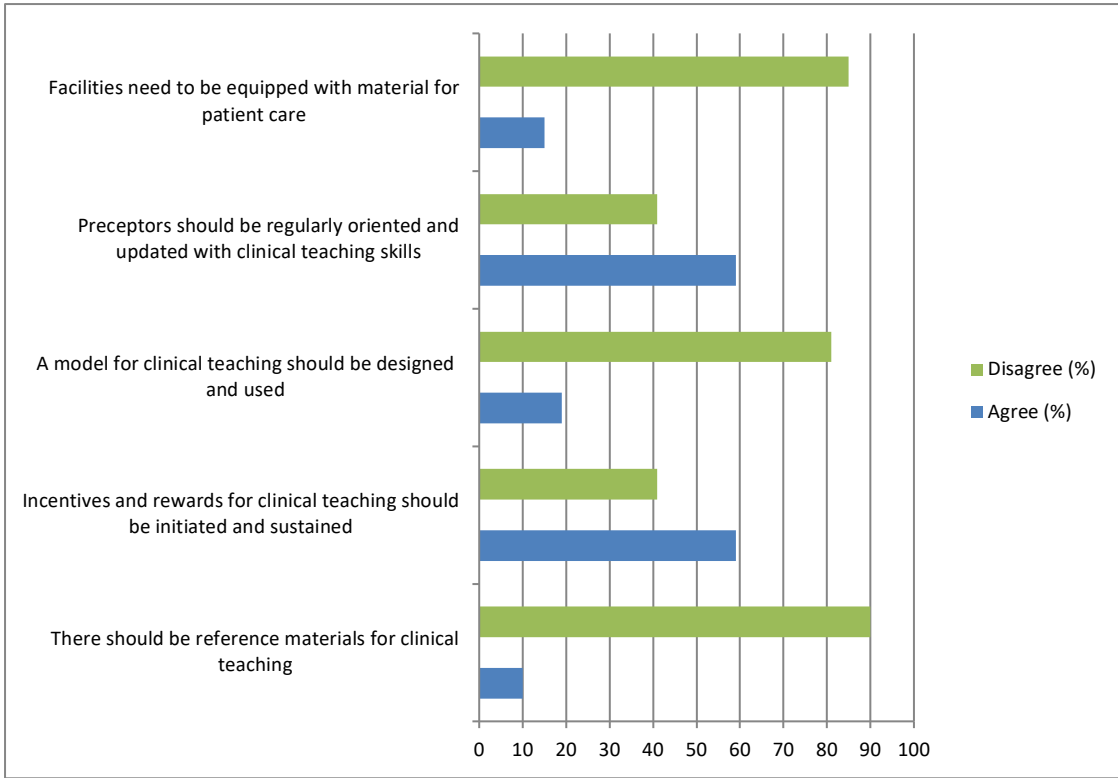


Figure 5.6: Proposed strategies to improve practice of clinical teaching

5.3 Results of the SCCTTP: Influence of the intervention on the preceptors' clinical teaching knowledge and confidence

5.3.1 Demographic characteristics of preceptors in the intervention and control groups

Table 5.3: Demographic characteristics of participants in the SCCTTP intervention

Demographic Characteristics	Preceptors in the Intervention Group (n=74)	Preceptors in the Control Group (n=66)	Total n=140 F (%)
Basic Education Level			
O-Level (Uganda Certificate of Education)	57 (77.0)	46 (69.7)	103 (74.0)
A-Level	17 (23.0)	20 (30.3)	37 (26.0)
Highest Professional Education Level			
Masters	5 (6.8)	1 (1.5)	6(4.3)
Bachelors	12 (16.2)	5 (7.6)	17 (12.1)
Diploma	57 (77.0)	58 (87.9)	115 (82.1)
Certificate (RN/RM)	0 (0.0)	2 (3.0)	02 (1.4)
Departments/ wards of work			
Surgical	22 (29.7)	28 (42.4)	50 (35.7)
Paediatrics	16 (21.6)	13 (19.7)	29 (20.7)
Obstetrics and gynaecology	14 (19.0)	12 (18.2)	26 (18.6)
Medical	22 (29.7)	13 (19.7)	35 (25)
Preceptor's role on the ward			
Ward-in-charge/manager	17 (23.0)	12 (18.2)	29(20.7)
Assistant ward-In-charge	18 (24.3)	14 (21.2)	32 (22.9)
Clinical Nurse	39 (52.7)	40 (60.6)	79 (56.4)
Preceptor's years of experience			
6 months -2 years	0 (0.0)	0 (0.0)	0(0.0)
3-10 years	4 (5.4)	4 (6.1)	8 (5.7)
11-20 years	47 (63.5)	35 (53.0)	82 (58.6)
21 years and above	23 (31.1)	27 (40.9)	50 (35.7)

A total of 140 preceptors were selected, with 74 and 66 respondents assigned to the intervention and control groups respectively. Most (74%) of the participants held the Uganda Certificate of Education and 82.1% had studied nursing at Diploma level. Surgical and

medical wards contributed most of the respondents to the study. Over 90% of the preceptors had worked in the Mulago hospital for more than ten years with 56.4% working as clinical nurses, 22.9% as assistant ward-in-charge and 20.7% as ward-in-charge.

Most preceptors (77%) in the intervention group had an O-level certificate, 77% were Diploma in Nursing graduates and almost two-thirds had worked in Medical and Surgical wards, respectively. Approximately 50% were working as clinical nurses, while only 5% had worked for less than ten years and none had worked for less than two years.

In the control group, the basic education level and higher professional attainment level were similar; the only difference was that fewer preceptors in the control group had attained Bachelors and Masters Degrees. Most of the preceptors (42.4%) in the control group worked in the surgical wards while the rest of the wards had a distribution of preceptors that was almost similar to that of the intervention group. Similarly, most (66.6%) of the preceptors in the control group were employed as clinical nurses (Table 5.3).

5.3.2 Preceptors' clinical teaching knowledge levels as assessed at pre- and post-test evaluation

The participants' clinical teaching knowledge was assessed at the beginning and at the end of the training. The assessment questionnaire comprised 22 questions (appendix L). These questions mostly assessed the following: the preceptors' knowledge of the concept and goal of preceptorship, benefits of positive preceptorship and barriers to positive preceptorship, qualities and roles of a preceptor, clinical teaching strategies and challenges, methods of assessment and ethical issues in clinical teaching. The participants were also asked to provide an overall score of their self-reported competence level in clinical teaching.

A total of 140 preceptors were assessed of whom 74 were in the intervention group and 66 in the control group. The overall pre-test mean score for the 140 participants was 37.8% (standard deviation of 16.5) and the post-test mean score was 58.4 (standard deviation of 21.8).

At the pre-test stage, the minimum score of the participants in the intervention group was 6%; the maximum score was 77% and the mean was 39.0% (SD 16.6). In comparison, the scores of the preceptors in the control group, who did not attend the six-day training but also performed the pre-and post- test, were as follows: their pre-test minimum score was 8% and maximum score was 79 % with a mean of 36.3% (SD 16.3).

At the post-test stage, the participants in the intervention group scored a minimum of 29% and a maximum of 96% with a mean score of 74.1% (SD 14.3). The corresponding values for the control group were 15% minimum, 75% maximum and mean score of 41.1% (SD 14.4).

5.3.3 Influence of intervention on the preceptors' clinical teaching knowledge levels (what was the knowledge gained?)

In order to determine whether the intervention had a significant influence on the preceptors' clinical teaching knowledge levels, an Independent Samples T-test for equality of means was performed using SPSS. Table 5.4 summarises the model results. The results illustrate the mean difference at pre-test and post-test assessment. The intervention group had a slightly higher mean score than the control group but the mean difference of 2.7 % is not statistically significant. At post-test there was a statistically significant difference of 32.9% between the

intervention and control group. Therefore, the intervention had a positive influence on the preceptors' clinical teaching knowledge.

Table 5.4: Association between SCCTTP and knowledge gain compared across intervention and control

SCORES	INTERVENTION Mean (SD)	CONTROL Mean (SD)	Mean Diff.	p-value
Pre-test Score (%)	39 (16.6)	36.3 (13.3)	2.7	0.34
Post-test Score (%)	74 (14.3)	41.1 (14.4)	32.9	0.00

5.3.4 Self-rated preceptors' confidence levels in conducting clinical teaching at pre- and post- evaluation

All the participants in the intervention and control groups were asked to self-rate their overall level of clinical teaching competence. As seen in Table 5.5, there was little difference evident in the pre-test and post-test scores for the two groups. The minimum pre-test score for the participants in the intervention group was 30% and the maximum score was 100% with a mean score of 69.8% and standard deviation of 16.3. Their counterparts in the control group had a pre-test minimum score of 0% and a maximum score of 100% with a mean score of 67.2% and standard deviation of 21.6.

The post-test minimum score for the intervention group was 30% and the maximum score was 100% with a mean score of 76.2% and standard deviation of 13.9. For the control group, the post-test minimum score was 0% and the maximum score was 100% with a mean score of 76.3 and standard deviation of 15.2.

Table 5.5: Self-rated preceptors' confidence levels in conducting clinical teaching

Self-reported confidence level in conducting clinical teaching				
Groups	Intervention group		Control Group	
	Pre-test	Post-test	Pre-test	Post-test
Minimum score (%)	30	30	00	00
Maximum score (%)	100	100	100	100
Mean/SD	69.8 (16.3)	76.2 (13.9)	67.2 (21.6)	76.3 (15.2)

5.3.5 Influence of the intervention on the preceptors' self-reported confidence level in conducting clinical teaching (what was the change in confidence levels?)

The results in Table 5.6 show that there was a minimal difference between the intervention and control groups based on self-rating at pre-test (2.6% mean diff) and at post-test (-0.1% mean diff.). These differences were not statistically significant.

Table 5.6: Preceptors' confidence in conducting clinical teaching: self-rating

SCORES	INTERVENTION Mean (SD)	CONTROL Mean (SD)	Mean Diff.	p-value
Pre-test score (%)	69.8 (16.3)	67.2 (21.6)	2.6	0.43
Post-test score (%)	76.2 (13.9)	76.3 (15.2)	-0.1	0.97

5.4 Follow-up results: Influence of the use of SCCTTP on self-reported clinical teaching competencies and overall self-reported confidence in conducting clinical teaching (i.e. week 1, week 6 and week 12)

Overall, 358 follow-up evaluation forms were analysed: 167 (46.6%) follow-up evaluations were conducted for the control group and 191 (53.4%) for the intervention group. An analysis of variance (ANOVA) test was conducted to analyse for inter-individual differences in intra-individual changes over time. This was done by comparing means on competence self-reported scores between the intervention and control groups at baseline. First, it was noted that only 94% (157/167) of the control participants and 99% (189/191) of intervention participants had provided complete data. Only participants providing complete data were included in the analysis and the details of these analyses are presented in the subsequent sections.

5.4.1 Self-reported clinical teaching competencies at follow-up evaluations

A follow-up evaluation was conducted at day 6, week 6 and week 12 post-intervention to measure the score of the self-reported competencies gained and retained over time. The participants in both groups self-reported their individual levels of clinical teaching competency (**Appendices I and N**). Table 5.7 shows the change in individual clinical teaching competencies as observed for preceptors in the control and intervention groups.

Table 5.7: Comparison between intervention and control groups (evaluation of training) from Baseline to 12 weeks

Clinical Teaching competencies		Intervention			Control		
		Initial* n (%)	Wk 6 %	Wk 12 %	Initial %	Wk 6 %	Wk 12 %
1	I consistently demonstrate how to perform clinical tasks	81.7	96.5	92.1	89.2	95.9	96.2
2	I clearly explain the important elements for the execution of a given task	85.5	98.2	95.2	87.7	98.0	96.2
3	I create sufficient opportunity for the student to observe me	91.3	96.5	95.2	86.2	95.9	98.1
4	I serve as a role model for to the kind of nurse/midwife I would like to produce	95.8	100	98.4	96.9	93.9	100
5	I observe students multiple times during patient encounters	74.3	89.1	87.3	71.9	95.9	88.7
6	I give useful feedback during or immediately after direct observation of the student's encounters with the patient	81.7	93.0	95.2	81.5	89.8	98.1
7	I help the students to understand which aspects they need to improve	83.1	100	96.8	93.8	100	98.1
8	I adjust my teaching activities to the level of experience of students	84.5	94.7	95.2	82.8	89.4	92.3
9	I offer sufficient opportunities to students to perform activities independently	80.3	91.2	87.3	69.2	77.6	86.8
10	I support students in activities that they find difficult to perform	93.0	98.2	98.4	96.9	98.0	98.1
11	I gradually reduce the support given to allow students to perform certain activities more independently	67.6	82.1	81.0	99.2	71.4	75.5
12	I ask students to provide a rationale for their actions	70.4	80.0	84.1	65.1	79.2	86.5
13	I help students become aware of gaps in their knowledge and skills	87.3	93.0	96.8	90.8	98.0	98.1
14	I ask students questions aimed at increasing their understanding	98.6	100	100	95.4	91.8	96.2
15	I encourage students to ask me questions to increase their understanding	90.1	100	100	95.1	98.0	98.1
16	I stimulate students to explore their strengths and weaknesses	74.6	93.0	95.2	81.5	91.7	94.3
17	I stimulate students to consider how they could improve their strengths and address their weaknesses	87.1	92.9	87.3	84.4	93.9	86.8
18	I encourage students to formulate learning goals	79.7	89.5	90.5	93.7	85.7	94.3
19	I encourage students to pursue their learning goals	90.1	89.5	95.2	92.2	93.6	100
20	I encourage students to learn new things	95.6	96.4	98.4	96.9	100	98.1
21	I create a safe learning environment	81.7	89.5	85.7	85.9	85.7	86.5
22	I take sufficient time to supervise students	74.3	78.9	85.7	83.1	79.6	88.7
23	I am genuinely interested in the students	97.2	100	100	93.8	98.0	96.2

Initial* means day 6 for intervention group and Initial means day 1 for control group.

5.4.2 Influence of the intervention on the preceptors' self-reported clinical teaching competencies during post-intervention follow-up evaluation

5.4.2.1: Influences observed in the intervention group

Twelve weeks after the SCCTTP training, a positive effect was observed in 13 of the 23 clinical teaching competencies that were self-reported by the intervention group at the three follow-ups: day 6, week 6 and week 12. As indicated in Table 5.7, those 13 clinical teaching competence areas where a positive effect was observed were as follows: 6, 8, 10, 12, 13, 14, 15, 16, 18, 19, 20, 22 and 23. These 13 competencies areas that showed improvement are shown in table 5.8 below:

Table 5.8: improvement observed in intervention group

Competencies	Improvement observed (percentages)		
	Day six	Week six	Week 12
Giving useful feedback during or immediately after direct observation of student's encounter with patient	81.7.	93.0.	95.2
Adjusting the teaching activities to the level of experience of the student (84.5 %, 94.7 % and 95.2 %).	84.5	94.7	95.2
Supporting students in activities which they find difficult to perform	93.0	98.2	98.4
Ask students to provide rationale for their actions	70.4	80.0	84.1
Help students to be aware of their gaps in their knowledge and skills	87.3	93.0	96.8
Ask students questions aimed at increasing their understanding	98.6	100,	100.
Encourage students to ask questions to increase their understanding	90.1	100	100
Stimulate students to explore their strengths and weaknesses (74.6%, 93.0% and 95.2%)	74.6	93.0	95.2
Encourage students to formulate learning goals	79.7	89.5	90.5
Encourage students to pursue their learning goals	90.1	89.5	95.2
Encourage students to learn new things	95.6	96.4	98.4
Take time to supervise students	74.3	78.9	85.7
Genuinely interested in students	97.2	100	100

Figure 5.7 provides a graphic illustration of the positive effects observed for these 13 clinical teaching competence areas, from the initial stage until week 12.

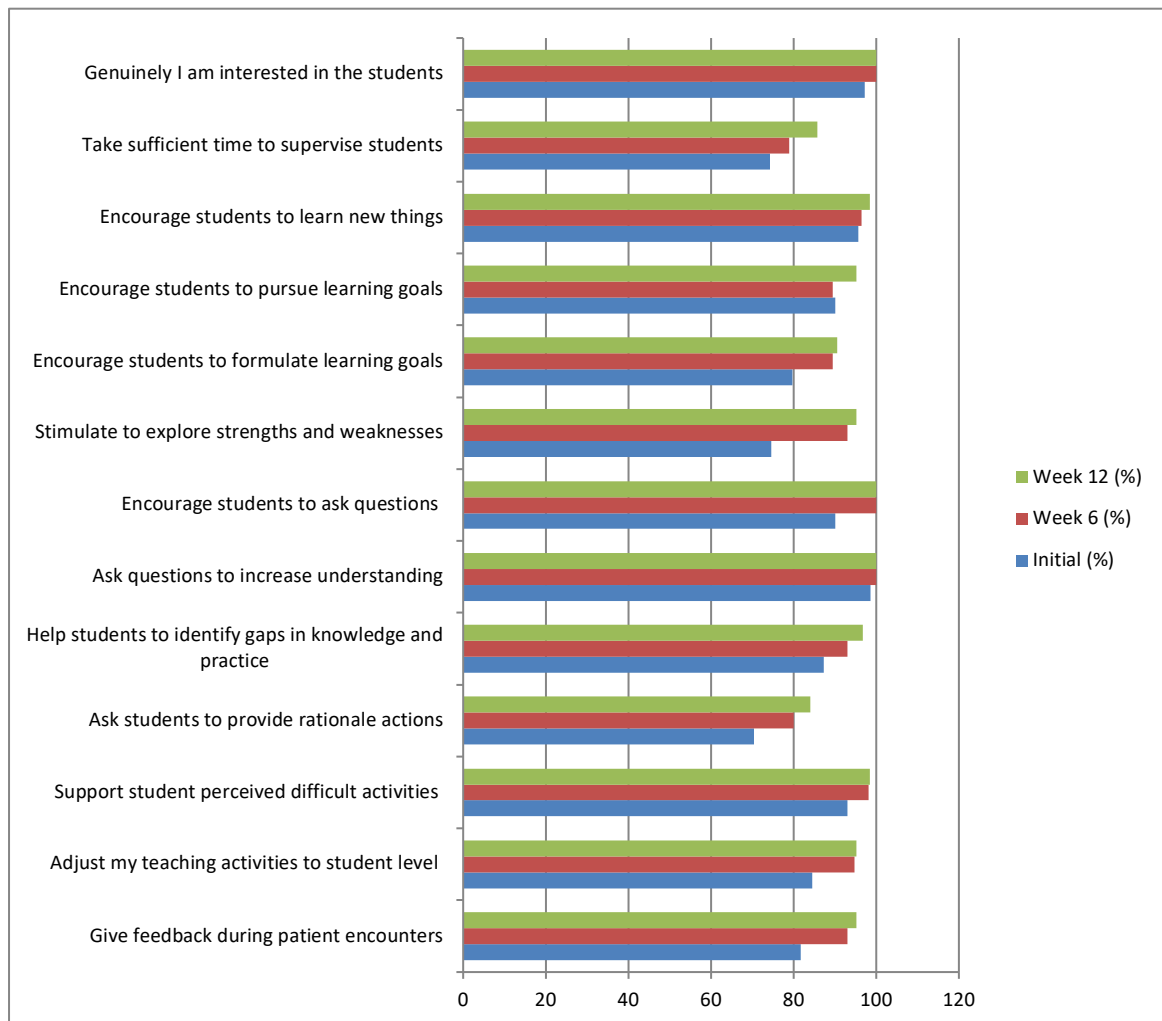


Figure 5.7: The variation in competence levels over time as observed in the intervention group

The results also showed that in 10 of the 23 competencies, an improvement in scores was observed at week 6 and thereafter a decline was observed. These were competence areas 1, 2, 3, 4, 5, 7, 9, 11, 17 and 21 (see Table 5.7 above), Those competencies were as follows:

Table 5.9: observed improvement up to six weeks in intervention group

Competencies	Day six	Week six	Week 12
Demonstrate how to perform a clinical task	81.7	96.5	92.1
Explain the important elements for executing a given task	85.5	98.2	95.2
Create sufficient opportunities for the student to observe performance	91.3	96.5	95.2
Serve a role model for the kind of nurse I would want to produce	95.8	100	98.4
Observe students multiple times during a patient encounter	74.3	89.1	87.3
Help students to understand aspects they need to improve	83.1	100	96.8
Offer sufficient opportunities for students to perform activities independently	80.3	91.2	87.3
Gradually reduce support given to allow students to perform activities independently	67.7	82.1	81.0
Stimulate students to improve their strengths and address their weaknesses	87.1	92.9	87.3
Create a safe learning environment	81.7,	89.5	85.7

Figure 5.8, below, provides a graphic illustration of the observed improvement in self-reported scores at week 6, followed by a decline at week 12.

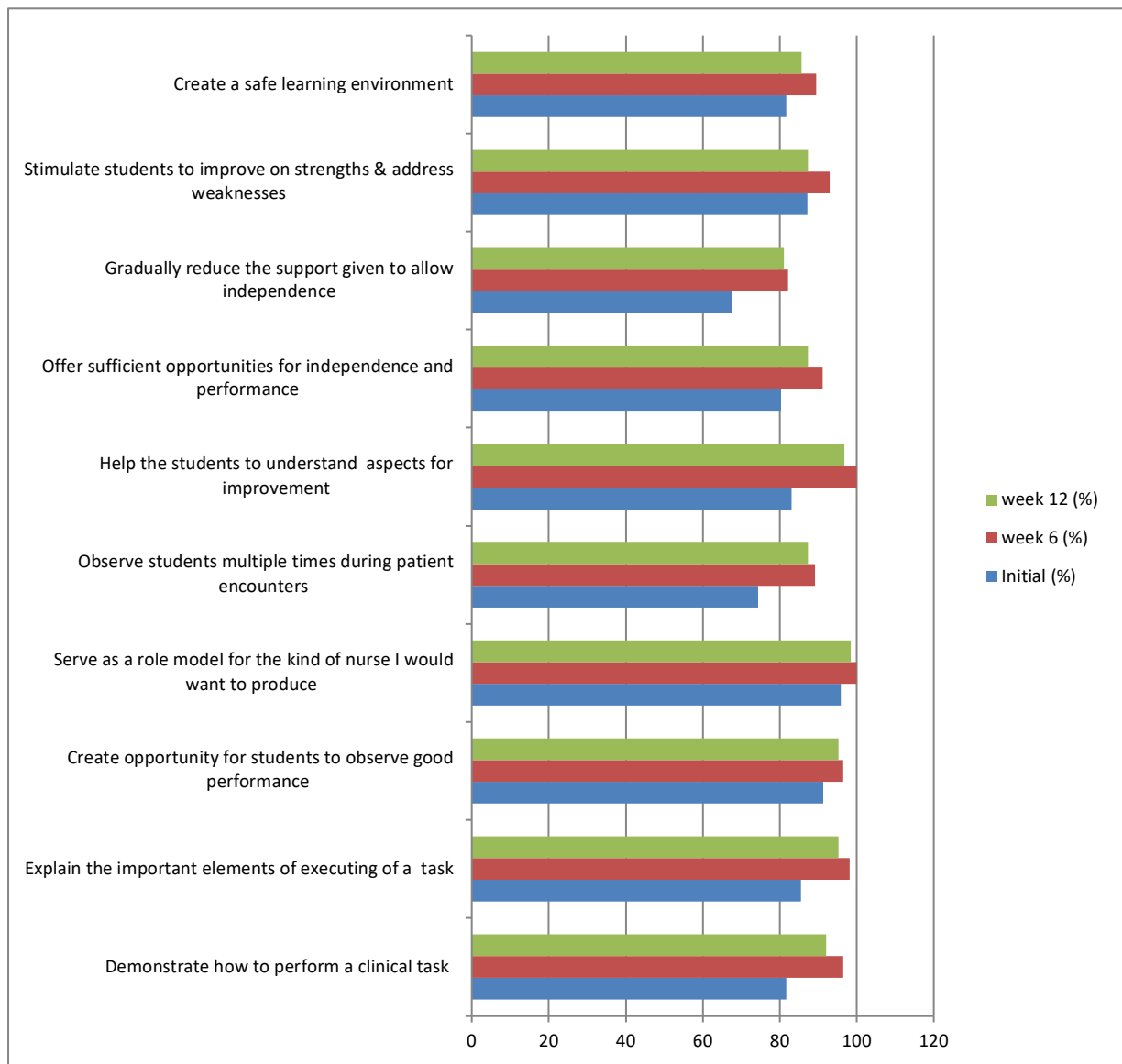


Figure 5.8: Improvement up to week 6 and decline at week 12 for ten clinical teaching competencies as observed in the intervention group

5.4.2.2: The self-reported scores in the control group

The participants in the control group had follow-ups evaluation on day 1, week 6 and week 12 as illustrated in Table 5.7 above. In the control group more than ten competencies

showed improvement over that time; these were competencies 1, 3, 6, 8, 9, 10, 12, 13, 15, 16, and 19. Seven competencies showed high scores at the initial evaluation, followed by a decline at week 6 and improvement at week 12; these were competencies 4, 11, 14, 18, 21 and 22. In six competencies high scores were observed at initial evaluation and week 6 and then a decline at week 12; these were competencies 2, 5, 7, 17, 20 and 23:

Figure 5.9, below, provides a graphic illustration of the observed improvement in self-reported scores at week 6 and then a decline at week 12 as observed in the control group.

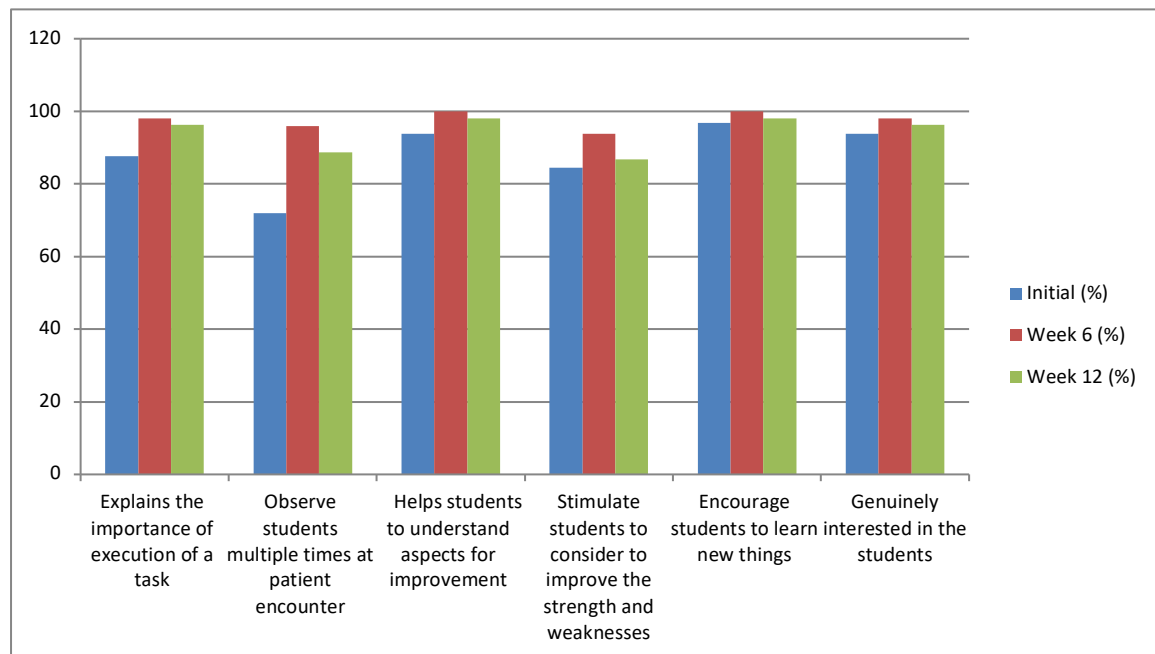


Figure 5.9: The six clinical teaching competencies that showed improvement up to week 6 and then declined at week 12 for the control group

Figure 5.9, above, shows the six competencies where a decline in score was observed after week 6. These were: explain the importance the elements for the proper execution of a given task (87.7%, 98.0% then a decline to 96.2%); observe students multiple times during their encounter with patient (71.9%, 95.9% then a decline to 88.7%). The others were; help

students to understand the aspects they need to improve (93.8%, 100% then a decline to 98.1%); stimulate students to consider how they could improve on their strengths and address their weaknesses (84.4%, 93.9% then a decline to 86.8 %); and, encourage students to learn new things (96.9 %, 100 % then a decline to 98.1%).

5.4.2.3: Similarities in the self-reported individualised clinical teaching competencies as observed in both groups (intervention and control)

Both groups (intervention and control) displayed a steady improvement in seven of clinical teaching competencies: these were competencies 8, 10, 12, 13, 15, 16 and 19, as shown in Table 5.10 below.

Table 5.10: Common observations for both the intervention and control groups

Clinical Teaching Competencies		Intervention			Control		
		Initial* n (%)	Wk 6 %	Wk 12 %	Initial %	Wk 6 %	Wk 12 %
VN							
8	I adjust my teaching activities to the level of experience of students	84.5	94.7	95.2	82.8	89.4	92.3
10	I support students in activities that they find difficult to perform	93.0	98.2	98.4	96.9	98.0	98.1
12	I ask students to provide a rationale for their actions	70.4	80.0	84.1	65.1	79.2	86.5
13	I help students become aware of gaps in their knowledge and skills	87.3	93.0	96.8	90.8	98.0	98.1
15	I encourage students to ask me questions to increase their understanding	90.1	100	100	95.1	98.0	98.1
16	I stimulate students to explore their strengths and weaknesses	74.6	93.0	95.2	81.5	91.7	94.3
19	I encourage students to pursue their learning goals	90.1	89.5	95.2	92.2	93.6	100

5.4.2.4 Comparison between intervention and control groups: individual competencies at baseline, weeks 6 and week 12

A comparison was made between the self-reported competencies of the intervention group and those of the control group to determine whether there was statistical significance. The results of this comparison are illustrated in Table 5.11 below.

Table 5.11: Comparison of individual competencies at baseline, week 6 and week 12

Clinical Teaching Competencies	OR (95% CI) and Unadjusted P-Value		
	Baseline	Week 6	Week 12
7. I help the students to understand which aspects they need to improve.	0.32 (0.10 - 1.06); 0.06 Preceptors in control group more likely to offer (68%)	-	
9. I offer sufficient opportunities to students to perform activities independently.	-	3.01 (0.97 - 9.38) ; 0.06 Better in intervention x 3	-
14. I ask students questions aimed at increasing their understanding.	-	0.98 (0.84 - 1.00); 0.04 Minimal 6%. More likely control better in this variable	0.94 (0.88 - 1.01); 0.092
18. I encourage students to formulate learning goals.	0.35 (0.13 - 0.96); 0.04 Control better by 65%	-	-

As shown in Table 5.11 above, in all clinical teaching competencies on which preceptors rated them-selves, a statistically significant influence was observed at week 6 in the main domain of scaffolding. Thus, consider competency #9: offer sufficient opportunities to students to perform activities independently. As shown in Table 5.11, preceptors in the intervention group showed three times better off with a P-Value of 0.04 and odds ratio of

0.98 at 95 % confidence interval. This is the most important finding at follow-up stage. Surprisingly preceptors in the control group reported better performance in some individual competencies. For example, they were 65 % more likely to encourage students to formulate learning goals at baseline and, 68% more likely to help the students to understand which aspects they need to improve at baseline. Likewise they were at 6% more likely to ask students questions aimed at increasing their understanding at week 6 and 12 respectively.

5.4.3 Influence of the SCCTTP on preceptors' confidence in conducting clinical teaching as reported during the post-intervention follow-up evaluation (day 6, weeks 6 and 12)

Table 5.12, below, presents the overall self-reported scores for the preceptors' levels of clinical teaching competence during the follow-up evaluation.

Table 5.12: Cluster scores (0-4, 5-7 and 8-10) for self-rated confidence levels for both intervention and control groups

SELF RATED SCORES	INTERVENTION			CONTROL		
	Baseline f (%)	Week 6 f (%)	Week 12 f (%)	Baseline f (%)	Week 6 f (%)	Week 12 f (%)
0-4(poor)	0	0	0	1 (1.7)	0 (0.0)	0 (0.0)
5-7 (average)	31 (44.3)	11 (19.3)	8(12.9)	18 (31.0)	14 (29.8)	7 (13.5)
8-10 (Excellent)	39 (55.7)	46 (80.7)	54 (87.1)	39 (67.2)	33 (70.2)	45 (86.5)
Total	70 (100)	57 (100)	62 (100)	58 (100)	47 (100)	52 (100)

Thus, at baseline, only one preceptor in the control group gave himself or herself a poor rating for overall competence level. The preceptors in the intervention group improved their self-rating scores progressively from average to excellent. There was a modest rise in the excellent scores in the control group. In both the intervention and control groups, self-rating as average scores reduced over time but more so for the control group from week 6.

5.4.4 Participants' justification for their self-reported overall scores.

The researcher required an understanding of why preceptors provided different scores for the same competency at the three follow-up intervals. The preceptors were therefore requested to state reasons for their rating of their overall level of clinical teaching competence at week 6 and week 12. The preceptors provided five reasons for their positive improvement in the overall scores. These five reasons were as follows: the learning from the SCCTTP (84%); having highly motivated nursing students (63%); working in a teaching hospital (68%); self-motivation (58%); and, being knowledgeable in nursing skills (52%).

On the other hand, the reasons provided for the decline in their overall scores were: high work load (70%); large numbers of students in the clinical areas (47%); limited resources for clinical teaching (71%); wards overcrowded with patients (16%); working in specialised wards (63%); difficult students (37%); and, little time given to students for clinical rotation (48%). Interestingly the preceptors in the control group stated lack of training in clinical teaching (78%) as one of the reason for their decline in scores yet their confidence levels in conducting clinical teaching were very high. These findings are presented in Table 5.13 below.

Table 5.13: Reasons for change in the overall scores from the score provided at baseline

Reason for improvement in the self-scores		
	Intervention n=191	Control n=167
Improvement attained after SCCTTP	161(84.3)	52(31.1)
Highly motivated students in clinical learning	121(63.4)	115(68.9)
Working environment as a teaching hospital	130(68.1)	110(65.9)
Self-motivation	111(58.1)	103(61.7)
Knowledge of nursing skills	100(52.4)	93(55.7)
Reasons for decline in self-scores		
High work load due to understaffing	70 (36.6)	69(41.3)
Large numbers of students in the clinical areas	89 (46.6)	100 (59.9)
Limited resources	135 (70.7)	121(72.5)
Wards overcrowded with patients	30 (15.7)	96 (57.5)
Working in specialised wards and the need for patient safety	121(63.4)	45(27.0)
Difficult students	70 (36.6)	80 (48.0)
Lack of clinical teaching competencies	00(0.0)	130 (77.8)
Little time given to students for clinical rotation	91 (47.6)	45 (27.0)

5.5 Summary

This section presented the data, with the use of tables and graphs accompanied by explanatory notes and statements. The next section will discuss the data and describe the limitations of the study.

Chapter 6: Discussion and study limitations

6.1 Introduction

The aim of this study was to describe the clinical teaching practices at a national referral hospital followed by designing and implementing a structured and collaborative clinical teaching training programme (SCCTTP), and then evaluating its influence on the nursing preceptors' self-reported confidence in their clinical teaching competencies. This study has found the following:

- i. Clinical teaching of pre-registration nursing students in Uganda has several challenges. Preceptors were not pedagogically prepared for their role of clinical teachers.
- ii. The SCCTTP had a positive influence on the preceptors' clinical teaching knowledge.
- iii. The preceptors' self-reported scores on the clinical teaching competencies steadily improved up to six weeks after the SCCTTP intervention.
- iv. The SCCTTP had no influence on the preceptors' confidence levels in clinical teaching.

6.2 The clinical teaching practices at the National Referral Hospital (NRH)

6.2.1 Preceptors' professional (nursing) preparation for the role of clinical teaching

Most preceptors had studied nursing/midwifery at the diploma level. Their specialisation was in one of the four major areas of nursing, midwifery, mental health nursing and comprehensive nursing. The preceptors' levels of nursing education conformed to the standards set in the nursing and midwifery diploma curricula (Ministry of Education and Sports, 2007a, 2007b). These also complied with the prescribed Uganda Nurses and

Midwives Council and internationally-required competencies for preceptorship (Affara, 2009; Hallin & Danielson, 2009; Uganda Government, 1996). In these standards, a preceptor holding a minimum of a diploma in nursing or midwifery was considered to have an adequate degree of competence for precepting pre-registration nursing students.

Although the level of nursing education seemed adequate for the pre-registered nursing students at the time of study, only a few nurses held a first-level degree (13%) and only 2% of the respondents had a post-graduate degree. The low numbers of nurses/midwives with a first-level degree may be considered to be an issue with regard to supervision and clinical teaching of nursing students studying towards a degree in nursing (undergraduates). McCarthy and Murphy (2010), in their study conducted in the United Kingdom to assess the preceptors' experiences of educating undergraduate nursing students, suggested that nurses who take on the preceptorship role should possess a first degree in nursing. Mann-Salinas et al. (2014), also emphasise the importance of the multi-factorial basis for selecting preceptors for training. They argue that the selection of preceptors for training should be based on a multi-factorial process incorporating professionalism, clinical skills and strong interpersonal and communication abilities. They recommend that nurses recruited for preceptorship training should have a good background in nursing skills, including the nursing process and other nursing care provision models, leadership skills, interpersonal skills and other professional attributes. Similarly, Colquitt (2014) provided criteria for selecting preceptors for training which were categorised into three skills groups: clinical skills, knowledge and personal skills. The knowledge criterion was based on the preceptors' actual performance in the pre-entry test and evaluation of the professional academic level.

McCarthy and Murphy (2010), Mann-Salinas et al. (2014) and Colquitt (2014) recommend that preceptors have at least a first degree; however, as mentioned above, more than 80% of the preceptors in the current study did not have a first degree although they met the required Ugandan standards (Ministry of Education and Sports, 2007a, 2007b). The global trend, however, is that nurses should be educated at university level; moreover postgraduate education is regarded as being important for nurses, worldwide (Mann-Salinas et al., 2014). This implies that the nursing education system in Uganda will have to incorporate appropriate programmes for nursing education at university level.

6.2.2 Preceptors' pedagogical preparation for the role of conducting clinical teaching

The results of the study indicate that the preceptors at the National Referral Hospital were neither comfortable nor satisfied with their level of competence to conduct clinical teaching of pre-registration nursing students. Most of the preceptors lacked knowledge of how to use the relevant clinical teaching methods and did not know the various clinical teaching models. They expressed discomfort in the use and understanding of the preceptorship model and had limited knowledge of clinical teaching models (such as the five-step micro-skills clinical teaching model, the novice to expert clinical teaching model and the supervisory clinical teaching model), with the exception of the preceptorship model.

The preceptors not only lacked knowledge about the various clinical teaching models, but also had difficulty in identifying appropriate clinical teaching methods. The preceptors had low scores regarding their comfort ratings in the use of many of the clinical teaching methods. Those methods where low comfort ratings were observed included: role play, case presentation, discussion, reflective teaching, and explorative teaching method. The preceptors not only had a low rating in some clinical teaching methods but also responded positively to

inappropriate clinical teaching methods. Thus, some preceptors considered the lecture method to be a clinical teaching method. They lacked confidence and ease in the use of the various clinical teaching methods and had difficulty in differentiating the appropriate clinical teaching methods. These results indicate that preceptors had not been pedagogically prepared nor trained for the clinical teaching role, despite the fact that they had been teaching pre-registered nursing and midwifery students for many years. Preceptors used traditional classroom teaching methods and had limited, if any, knowledge of other teaching strategies for clinical teaching.

There has been a lack of pedagogically prepared preceptors in Uganda since the apprenticeship nursing type of nursing education was introduced in the country by Catherine Cook in 1919 (Nyakuni, 2002). It is believed that the apprenticeship approach was adopted on the assumption that knowledge of nursing skills, in itself, was enough for practitioners to mentor and conduct clinical teaching (Myrick & Barrett, 1992). However, as Colquitt (2014) comments, being an excellent bedside nurse does not mean that one is an excellent bedside clinical teacher. This is because excellent bedside nurses may lack the necessary characteristics of bedside clinical teaching. The practice of having preceptors without pedagogical training in Uganda is similar to the situation that XiaoJing, Dan, and MinHua (2011, p. 1110) reported in some hospitals in Shanghai, China. XiaoJing et al. (2011), found that because of the shortage of qualified clinical instructors, senior experts who were not trained in clinical teaching took on the role of preceptorship. In most of the African education systems, the use of preceptors without pedagogical preparation still prevails (Nyoni & Barnard, 2016), as has been highlighted in this study.

The lack of preceptors who are pedagogically prepared is not specific to African health care settings; Chisengantambu et al. (2005) reported similar findings in Australia's Port Pirie regional health service. At this facility, a preceptorship orientation was organised in response to the findings that some nurses were conducting clinical teaching without formal orientation to preceptorship. The practice of using unprepared preceptors to conduct clinical teaching is not unique to nursing, Frattarelli and Kasuya (2003) found similar situations at the medical school of Hawaii where only 38% of the resident doctors in hospitals were formally prepared for the clinical teaching role. This practice contradicts current trends in health professional education (Colquitt, 2014; Frenk et al., 2010; Jeggels et al., 2013; Seibert & Bonham, 2016).

Internationally, nursing educationists and nursing regulators prescribe that all preceptors of nursing students should be adequately trained in pedagogical skills (Barker & Pittman, 2010; Halabi, Abdalrahim, Persson, Hedemalm, & Lepp, 2012). Preparatory training that aims at improving the competencies of preceptors in clinical teaching is vital for a successful preceptorship role. A number of studies have listed several benefits that are achieved as a result of proper training of preceptors for the preceptorship role (Burns et al., 2006; DeCicco, 2008; Furney et al., 2001). Such benefits include: creating an opportunity for competent preceptors to influence nursing practice, increasing job satisfaction, supporting personal development and self-fulfilment, development of interpersonal, teaching and leadership skills, and the accumulation of credits which can be recognised at re-certification (Kalischuk, Vandenberg, & Awosoga, 2013).

A lack of pedagogical preparation of preceptors threatens the quality of nursing education and especially clinical teaching and learning. It breaches the set international

standards, where preceptors are required to be well-prepared for the role of clinical teaching (Chisengantambu et al., 2005; DeCicco, 2008; Gaberson et al., 2014; Hallin & Danielson, 2009; Happell, 2009; Heshmati-Nabavi & Vanaki, 2010; Kolb, 1984; McCarthy & Murphy, 2010; Seibert & Bonham, 2016).

The effective and efficient performance of clinical teaching requires a well-planned and ongoing programme to develop and update preceptors on required clinical teaching competencies. These programmes may be in the form of meetings, workshops and conferences or they could entail orientation training in clinical teaching, where information on clinical teaching can be shared among the participants. In this study, most preceptors reported the use of meetings and self-study as avenues to improve clinical teaching competencies. However, there was no proof or evidence that clinical teaching guidelines were provided at those meetings to guide the learning of those teaching competencies. It was therefore clear that the referral hospital did not have a structured approach or strategy for supporting and improving the preceptors' competencies in conducting clinical teaching.

6.2.3 Perceived clinical teaching challenges and proposed interventions to address them

While this study focussed on improving the preceptors' self-reported competencies in clinical teaching, it also identified several challenges in clinical teaching which included the following: unwillingness of patients to participate in clinical teaching (68%); conflict of teaching and practice in relation to severity of sickness, especially with a very sick patient (53%), preceptor lacking the training to conduct clinical teaching (48%) and a lack of opportunities to upgrade in the area of clinical teaching (43%). Other challenges included a large number of students in the clinical settings (40%), lack of guidelines for clinical teaching

(39%), limited time for conducting clinical teaching (33%), lack of clinical teaching resources (31%) and lack of incentives for conducting clinical teaching (31%).

These results were in agreement with findings from similar studies (Chang et al., 2015; Chen et al., 2011; Halabi et al., 2012; Omansky, 2010) where effective preceptorship was limited by multiple challenges, ranging from inadequacy in clinical teaching resources and space to large student numbers. Preceptors require pedagogical skills to manage these clinical teaching challenges comfortably because failure to do so may result in stressful experiences and a compromise in clinical teaching and quality of care.

6.2.3.1 Human resources and patients' safety in the clinical areas

Because of a human resource shortage, the Ugandan health care workers commonly encounter challenges such as a conflict between provision of care and conducting clinical teaching (Nguyen et al., 2008). According to the budget monitoring and accountability report produced by the Ministry of Finance Planning and Economic Development (2013), only 58% of Ministry of Health staffing positions were filled. In this report, the health worker to population ratio was 1:1298, in comparison to the recommended World Health Organisation ratio of 1:439. This staffing shortfall leads to serious limitations in health service delivery as well in development of human resources. Especially in the case of clinical teaching, staff shortages result in clinical health workers, including nurses and midwives, being more occupied with providing clinical care to patients than in providing clinical teaching. This might not be a problem if preceptors at the referral hospital felt competent in providing clinical teaching, as this would enable them to manage the challenges.

One example of particular concern to clinical precepting relates to the acuity and severity of patients' health conditions. Patients may not feel able or well enough to agree to a student teaching session and their family members may also resist any involvement. Furthermore, it is ethically inappropriate to run the risk of compromising a patient's health condition. To minimise any such risk, a virtual learning resource or simulated patients may be used to act as training alternatives for real patients. The use of simulated patients and virtual resources is on the rise. Several medical and nursing educationists have recognised that the use of real patients in the clinical setting for clinical teaching is associated with difficulties that can be avoided by using simulated patients (Blasco, Kohen, & Shapland, 1999; Cleland, Abe, & Rethans, 2009; Jha, Quinton, Bekker, & Roberts, 2009; Nestel, Burn, Pritchard, Glastonbury, & Tabak, 2011). In a study conducted in the United Kingdom at the University of Leeds, Jha et al. (2009) provided justifications for using simulated patients to teach clinical skills to health professionals. In their study, which reviewed several articles on simulated patients, Jha et al. (2009) provided five reasons for the introduction of simulated patients as a clinical teaching resource (Table 6.1).

Table 6.1: Justification for introduction of simulated patients for clinical teaching

JUSTIFICATION FOR INTRODUCTION OF SIMULATED PATIENTS FOR CLINICAL TEACHING

1. Reduced learning opportunities within the hospital due to reduced admissions, short hospital stay and predominance of very sick patients in the hospital.
2. Lack of cooperation by the patient in becoming involved in clinical education.
3. Ethical complications of involving very sick patients.
4. Difficulty of evaluating students in an uncontrolled environment.
5. Increased involvement of other health professionals in the care of the patient.

Source: Jha, V., Quinton, N. D., Bekker, H. L., & Roberts, T. E. (2009). Strategies and interventions for the involvement of real patients in medical education: a systematic review. *Medical Education*, 43(1), 10-20.

6.2.3.2 Availability of relevant guidelines to support clinical teaching

In Uganda, the guidelines for clinical learning include national assessment tool books, national midwifery case record books and the Uganda nurses and midwives council nursing syllabus. These are nationally standardised and are updated whenever a training curriculum is revised. However guidelines are lacking for the number of students per preceptor, hours of rotation for each specified specialisation and the number of cases and hours allocated for the day, evening and night shifts. This situation is contrary to that cited by Campbell (1968), who reported that when nursing education commenced at Mulago hospital in 1955, there were guidelines for clinical learning and rotation. According to Campbell (1968), preceptors were provided with a syllabus book in which the 44 weeks of clinical teaching and rotation were documented. Classroom teaching was only allocated four weeks of each academic year. All nursing students had twelve weeks of rotation in medical wards and twelve weeks of rotation in surgical wards. They also had eight weeks of rotation in gynaecological wards and twelve weeks in other specialisations. This ensured uniformity in clinical exposure as well as adherence to prescribed standards.

In this study, almost half of the preceptors reported a lack of clear guidelines for clinical teaching. This implies that preceptors and tutors use individualised criteria to determine the period and shift of allocation for clinical teaching and learning. A lack of guidelines for preceptors to follow during clinical teaching, coupled with limited incentives for clinical teaching, pose a risk to the acquisition of skills.

6.2.3.3 Incentives and clinical teaching

Another challenge observed during the study was that incentives for preceptors were inadequate. Approximately one third of the preceptors cited lack of incentives as an

important limitation in their role of conducting clinical teaching. Thus, preceptors are not given regular remuneration for performing for this role and function. In the National Referral Hospital, remuneration is only given for the twice a year examination management. Funding for preceptor remuneration is not budgeted for because of the inadequate government funding of the hospitals and nursing colleges (Ministry of Finance Planning and Economic Development, 2013). A lack of remuneration for preceptors involved in clinical teaching is likely to demotivate them as far as conducting clinical teaching is concerned. This situation poses serious consequences for skills acquisition by the nursing and midwifery students.

Because of a limited budget for supporting public hospitals, medical supplies, sundries and equipment are in short supply. In this study the preceptors reported they were unable to demonstrate nursing skills appropriately because of a limited amount of, or lack of, materials. The facility lacked sundries, linen, beds, surgical instruments and sometimes medications. These resources would be needed for preceptors to demonstrate nursing procedures to nursing students. Funding from government is inadequate to meet the costs of all the resources needed for service and training in the health facilities. This lack of adequate funding in the health sector was also reported by the Ministry of Finance Planning and Economic Development (2013); the Ministry noted that the funds provided to the health sector could not meet, adequately, the salaries and other requirements for service provision in the health facilities. This is a big challenge to many of the public facilities.

6.3 The SCCTTP and its influence on preceptors' clinical teaching knowledge and confidence levels

This study offered the six-day short-term SCCTTP to improve the preceptors' clinical teaching knowledge and confidence. The results show that the SCCTTP was well received by

the preceptors and their knowledge of how to conduct clinical teaching improved greatly from a mean score of 39 (16.6) at pre-test to 74 (14.3) at post-test. The knowledge levels for conducting clinical teaching steadily improved during the six days of training. This demonstrates the success of the SCCTTP. There are three important factors which contribute to a positive outcome for the SCCTTP. These include: firstly, the importance of collaboration between the key stakeholders (colleges of nursing and the training hospitals); secondly, the preceptors' involvement in determining the short-term training mode; and finally, the use of interactive training strategies which appreciated the role of experience and reflection. The results of the study showed that the SCCTTP had a positive influence on the preceptors' self-reported clinical teaching knowledge. The following discussion examines the factors that supported the observed changes, which reflected the success of the SCCTTP. The strategies used to evaluate the change are also reviewed.

6.3.1 The importance of collaboration between the key stakeholders as a factor in the success of the SCCTTP

In this study a collaborative approach was followed to support the implementation of the SCCTTP; this approach applied especially to resource sharing by the school and the hospital. Human resources and training resources such as space, teaching aids, internet and funds were considered to be important in ensuring the success of the SCCTTP. Neither the School of Nursing and Midwifery nor the training hospital could fully provide the resources needed to implement the SCCTTP. The collaborative approach used in the SCCTTP, especially in the areas of leadership, administration and provision of resources facilitated the success of the SCCTTP intervention. The School of Nursing and Midwifery and the National Referral Hospital worked together to support the training of the preceptors in conducting clinical teaching. This collaboration improved the relationship and communication between the

school and the hospital and increased the awareness of the school and hospital concerning their contributions to the clinical teaching of pre-registration nursing students.

The use of collaboration in this study is similar to the experiences documented in other studies (Happell, 2009; Nordgren et al., 1998; Schaubhut & Gentry, 2010; Smedley & Penney, 2009). In Happell's (2009) study entitled "a model of preceptorship in nursing: reflecting the complex function of role" conducted in Australia, similar results ensued through the use of collaboration. Happell collaborated with all stakeholders in clinical teaching to develop the preceptorship model after realising the complexity of nursing education. Smedley and Penney (2009) also reported that collaboration with various stakeholders supported success of the programme for improving preceptors' clinical teaching skills.

6.3.2 The SCCTTP and involvement of the preceptors during the design as a factor in its success

From the commencement of this study, and throughout its implementation, it was recognised that the preceptors were full-time employees of the hospital, and responsible for providing clinical services to patients; the preceptorship role was not their primary role. It was therefore important for the researcher to involve the preceptors in determining the mode of delivery and content for the SCCTTP. The six-day short training programme was adopted in response to the preceptors' preference and also to allow the preceptors to meet their primary clinical obligations. As preceptors were adult learners, their involvement in the planning helped them to engage with the programme. The current strategy responds to the recommendations of Hilli and Melender (2015) as well as Knowles (1980), who advocated for trainees' involvement in the planning process stage of any programme. It was also similar

to the strategies used by Schaubhut and Gentry (2010) in their study entitled “nursing preceptor workshops: partnership and collaboration between academia and practice”. Those writers developed a draft content outline which was presented to the hospital educators for review and provision of additional input. This was a sign of hospital involvement at the design phase of their programme. In the case of the SCCTTP, the results of this study showed that the preceptors’ self-reported clinical teaching knowledge had greatly improved: nursing educators and preceptors were involved at the design stage and expressed preference for a short-term training programme.

The benefit of offering a short-term training programme, as shown in this study, is similar to the findings of Jeggels et al. (2013, p. 5) in which the preceptors’ competencies improved after two weeks of short-term training. At the University of the Western Cape in South Africa, Jeggels et al. (2013) conducted a two-week preceptorship programme for registered nurses. In that programme, the preceptors and their supervisors reported that all the desired outcomes of the course were achieved. Frattarelli and Kasuya (2003) also recorded similar findings in their short-term training course for resident doctors in Hawaii. In their study the doctors were very receptive towards learning to become better teachers and they appreciated how useful it was for them to improve their clinical teaching skills.

6.3.3 The use of interactive training strategies as a factor in the success of the SCCTTP intervention

The SCCTTP intervention was able to facilitate improvements in the preceptors’ self-reported competencies in clinical teaching; however, the SCCTTP is not yet an approved strategy for improving clinical teaching skills in Uganda. A comparison of the results of the

intervention and control groups show improvement in levels of knowledge after SCCTTP training for the preceptors in the intervention group.

The SCCTTP used experiential learning and adult learning teaching strategies and principles (Knowles, 1980; Kolb, 1984) in the design and implementation of the programme. The programme was interactive and the preceptors reflected, role played and discussed issues and concepts that relate to their role of conducting clinical teaching. The active interaction, with exposure to practical skills and active participation, supported their awareness of their roles as clinical teachers and preceptors (Ford, Fitzgerald, & Courtney-Pratt, 2013). It suggests that the increase in knowledge and improved scores in the self-reported clinical teaching competencies could be attributed directly to the preceptors' response to the SCCTTP intervention (Chang et al., 2015; Dyer & Pardue, 1999; Ford et al., 2013; Gallagher, Tweed, Hanna, Winter, & Hoare, 2012; Jeggels et al., 2013). However, other factors might also have contributed to the improvement in knowledge levels for the preceptors; one such factor could have been the unstructured discussions that took place during the training. Here, the preceptors were encouraged to share their past experiences in conducting clinical teaching. It is possible that the sharing of their experience contributed greatly to the observed change in the self-reported clinical teaching knowledge. The use of experience and reflection are strongly supported in the Kolb experiential and Knowles adult learning theories which provided the foundation for this study.

6.3.4 The factor of knowledge retention and the SCCTTP evaluation

Another important finding of this study relates to the observed trend in which the participants self-reported their knowledge level up to twelve weeks after the intervention. Findings showed a steady improvement in the scores that were awarded to some clinical teaching

competencies especially to those which relate to provision of feedback and sufficient time to practice. In ten out of the twenty three competencies, a decline in scores was observed at six weeks after the intervention which indicated loss of knowledge after six weeks. This finding relating to knowledge retention in some competencies and a decline in others at week six needs further investigation. This study did not investigate retention of knowledge over time and so it was not possible to determine to what extent and how much knowledge was retained after the intervention. Of note is the observed steady progress and then decline in preceptors' scores in ten specific clinical teaching competencies. These competencies are shown in table 6.2 below. Research and practice has shown that teaching aims at learning and subsequent retention of learned knowledge (Murre & Dros, 2015). The extent to which this knowledge is retained is an important consideration when planning and implementing such programmes.

Exposure to learner-centred strategies could have promoted the learning and retention of knowledge in the study. The interactive teaching strategies used in implementing the SCCTTP contributed to the retention of the acquired knowledge. The preceptors were exposed to role plays, small group discussions, individualised reflection, brain storming and discussion in the plenary and demonstration methods of learning. This facilitated knowledge retention at the 6-week follow-up evaluation. Latham, Long, and Devitt (2013) have reported this benefit in relation to learner-centred strategies; in their study, the pupils who were exposed to pupil-centred teaching methods retained knowledge more than the pupils exposed to teacher-centred teaching methods. In addition to learner-centred strategies, Semb and Ellis (1993) noted other factors that promote knowledge retention: these included the degree of originality of learning, the learning task, characteristics of the retention interval and method of instruction, manner in which memory is tested and individual differences.

What is learned can easily be forgotten if rehearsal and re-learning does not take place at appropriate intervals (Bahrick, 1979). It has been documented that knowledge can be retained for a long period (Custers & Cate-ten, 2011; Semb & Ellis, 1993; Toh, Miller, & Simpson, 2015; Tou, Tou, Mah, Karatassas, & Hewett, 2013). The current study found, however, that there was a decrease in knowledge retention, thus there may be a number of factors which influence knowledge retention, of which one is context, which was not evaluated in this study. The Ebbinghaus knowledge retention curve refers, in which knowledge is maintained in a two-phase process (Bahrick, 1979). According to Bahrick (1979, pp. 298-299) knowledge is acquired and unless it is used, it is at risk of being forgotten. Successive exposure and periodic re-acquisition and use of knowledge all help to promote its retention. It is therefore important that training and retraining take place as a way of reinforcing teaching and learning of clinical skills.

Table 6.2: Ten competencies with steady progress and then decline after six weeks of SCCTTP

The ten clinical teaching competencies where improvement was observed up to six week after SCCTTP intervention

- Demonstrate how to perform a clinical task
- Explain the important elements for executing a given task
- Create sufficient opportunities for the student to observe performance
- Serve a role model for the kind of nurse I would want to produce
- Observe students multiple times during a patient encounter
- Help students to understand aspects they need to improve
- Offer sufficient opportunities for students to perform activities independently
- Gradually reduce support given to allow students to perform activities independently
- Stimulate students to improve their strengths and address their weaknesses
- Create a safe learning environment

6.4 The influence of the SCCTTP on preceptors' confidence to conduct clinical teaching

The results of this study showed that the majority of the preceptors had high levels of confidence in their ability to conduct clinical teaching at the beginning of the intervention. The preceptors at the National Referral Hospital generally considered themselves to be competent and knowledgeable with respect to their clinical teaching role.

The self-reported confidence of many of the preceptors at the National Referral Hospital were in the range of 8-10 (80%-100%) confidence level with a mean score of 70 % at the beginning of the training and 76 % at the end of training. The preceptors' confidence levels did not decline throughout the implementation period of the SCCTTP intervention. However, preceptors' confidence levels did not correlate with their knowledge levels in conducting clinical teaching. Some of the preceptors, especially in the control group, had clinical teaching knowledge levels as low as 6%, even though their confidence levels were as high as 80%. Interestingly, the preceptors in the intervention group had high confidence levels and low scores at the pre-test level. However, their knowledge levels correlated with confidence level scores after SCCTTP training, but confidence levels remained high in both groups. Brener, Billy and Grady, (2003), in their study of assessment factors which affect the validity of self-reported health-risk behaviours among adolescents indicated that scores from self-assessment are sometimes influenced by what the individual desires to be (social desirability). This is a situation in which validity is affected by the problems that arise from desire to prove to others that some body is worthy against the cognitive validity attributes which are associated with accuracy (Brener et al., 2003). The preceptors' self-reported high confidence levels are a good indicator of a response resulting from social desirability in self-reported assessment (Brener et al., 2003). The preceptors' occupational role might have

influenced their responses in this area of self-confidence. Because these preceptors had helped nursing students under their supervision to learn clinical skills from their first day at work, the preceptors' responses were affected by the social desirability factor. This was a desirable attribute for the preceptors at the National Referral Hospital and also a positive factor in self-belief, which is an issue in intrinsic motivational theories.

The finding that preceptors had high confidence levels in their ability to conduct clinical teaching was regarded a positive influence on their motivation to teach nursing students in the clinical areas. This is because belief in one's abilities plays a great role in achieving a high quality work output. Studies have determined that human achievement depends on the interaction between one's behaviour, self-belief and emotional status (Kalaian & Freeman, 1987; Lavigne, Vallerand, & Miquelon, 2007; Usher, Mills, West, Park, & Woods, 2015). Interestingly, the preceptors recognised the role of self as far as improvement in performance is concerned. Most preceptors had confidence in themselves regarding their ability to conduct clinical teaching to pre-registration nursing students. There are great psychological advantages to positive thinking, which has a positive influence on ensuring successful outcomes (Lavigne, et al. 2007).

6.5 Proposed structured training model for collaborative clinical teaching

The results of this study, combined with applying the principles derived from Kolb's experiential learning and Knowles' adult learning theories, lead to the recommendation that the SCCTTP model should be applied as an approach to the pedagogical preparation of preceptors and to the conduct of clinical teaching in Uganda. This model, which uses the collaborative approach to resource utilisation, is an ideal way to improve the clinical teaching

competencies of preceptors. Figure 6.1, below, illustrates diagrammatically the interrelatedness and connectivity of the key components of the proposed model.

The model involves four key players: the schools of nursing, Ministry responsible for nursing education, training hospitals and the regulatory bodies. The SCCTTP, which provides the content and strategies for improving the preceptors' clinical teaching competencies, relates to these three key players in an inter-institutional collaborative manner. Inter-institutional collaboration in the SCCTTM offers continuous improvement support to clinical teaching and preceptorship in terms of resource sharing and utilisation and this forms the cardinal principle in the model.

In Uganda, the schools of nursing are responsible for the overall management of allocation of students in the clinical settings. These schools are the custodians of the training curriculum. They are responsible and accountable for the quality of students' learning in the clinical areas. The researcher therefore recommends that the schools of nursing, with support from the ministry responsible for nursing education, take responsibility for the custodianship of the structured collaborative clinical teaching training model (SCCTTM). The schools of nursing are responsible for maintaining a positive interaction with the hospitals and collaboration with key stakeholders, especially the training hospitals. The graduates/nurses of the schools of nursing form the human resources for the hospitals and other health care services. These graduates will also in time become the next generation of preceptors. The schools of nursing also hold an institutional memory as regard to the capacity and quality of nurses in the training hospital. The schools of nursing as the custodians of the SCCTTM, will promote easy identification and recruitment of the preceptors for SCCTTM training, and source appropriate resources for training including funding.

The second group of key players in the SCCTTM is the training hospitals. Clinical placements, apart from community field work, are in the hospitals and almost all preceptors are employees of the training hospitals. The SCCTTM recognises the training hospitals as key stakeholders, mainly responsible for the provision and release of preceptors for training. These hospitals are also responsible for ensuring that the wards are well covered in the absence of those preceptors attending the six-day SCCTTP. The hospitals are also responsible for implementing the clinical teaching guidelines and protocols.

The third key player group in the SCCTTM are the regulatory professional bodies. The Uganda Nurses and Midwives Council (UNMC) is the body responsible for regulating nursing practice, including the practice of nursing and midwifery tutors. In this model the UNMC is responsible for establishing a clinical teaching policy guideline and for ensuring that the clinical teaching guidelines are implemented accordingly. The UNMC therefore monitors and regulates the schools of nursing and the training hospitals in relation to the quality of clinical teaching.

The fourth key player group, in the SCCTTM is the ministry responsible for nursing education. The ministry responsible for nursing education offers policy direction, supervision and national budgetary provision for nursing education in the country. In this model the ministry responsible for nursing education is responsible for providing funds and ensuring inter-institutional and inter-sector collaboration among key players. The ministry responsible for nursing education therefore provides funds, relevant policies and linkages with other organisations and sectors in support of quality clinical teaching.

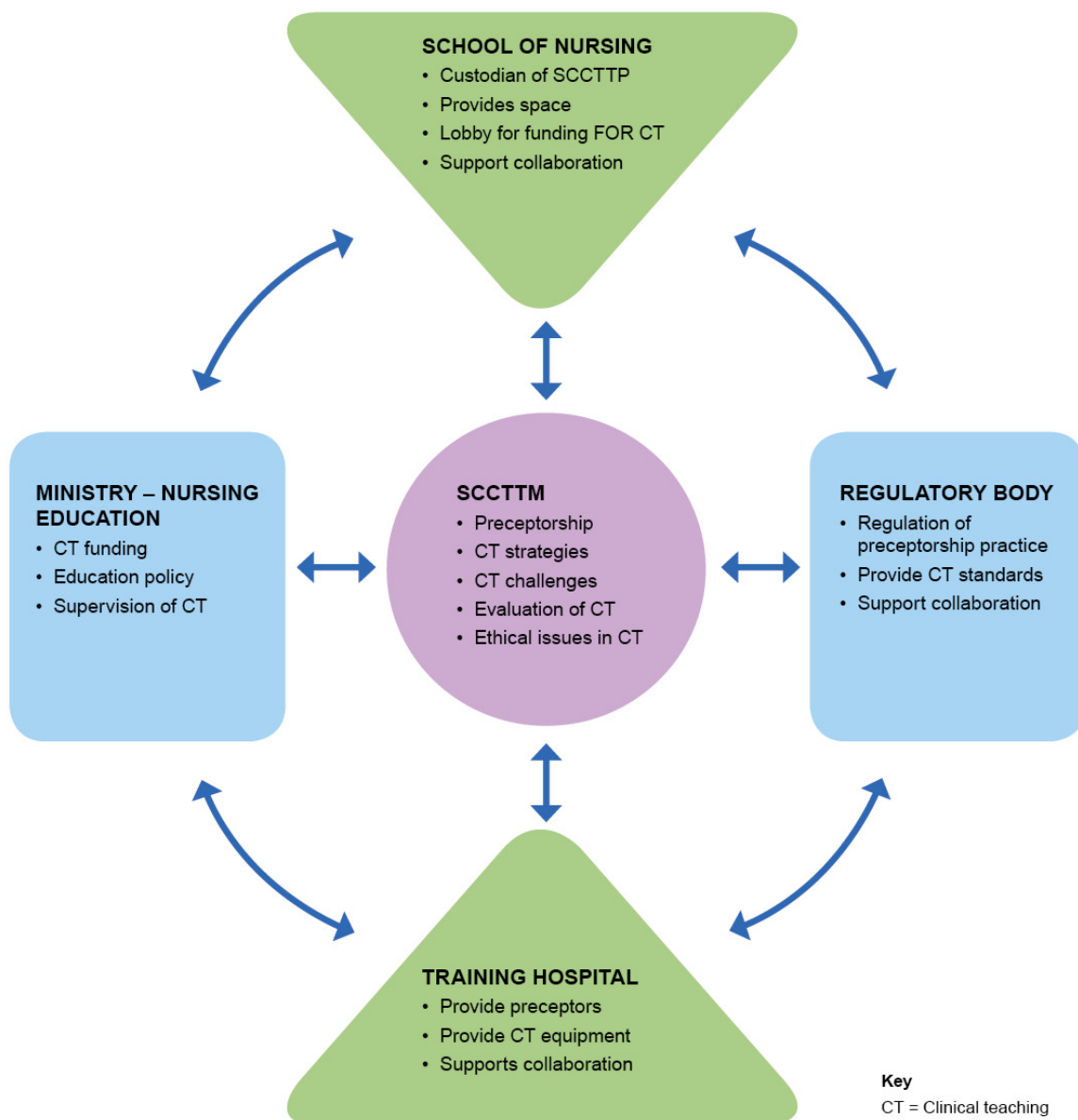


Figure 6.1: The proposed Structured Collaborative Clinical Teaching Training Model (SCCTTM) for Preceptors

6.6 Methodological discussion

6.6.1 Generalisability and transferability

Generalisation is an act of reasoning that involves drawing broad conclusions from particular instances (Polit & Beck, 2010). It involves making an inference about the unobserved, based on the observed. It is a quality standard in qualitative research.

Transferability is mainly used in qualitative research and refers to the degree at which research can be generalised or transferred to another context or settings. Polit and Beck (2010), refer to this as a case-to-case transfer.

This study was conducted in a national referral hospital in Uganda, which is considered to be the best hospital in the country with highly qualified nurses and doctors (Mulago Hospital, 2016). The hospital is the largest state owned health facility. It offers clinical rotations to the four health training institutions within the complex as well as to many other training institutions whose students visit the facility for specialised medical and nursing experience (Uganda Nurses and Midwives Council, 2016). Although the current research was conducted at that national referral hospital, most of the study results are similar to findings of other studies performed in Uganda. Uys et al. (2010) also reported similar results in their study which evaluated the performance of trained comprehensive nurses. They also found that clinical teaching was not well managed. Moreover, health facilities had fewer nurses with advanced nursing education, severely ill patients and large numbers of nursing students. Thus the intervention tested in this thesis can be generalised and is transferable to other training hospitals in the country and the region.

6.6.2 The role of reflexivity in the current study

Reflexivity is a process in which the researcher maintains thoughtful and conscious awareness during the study (Bondi, 2009; Lynch, 2008). Reflexivity promotes developing transparency in decision making in the research processes at multiple levels: personnel, methodological, theoretical and others (Lynch, 2008). Throughout the writer's nursing life, she has been disturbed by the attitude of senior nurses towards junior nurses. The senior nurses say "*nurses of today are not as good as nurses of those days*". After qualifying as a nurse tutor, the writer served at various training institutions and also conducted a study entitled "capacity of nursing schools to implement the comprehensive nursing curricula". In this study (Museene, 2010), the writer noted deficiencies and shortage of resources in the areas of human resources and training materials. It was also noted that the preceptors seemed not to appreciate their role as clinical teachers/preceptors. The writer's experience of being a nursing tutor and the many opportunities, to which she was exposed, made her appreciate that some preceptors were not well-prepared for the pedagogical role of precepting. Likewise it was noted that shortages of staff in the clinical facilities made it very difficult for preceptors to be released for long periods of preceptorship training. This study aimed to establish a short-term intervention that would be used to improve the preceptors' clinical teaching competencies with only a short period away from the clinical facilities.

6.7 Limitations of the current study

The study limitations are noted in this section. The study concentrated mainly on the educational component and ignored the assessment of the preceptors' clinical skills in nursing. In this study, it was assumed that all nursing preceptors at the National Referral Hospital were well-trained and were highly competent in their nursing skills. This assumption is considered to be a limitation in this study as specific nursing skills per speciality were not

identified or assessed. However, the preceptors in the study had worked in busy clinical setting for an average of more than ten years and so the researcher assumed clinical competence. The lack of a well-grounded theoretical framework for programme development was also considered as a limitation.

The study was confined to preceptors working in the wards and units of the National Referral Hospital, which is highly regarded within Uganda for the quality of its services. The quality and clinical competence of the nursing preceptors at the Hospital may be different from those in other health facilities and may have contributed to the positive results, but affects the potential generalisation of the study. Therefore, it is not possible to generalise results to smaller regional and local hospitals without further interrogation. The results may, however, be useful as a baseline for further research in other Ugandan settings.

The SCCTTP manual was not evaluated by the nursing students but by a team of experts, some of whom were practising preceptors. The manual was the first of its kind; therefore, for future studies there is need for the manual to be evaluated by nursing students, especially for the content on problems faced by students.

The sample size for the implementation of the SCCTTP was small; this made it difficult to use linear regression analysis to eliminate other factors that could have contributed to the improvement in knowledge after training.

The study did not compare levels of competencies in terms of the nursing educational level. It would be of value to assess whether the knowledge gained and competencies attained

by preceptors holding a qualification at bachelor level differ from preceptors qualified at diploma or certificate of nursing education level.

Chapter 7: Implications, recommendations and conclusions

7.1 Introduction

This section presents the study recommendations, describes the implications of the study results for nursing practice, education and management, and conclusions are drawn.

This study was the first one of its kind to be conducted in Uganda. It addressed the educational preparation of nurses in order for them to be competent and confident preceptors of nursing students in the clinical learning environment. The preceptors at the NRH had not been pedagogically prepared to offer clinical teaching to pre-registered nursing and midwifery students. The study identified challenges of clinical teaching which included: limitation in human resource capacity in terms of competencies and numbers; limitations in upholding patient safety; lack of guideline and standards for clinical teaching and inability to provide incentive to the preceptors for their input to clinical teaching. The involvement of clinical teaching stakeholders, applying the collaborative approach to clinical teaching resource mobilisation and utilisation and the use of interactive, reflective and active learning strategies was a useful experience which was acquired during the design and implementation of the SCCTTP. The study results were positive especially in improving the preceptors' knowledge and self-reported clinical teaching competencies. This study has positive implication and therefore, a number of recommendations are presented, which are relevant to the conduct of clinical teaching.

7.2 Implications of the study findings for nursing practice, education and management

It is evident from the literature as well as from the results of this study that the availability of well-trained and competent preceptors is fundamental for effective clinical teaching. Well-prepared preceptors facilitate student learning and although this study did not investigate the association between preceptor competence and student learning, the literature supports this association (Mundy, 1997). Nurses who are well-trained and supported have the potential to offer improved quality of care.

7.3. Recommendations

There are a number of recommendations emanating from the study. These are grouped into five clusters: recommendations for schools of nursing and training hospitals; recommendations for regulatory bodies; recommendations for the Ministry responsible for nursing education; recommendations for policy and, recommendations for future research.

7.3.1 Recommendations for the nursing schools and training hospitals

The study highlighted the training needs of the preceptors and presented the challenges facing them, which included limited training opportunities, low levels of incentives provided to them and having to deal with large numbers of students. Schools of nursing need to include preceptors' updates strategies and ensure that they are kept informed of changes and new skills; they need to be provided with the necessary support, by means of in-service educational programmes. Service-related factors which affect the quality of nursing training and clinical teaching, such as staff shortages, should be brought to the attention of the relevant government departments. One particular concern is that of large student numbers, which has negative implications for the quality of learning, patient care and financial

requirements. Although this concern cannot be resolved unless sufficient financing is provided, there needs to be adequate planning to deal with the large numbers of students.

The current study has demonstrated positive results associated with a good collaboration and positive working relationship with the training hospital; this practice needs to be maintained. The schools of nursing and training hospitals need to communicate regularly and hold forums for problem solving.

The current study has demonstrated the need for training preceptors in pedagogical skills but many schools of nursing do not have a recognised training programme for nursing preceptors. This model has demonstrated its usefulness and should be tested further in different nursing educational settings with the possibility that a national training curriculum could be developed, based on this model. The schools of nursing should recognise the importance of improving the preceptors' clinical teaching competencies and should regard this as being entirely their responsibility. The SCCTTP intervention can also be used as an ongoing in-service training model to support preceptorship at training hospitals and to promote quality service delivery. All preceptors involved in the education of health professionals, including nursing education, should be prepared, trained and retrained in pedagogical methods; here, the SCCTTP is potentially a cost-effective and time saving model.

7.3.2 Recommendations for the regulatory bodies (Uganda Nurses and Midwives Council)

The results of this study have demonstrated the importance of proper preparation for educational preceptorship. The Uganda Nurses and Midwives Council (UNMC) recognises

only tutor training in the area of nursing education. That Council needs to recognise and accredit preceptors who have completed the SCCTTP training as part of their continuous professional development.

7.3.3 Recommendations for the Ministry responsible for nursing education

The Ministry of Education and Sports needs to work closely with training hospitals to integrate the SCCTTP into the induction process for newly-hired nurses. The UNMC should, as part of the process of renewing accreditation of schools, ensure that the preceptors of the teaching hospitals have received SCCTTP training and have attended refresher courses on the SCCTTP. There should also be evidence that the schools are working closely with hospitals to provide enough materials for training in the clinical areas.

7.3.4 Recommendations for policy

The results of the study have demonstrated a positive influence on the preceptors' knowledge and self-perceived competence in conducting clinical teaching. Guidelines and protocols which support preceptor training and quality clinical teaching should be developed. There is a need for a policy on preceptors' preparation for managing clinical teaching. A guideline is needed that prescribes the educational standards for clinical preceptors, the maximum numbers of students allowable per preceptor and the number of students in the clinical settings. The application of such a guideline is needed to avoid the challenges associated with untrained preceptors, overcrowding in clinical settings and a poor preceptor: student ratio.

7.3.5 Recommendations for future research

This study addressed the pedagogical preparation of the preceptor but did not evaluate skills. A formal preceptor training programme should include the assessment not only of

knowledge, but also skills in clinical teaching. As this study was conducted in one clinical facility only, it would be necessary to repeat it in other centres in Uganda, in order to establish the nature of preceptors' knowledge of clinical teaching.

7.4 Conclusion

This study described the preceptors' clinical teaching practices at one of the referral hospitals in Uganda. A lot of strength and challenges were identified which formed the basis for designing and implementation of the structured and collaborative clinical teaching training program (SCCTTP). The implementation and evaluation of SCCTTP provided valuable information in relation to clinical teaching and preceptorship preparation.

The structured and collaborative clinical teaching training programme (SCCTTP) study was the first of its kind in Uganda. It showed a positive influence on the preceptors' knowledge in conducting clinical teaching. Although the SCCTTP was new to the preceptors at the National Referral Hospital, they willingly took part in the short-term training and improved their clinical teaching competencies. However, the self-reported confidence levels of most of the preceptors at the National Referral Hospital were already high before the intervention and did not decline throughout the implementation period. The writer also found that in the case of some of the reported competencies, there was a decline after six weeks in the percentage scores relating to those competencies; this suggests the need for refresher training in those competencies.

Training of preceptors is a vital component in the preparation of nursing students to become registered nurses, as the quality of their care and service is dependent on the quality of their training, support and supervision. The well-prepared preceptor plays a vital role in

providing quality nursing care. The SCCTTP therefore, takes a centre position in laying and structuring the pedagogical competencies required for effective provision of the preceptorship role in Uganda.

References

- Aagaard, E., Teherani, A., & Irby, D. M. (2004). Effectiveness of the one-minute preceptor model for diagnosing the patient and the learner: proof of concept. *Academic Medicine*, *79*(1), 42-49. Retrieved from <http://journals.lww.com/academicmedicine>
- Abdullah, M. H. (2001). Self-directed learning. *ERIC Digest*, 1-6. Retrieved from <http://files.eric.ed.gov/fulltext/ED459458.pdf> website: <http://eric.indiana.edu>.
- Affara, A. F. (2009). ICN framework of competencies for the nurse specialist. *ICN Regulation Series* 1-40. Retrieved from http://www.siga-sfia.ch/files/user_upload/08_ICN_Framework_for_the_nurse_specialist.pdf
- Al-Hussami, M., Saleh, M. Y., Darawad, M., & Alramly, M. (2011). Evaluating the effectiveness of a clinical preceptorship program for registered nurses in Jordan. *Journal of Continuing Education in Nursing*, *42*(12), 569-576. doi:10.3928/00220124-20110901-01
- Ali, G. W. (2012). Caring and effective teaching behavior of clinical nursing instructors in clinical area as perceived by their students. *Journal of Education and Practice*, *3*(7), 15-27. Retrieved from <http://www.academia.edu> website: <https://www.iiste.org>
- Amalba, A., Abantanga, F. A., Scherpbier, A. J. J. A., & van Mook, W. N. K. A. (2017). Community-based education: the influence of role modeling on career choice and practice location. *Medical Teacher*, *39*(2), 174-180. doi:10.1080/0142159X.2016.1246711
- Andersson, C. S., Danielsson, A., Hov, R., & Athlin, E. (2013). Expectations and experiences of group supervision: Swedish and Norwegian preceptors' perspectives. *Journal of Nursing Management*, *21*(2), 263-272. doi:10.1111/j.1365-2834.2012.01398.x
- Atakro, C. A., & Gross, J. (2016). Preceptorship versus clinical teaching partnership: literature review and recommendations for implementation in Ghana. *Advances in Nursing*, *2016*. doi:10.1155/2016/1919246
- Bahrack, H. P. (1979). Maintenance of knowledge: questions about memory we forgot to ask. *Journal of experimental Psychology: General*, *108*(3), 296-308. doi:10.1037/0096-3445.108.3.296
- Barangard, H., Afshari, P., & Abedi, P. (2016). The effect of the SNAPPS (summarize, narrow, analyze, probe, plan, and select) method versus teacher-centered education on the clinical gynecology skills of midwifery students in Iran. *Journal Of Educational Evaluation For Health Professions*, *13*, 41-41. doi: 10.3352/jeehp.2016.13.41
- Barker, E. R., & Pittman, O. (2010). Becoming a super preceptor: a practical guide to preceptorship in today's clinical climate. *Journal of the American Academy of Nurse Practitioners*, *22*(3), 144-149. doi:10.1111/j.1745-7599.2009.00487.x

- Basavanthappa, B. T. (2009). *Nursing education*. (2nd ed., pp. 520-579). New Delhi: Jaypee Brothers Medical Publishers LTD
- Bates, R. (2004). A critical analysis of evaluation practice: The Kirkpatrick model and the principle of beneficence. *Evaluation and program planning journal*, 27(3), 341-347. doi:10.1016/j.evalprogplan.2004.04.011
- Benner, P. (1982). From novice to expert. *The American Journal of Nursing*. 82, 402- 407). Retrieved from <http://www.jstor.org/stable/3462928> doi:10.2307/3462928
- Bettany-Saltikov, J. (2012). *How to do a systematic literature review in nursing: A step by step guide* (1st ed.). London: Open University Press
- Blasco, Kohen, & Shapland. (1999). Parents-as-teachers: design and establishment of a training programme for paediatric residents. *Medical Education*, 33(9), 695-701. doi:10.1046/j.1365-2923.1999.00334.x
- Bondi, L. (2009). Teaching reflexivity: undoing or reinscribing habits of gender? *Journal of Geography in Higher Education*, 33(3), 327-337. doi:10.1080/03098260902742417
- Borun, M., Schaller, D., Chambers, M., & Allison-Bunnell, S. (2010). Implications of learning style, age group, and gender for developing online learning activities. *Visitors studies*, 13(2), 145- 159. doi:10.1080/10645571003621513
- Branch, W. T., & Paranjape, A. (2002). Feedback and reflection: teaching methods for clinical settings. *Academic Medicine*, 77(12, Part 1), 1185-1188. Retrieved from http://journals.lww.com/academicmedicine/Fulltext/2002/12000/Feedback_and_Relection__Teaching_Methods_for.5.aspx
- Braungart, R. G., & Gramet, P. R. (2010). *Applying learning theories to health practice health professional as educator: Principles of teaching and learning* (pp. 55-101). Retrieved from <https://books.google.co.za/books?>
- Brener, N. D., Billy, J. O. G., & Grady, W. R. (2003). Assessment of factors affecting the validity of self-reported health-risk behavior among adolescents: evidence from the scientific literature. *Journal of Adolescent Health*, 33(6), 436-457. doi:10.1016/S1054-139X(03)00052-1
- Bridges, S. (2014). Exploration of the concept of collaboration within the context of nurse practitioner-physician collaborative practice. *Journal of American Association Nurse Practitioners* 26(7), 402-410. doi:10.1002/2327-6924.12043
- Brooks, J. G., & Brooks, M. G. (1999). *In search of understanding: the case for constructivist classrooms*. Retrieved from http://ocw.metu.edu.tr/pluginfile.php/9173/mod_resource/content/1/In%20Search%20of%20Understanding.pdf
- Burns, C., Beauchesne, M., Ryan-Krause, P., & Sawin, K. (2006). Mastering the preceptor role: challenges of clinical teaching. *Journal of Pediatric Health Care*, 20(3), 172-183. doi:10.1016/j.pedhc.2005.10.012

- Campbell, C. (1968). *Guide to student and pupil nurses in Mulago hospital: Some thoughts on training*. Report. Kampala: Mulago Hospital..
- Carlson, E. (2012). Precepting and symbolic interactionism - a theoretical look at preceptorship during clinical practice. *Journal of Advanced Nursing*, 69(2), 457- 464. doi:10.1111/j.1365-2648.2012.06047
- Carlson, E., Wann-Hansson, C., & Pilhammar, E. (2009). Teaching during clinical practice: strategies and techniques used by preceptors in nursing education. *Nurse Education Today*, 29(5), 522-526. doi:10.1016/j.nedt.2008.11.012
- Cele, S. C., Gumede, H. A., & Kubheka, B. A. (2002). An investigation of the roles and functions of nurse preceptors in the clinical areas. *Curationis*, 25(1), 41-51. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/12096572>
- Chang, C.-C., Lin, L.-M., Chen, I. H., Kang, C.-M., & Chang, W.-Y. (2015). Perceptions and experiences of nurse preceptors regarding their training courses: a mixed method study. *Nurse Education Today*, 35(1), 220-226. doi:10.1016/j.nedt.2014.08.002
- Chen, Y. H., Duh, Y. J., Feng, Y. F., & Huang, Y. P. (2011). Preceptors' experiences training new graduate nurses: a hermeneutic phenomenological approach. *Journal of Nursing Research*, 19(2), 132-140. doi:10.1097/JNR.0b013e31821aa155
- Cheshire, M., Montgomery, M., & Johnson, P. (2017). Incorporating clinical experiences at a community-based free clinic to improve nursing students' understanding of rural, medically underserved populations. *Online Journal of Rural Nursing and Health Care*, 17(1), 73-86. doi:10.14574/ojrnhc.v17i1.439
- Chisengantambu, C., Penman, J., & White, F. (2005). Preceptors central to nursing workforce. *Australian Nursing Journal*, 13(1), 35-35. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=hch&AN=17536511&site=ehost-live>
- Cleland, J. A., Abe, K., & Rethans, J.-J. (2009). The use of simulated patients in medical education: AMEE Guide No 42. *Medical Teacher*, 31(6), 477-486. doi:10.1080/01421590903002821
- Colquitt, J. D. (2014). *Development of a preceptor characteristics inventory for respiratory therapists*. (PhD Dissertation), University of Georgia, Medical Centre of Central Georgia. Retrieved from <https://www.researchgate.net/publication/303298127>
- Concato, J. (2004). Observational versus experimental studies: what's the evidence for a hierarchy? *The Journal of the American Society for Experimental NeuroTherapeutics*, 1(3), 341-347. doi:http://dx.doi.org/10.1602/neurorx.1.3.341
- Conrad, N. L. (1997). *Teaching nursing in a developing country*. Nurse Educator, 22 (4), 19-24). USA: Lippincott-Raven Publishers.
- Courtney-Pratt, H., Pich, J., Levett-Jones, T., & Moxey, A. (2017). I was yelled at, intimidated and treated unfairly'. Nursing students' experiences of being bullied in

- clinical and academic settings. *Journal of Clinical Nursing*, 00 1-10, doi:10.1111/jocn.13983
- Creswell, W. J. (2009). *Research design: quantitative and mixed methods approaches*. (3rd ed.). London: SAGE.
- Creswell, J. W. (2014). *Research design: qualitative, quantitative, and mixed methods approaches*. (4th.ed). London: SAGE.
- Cruess, S. R., Cruess, R. L., & Steinert, Y. (2008). Role modelling - making the most of a powerful teaching strategy. *British Medical Journal*, 336(7646), 718-721. Retrieved from <http://www.bmj.com.ezproxy.uct.ac.za/content/bmj/336/7646/718.full.pdf> doi:10.1136/bmj.39503.757847.BE
- Cunningham, C. T., Quan, H., Hemmelgarn, B., Noseworthy, T., Beck, C. A., Dixon, E., Jette, N. (2015). Exploring physician specialist response rates to web-based surveys. *BMC Medical Research Methodology*, 15(1), 32. doi:10.1186/s12874-015-0016-z
- Custers, E., & Cate-ten, O. (2011). Very long-term retention of basic science knowledge in doctors after graduation. *Medical Education*, 45(4), 422-430. Retrieved from <http://onlinelibrary.wiley.com.ezproxy.uct.ac.za/doi/10.1111/j.1365-2923.2010.03889.x>
- Daly, P. (1983). *Notes on nursing education in Uganda*. Report. Training School: Mulago Hospital. Kampala.
- DeCicco, J. (2008). Developing a preceptorship/mentorship model for home health care nurses. *Journal of Community Health Nursing*, 25(1), 15-25. doi:10.1080/07370010701836310
- Dorcas, C. F. (2007). Precepting a student? here are the job descriptions. *Home Health Care Management & Practice*, 19(6), 464-469. doi:10.1177/1084822311422938
- Dunn, S. V., & Burnett, P. (1995). The development of a clinical learning environment scale. *Journal of Advanced Nursing*, 22(6), 1166-1173. Retrieved from <http://onlinelibrary.wiley.com.ezproxy.uct.ac.za/doi/10.1111/j.1365-2648.1995.tb03119.x/pdf>
- Dyer, J. A., & Pardue, K. (1999). Preparing preceptors to precept. *Journal of Creative Nursing*, 5(4), 12. Retrieved from <http://web.b.ebscohost.com.ezproxy.uct.ac.za/ehost/pdfviewer/pdfviewer?sid>
- Eddy, S. (2010). Lessons learned from formal preceptorship programs. *Journal of Creative Nursing*, 16(4), 198-199. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=hch&AN=57235951&site=ehost-live> doi:10.1891/1078-4535.16.4.198
- Ertmer, P. A., & Newby, T. (1993). Behaviorism, cognitivism, constructivism: comparing critical features from an instructional design perspective. *Performance Improvement Quarterly*, 6(4), 50-72. Retrieved from

<http://onlinelibrary.wiley.com.ezproxy.uct.ac.za/doi/10.1002/piq.21143/epdf>
doi:10.1111/j.1937-8327.1993.tb00605.x

- Ford, K., Fitzgerald, M., & Courtney-Pratt, H. (2013). The development and evaluation of a preceptorship program using a practice development approach. *Australian Journal of Advanced Nursing, 30*(3), 5-13. Retrieved from <https://search.informit.com.au/documentSummary;dn=225927332520551;res=IELAPA>
- Fosnot, C. T., & Perry, R. S. (1996). *Constructivism: A psychological theory of learning constructivism: theory, perspectives, and practice*. 2nd ed.). New York: Teachers College Press
- Frattarelli, L. C., & Kasuya, R. (2003). Implementation and evaluation of a training program to improve resident teaching skills. *American Journal of Obstetrics and Gynecology, 189*(3), 670-673. doi:10.1067/S0002-9378(03)00879-2
- Frenk, J., Chen, L., Bhutta, Z. A., Cohen, J., Crisp, N., Evans, T., . . . Zurayk, H. (2010). Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *The Lancet, 376*(9756), 1923-1958. doi:10.1016/S0140-6736(10)61854-5
- Furney, S. L., Orsini, A. N., Orsetti, K. E., Stern, D. T., Gruppen, L. D., & Irby, D. M. (2001). Teaching the one-minute preceptor: a randomised controlled trial. *Journal of General Internal Medicine, 16*(9), 620-624. doi:10.1046/j.1525-1497.2001.016009620.x
- Gaberson, K., & Oermann, H. (2010). *Clinical teaching strategies in nursing*. Retrieved from <http://books.google.co.ug/books?id=UHoZd9SN5FAC>
- Gaberson, K., Oermann, H., & Shellenbarger, T. (2014). *Clinical teaching strategies in nursing*. Retrieved from <https://books.google.co.ug/books?id=cR7yAgAAQBAJ>
- Gallagher, P., Tweed, M., Hanna, S., Winter, H., & Hoare, K. (2012). Developing the one-minute preceptor. *The Clinical Teacher, 9*(6), 358-362. doi:10.1111/j.1743-498X.2012.00596.x
- Gilchrist, K. L., & Rector, C. (2007). Can you keep them? Strategies to attract and retain nursing students from diverse populations: best practices in nursing education. *Journal of Transcultural Nursing, 18*(3), 277-285. doi: 10.1177/1043659607301305
- Gorstein, J., Sullivan, K. M., Parvanta, I., & Begin, F. (2007). *Indicators and methods for cross-sectional surveys of vitamin and mineral status of populations. Micronutrient Initiative*. Retrieved from <https://scholar-google-co-za.ezproxy.uct.ac.za/scholar?q>
- Grimes, D. A., & Schulz, K. F. (2002). Descriptive studies: what they can and cannot do. *The Lancet, 359*(9301), 145-149. doi:http://dx.doi.org/10.1016/S0140-6736(02)07373-7
- Halabi, J. O., Abdalrahim, M. S., Persson, G. L., Hedemalm, A., & Lepp, M. (2012). The development of a preceptor training program on clinical nursing education in Jordan

- in collaboration with Sweden. *Journal of Continuing Education in Nursing*, 43(3), 135-144. doi:10.3928/00220124-20111115-04
- Hall-Lord, M. L., Theander, K., & Athlin, E. (2013). A clinical supervision model in bachelor nursing education - purpose, content and evaluation. *Nurse Education in Practice*, 13(6), 506-511. doi:10.1016/j.nepr.2013.02.006
- Hallahan, M., & Rosenthal, R. (1996). Statistical power: concepts, procedures and applications. *Behaviour Research and Therapy*, 34(5), 489-499. Retrieved from <http://www.sciencedirect.com/science/article/pii/0005796795000828> doi:10.1016/0005-7967(95)00082-8
- Hallin, K., & Danielson, E. (2009). Being a personal preceptor for nursing students: registered nurses' experiences before and after introduction of a preceptor model. *Journal of Advanced Nursing*, 65(1), 161-174. doi:10.1111/j.1365-2648.2008.04855.x
- Happell, B. (2009). A model of preceptorship in nursing: reflecting the complex functions of the role. *Nursing Education Perspectives*, 30(6), 372-376. doi:10.1043/1536-5026-30.6.372
- Heffernan, C., Heffernan, E., Brosnan, M., & Brown, G. (2009). Evaluating a preceptorship programme in South West Ireland: perceptions of preceptors and undergraduate students. *Journal of Nursing Management*, 17(5), 539-549. doi:10.1111/j.1365-2834.2008.00935.x
- Henderson, A., Briggs, J., Schoonbeek, S., & Paterson, K. (2011). A framework to develop a clinical learning culture in health facilities: ideas from the literature. *International Nursing Review*, 58(2), 196-202. doi:10.1111/j.1466-7657.2010.00858.x
- Heshmati-Nabavi, F., & Vanaki, Z. (2010). Professional approach: the key feature of effective clinical educator in Iran. *Nurse Education Today*, 30(2), 163-168. doi:<http://dx.doi.org/10.1016/j.nedt.2009.07.010>
- Hilli, Y., & Melender, H.-L. (2015). Developing preceptorship through action research: Part 1. *Scandinavian Journal of Caring Science*, 29(3), 470-477. doi:10.1111/scs.12169
- Hyrkas, K., & Shoemaker, M. (2007). Changes in the preceptor role: re-visiting preceptors' perceptions of benefits, rewards, support and commitment to the role. *Journal of Advanced Nursing*, 60(5), 513-524. doi:10.1111/j.1365-2648.2007.04441.x
- Jacob, W. J., Nsubuga, Y. K., & Mugimu, C. B. (2009). Higher education in Uganda: the role of community colleges in educational delivery and reform. *Community College Models* (pp. 335-358): University of Pittsburgh: Springer Science+Business Media.
- Jamshidi, L. (2012). The challenges of clinical teaching in nursing skills and lifelong learning from the standpoint of nursing students and educators. *Procedia - Social and Behavioral Sciences*, 46(0), 3335-3338. doi:10.1016/j.sbspro.2012.06.062
- Jeggels, J. D., Traut, A., & Africa, F. (2013). *A Report on the development and implementation of a preceptorship training programme for registered nurses* (0379-

8577). Retrieved from University of Western Cape, Bellville, South Africa:
<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2012328761&site=ehost-live>

- Jha, V., Quinton, N. D., Bekker, H. L., & Roberts, T. E. (2009). Strategies and interventions for the involvement of real patients in medical education: A Systematic Review. *Medical Education*, 43(1), 10-20. doi:10.1111.1365-2923.2008.03244.x
- Joyner, B., & Young, L. (2006). Teaching medical students using role play: twelve tips for successful role plays. *Medical Teacher*, 28(3), 225-229. doi:10.1080/01421590600711252
- Kalaian, S. A., & Freeman, D. J. (1987). *Relations between teacher candidates' self-confidence and orientations to teaching*. Program Evaluation Series. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED300366&site=ehost-live>
- Kalischuk, R. G., Vandenberg, H., & Awosoga, O. (2013). Nursing preceptors speak out: an empirical study. *Journal of Professional Nursing*, 29(1), 30-38. doi:<http://dx.doi.org/10.1016/j.profnurs.2012.04.008>
- Kelly, J., & McAllister, M. (2013). Lessons students and new graduates could teach: a phenomenological study that reveals insights on the essence of building a supportive learning culture through preceptorship. *Contemporary Nurse*, 44(2), 170-177. doi:10.5172/conu.2013.44.2.170
- Khatib, M., Sarem, S. N., & Hamidi, H. (2013). Humanistic education: concerns, implications and applications. *Journal of Language Teaching and Research*, 4(1), 45-51. doi:<http://dx.doi.org.ezproxy.uct.ac.za/10.4304/jltr.4.1.45-51>
- Kiguli, S., Baingana, R., Paina, L., Mafigiri, D., Groves, S., Katende, G., . . . Roy, M. (2011). Situational analysis of teaching and learning of medicine and nursing students at makerere university college of health sciences. *BioMedical Central International Health and Human Rights*, 11(1), 1. Retrieved from <https://bmcinthealthhumrights.biomedcentral.com/articles/10.1186/1472-698X-11-S1-S3>
- Killam, L. A., & Heerschap, C. (2013). Challenges to student learning in the clinical setting: a qualitative descriptive study. *Nurse Education Today*, 33(6), 684-691. doi:10.1016/j.nedt.2012.10.008.
- Knowles, M. (1980). *The modern practice of adult education: from pedagogy to andragogy*. (N) 07632). Cambridge Adult Education, Englewood Cliffs, NJ: Prentice-Hall.
- Kolb, D. A. (1981). Learning styles and disciplinary differences. In: A. Chickering (Ed.), *The modern American College: Responding to the new Realities of Diverse Students and a Changing Society* (pp. 232-255). San Francisco: Jossey-Bass, Inc.
- Kolb, D. A. (1984). *Experiential learning: experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall.

- LaSala, K. B., & Nelson, J. (2005). What contributes to professionalism? *Medical Surgical Nursing, 14*(1), 63-67. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=16184686&site=ehost-live>
- Latham, G., Long, T., & Devitt, P. (2013). *Research and commentary. participatory teaching can help to promote knowledge retention* (20462336). Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=hch&AN=92907414&site=ehost-live>
- Lavigne, G. L., Vallerand, R. J., & Miquelon, P. (2007). A motivational model of persistence in science education: a self-determination theory approach. *European Journal of Psychology of Education - EJPE (Instituto Superior de Psicologia Aplicada), 22*(3), 351-369.
- Leedy, D. P., & Ormrod, E. J. (2010). *Practical research planning and design*. (9th ed.). Cape Town: Pearson Education International
- Leep Hunderfund, A. N., Dyrbye, L. N., Starr, S. R., Mandrekar, J., Naessens, J. M., Tilburt, J. C., . . . Reed, D. A. (2017). Role modeling and regional health care intensity: United States medical student attitudes toward and experiences with cost-conscious care. *Academic Medicine, 92*(5), 694-702. doi:10.1097/acm.
- Leffers, J. M., Mbabali, S. M., Nabirye, R. C., & Mbalinda, S. N. (2014). Using technology to support an ongoing partnership for nursing education in Uganda. *Global Health Nursing: Building and Sustaining Partnerships, 274-283*, New York: Springer publication company.
- Leon, A. C., Davis, L. L., & Kraemer, H. C. (2011). The role and interpretation of pilot studies in clinical research. *Journal of Psychiatric Research, 45*(5), 626-629. doi:10.1016/j.jpsychires.2010.10.008
- Levin, K. A. (2006). Study design iii: cross-sectional studies. *Evidence-based Dentistry, 7*(1), 24-25.
- Linfield Good Samaritan School of Nursing. (2013). *Clinical Teaching Associate (Preceptor) Manual*. Portland: Linfield College.
- Lippe, M., & Carter, P. (2017). Using the CIPP model to assess nursing education program quality and merit. *Teaching and Learning in Nursing*. doi:10.1016/j.teln.2017.09.008
- Liu, M., Yin, L., Ma, E., Lo, S., & Zeng, L. (2009). Competency inventory for registered nurses in macao: instrument validation. *Journal of Advanced Nursing, 65*(4), 893-900. doi:10.1111/j.1365-2648.2008.04936.x
- Logan, B. L., Kovacs, K. A., & Barry, T. L. (2015). Precepting nurse practitioner students: one medical center's efforts to improve the precepting process. *Journal of American Association of Nurse Practitioners, 27*(12), 676-682. doi:10.1002/2327-6924.12265
- Luhanga, F., Yonge, O., & Myrick, F. (2008). Precepting an unsafe student: the role of the faculty. *Nurse Education Today, 28*(2), 227-231. doi:10.1016/j.nedt.2007.04.001

- Lynch, C. (2008). Reflexivity in research on civil society: Constructivist Perspectives. *International Studies Review*, 10(4), 708-721. doi:10.1111/j.1468-2486.2008.00827.x
- Mamchur, C., & Myrick, F. (2003). Preceptorship and interpersonal conflict: a multidisciplinary Study. *Journal of Advanced Nursing*, 43(2), 188-196. doi:10.1046/j.1365-2648.2003.02693.x
- Mann-Salinas, E., Hayes, E., Robbins, J., Sabido, J., Feider, L., Allen, D., & Yoder, L. (2014). A Systematic review of the literature to support an evidence-based precepting program. *Burns*, 40(3), 374-387. doi:http://dx.doi.org/10.1016/j.burns.2013.11.008
- Matsiko, C. W., & Kiwanuka, J. (2003). *A review of human resource for health in Uganda* (1728-6107). 1 (1), 15-20. Retrieved from <https://tspace.library.utoronto.ca/bitstream/1807/6019/1/hp03006.pdf>
- McCarthy, B., & Murphy, S. (2010). Preceptors' experiences of clinically educating and assessing undergraduate nursing students: an irish context. *Journal of Nursing Management*, 18(2), 234-244. doi:10.1111/j.1365-2834.2010.01050.x
- McGrath, D., Crowley, L., Rao, S., Toomey, M., Hannigan, A., Murphy, L., & Dunne, C. P. (2015). Outcomes of irish graduate entry medical student engagement with self-directed learning of clinical skills. *Bio-Medical Central Medical Education*, 15(1), 1.
- Meyers, C., Brandt, W,C (2014) *Implementation fidelity in education research*. (1st ed.) New York: Routledge.
- Miceli, A., Sebuyira, L. M., Crozier, I., Cooke, M., Naikoba, S., Omwangangye, A. P., . . . Weaver, M. R. (2012). advances in clinical education: a model for infectious disease training for mid-level practitioners in uganda. *International Journal of Infectious Diseases*, 16(10), e708-e713. doi:10.1016/j.ijid.2012.07.003
- Millett, C. M. (2016). Dollars and sense: the policy implications of financing an accelerated nursing degree. *Journal of Professional Nursing*, 32(5, Supplement), S14-S23. doi:http://dx.doi.org/10.1016/j.profnurs.2016.02.009
- Mingpun, R., Srisa-ard, B., & Jumpamool, A. (2015). strengthening preceptors' competency in thai clinical nursing. *Educational Research and Reviews*, 10(20), 2653-2660.
- Ministry of Education and Sports. (2007a). *Ministry of education and sports curriculum for diploma direct nurses - Uganda*. Kampala:Ministry of Education and Sports.
- Ministry of Education and Sports. (2007b). *Ministry of education and sports curriculum for diploma in nursing - Uganda*. Kampala: Ministry of Education and Sports.
- Ministry of Education and Sports. (2010). *Report on assessment of the quality of human resource for health pre-service practicum training*. Kampala: Ministry of Education and Sports.
- Ministry of Education and Sports. (2012). *The Uganda students' higher education financing policy*. Kampala: Ministry of Education and Sports

- Ministry of Education and Sports. (2016). *Education and sports sector annual performance report*. Retrieved from <http://www.education.go.ug/data/mreports/61/THE%20EDUCATION%20AND%20SPORTS%20SECTOR%20ANNUAL%20PERFORMANCE%20REPORT%202015/16.html>
- Ministry of Finance Planning and Economic Development. (2013). *Health workers' shortage in Uganda*. Retrieved from www.finance.go.ug/bmau/
- Ministry of Health. (2010a). *Health sector strategic and investment plan : 2010/11-2014/15 Kampala*. Ministry of Health, Uganda.
- Ministry of Health. (2010b). *The national health policy*. Ministry of Health Uganda.
- Ministry of Health. (2016). Mulago national referral hospital. Retrieved from health.go.ug/content/mulago-national-referral-hospital
- Missen, K., McKenna, L., & Beauchamp, A. (2016). Graduate nurse program coordinators' perspectives on graduate nurse programs in victoria, australia: a descriptive qualitative approach. *Collegian, 23*(2), 201-208. doi:10.1016/j.colegn.2015.03.004
- Mohide, E. A., Gerardri, O., Norman, D., Cavalieri, V., McKey, C. A., Jennings, B., . . . Seidlitz, W. (2012). Selecting nurse preceptors: What qualities and characteristics should be considered? Retrieved from <http://www.nursinglibrary.org/vhl/handle/10755/243307>
- Mukakarisa, H. K. (2012). *Uganda nurses and midwives; may 2012 examination release statement*. Kampala: Ministry of Education and Sports Uganda.
- Mukakarisa, H. K. (2017). *Uganda nurses and midwives; may 2017 examination release statement*. Kampala: Ministry of Education and Sports Uganda.
- Mulago Hospital. (2016). Mulago/ Uganda National Referral Hospitals. Retrieved from <http://health.go.ug/content/mulago-national-referral-hospital>
- Muldowney, Y., & McKee, G. (2011). Nurses new to intensive care: perceptions of their clinical learning environment. *Nursing in Critical Care, 16*(4), 201-209. doi:10.1111/j.1478-5153.2011.00426.x
- Mundy, A. (1997). Motivating staff nurses to serve as clinical preceptors. *Nursing Management, 28*(6), 66-66. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=9709205357&site=ehost-live>
- Murre, J. M. J., & Dros, J. (2015). Replication and analysis of Ebbinghaus' forgetting curve. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4492928/> PLOS One. 2015; 10(7): e0120644.

- Museene, K. S. (2010). *Capacity of nursing training institutions to implement the comprehensive nursing curriculum*. (Masters of Philosophy thesis), Moi University, Eldoret.
- Myrick, F., & Barrett, C. (1992). Preceptor selection criteria in canadian basic baccalaureate schools of nursing - a survey. *Canadian Journal of Nursing Research*, 24(3), 53-68.
- Myrick, F., & Yonge, O. (2002). Preceptor questioning and student critical thinking. *Journal of Professional Nursing*, 18(3), 176-181. doi:10.1053/jpnu.2002.124485
- Myrick, F., & Yonge, O. (2005). *Nursing preceptorship: connecting practice and education*. Philadelphia: Lippincott Williams and Wilkins.
- National Planning Authority. (2015). *SECOND NATIONAL DEVELOPMENT PLAN (NDPII) 2015/16 – 2019/20*. Retrieved from Kampala, National Planing Authority-Uganda.
- Neher, J. O., Gordon, C., Meyer, B., & Stevens, N. (1992). A Five-step "microskills" model of clinical teaching *Journal of the American Board of Family Practitioners*, 5(4), 419-424.
- Ness, V., Duffy, K., McCallum, J., & Price, L. (2010). Supporting and mentoring nursing students in practice. *Nursing Standard*, 25(1), 41-46.
- Nestel, D., Burn, C. L., Pritchard, S. A., Glastonbury, R., & Tabak, D. (2011). The use of simulated patients in medical education: guide supplement 42.1 - viewpoint. *Medical Teacher*, 33(12), 1027-1029. doi:10.3109/0142159X.2011.596590
- Newton, J. M., Jolly, B. C., Ockerby, C. M., & Cross, W. M. (2012). Student centredness in clinical learning: the influence of the clinical teacher. *Journal of Advanced Nursing*, 68(10), 2331-2340. doi:10.1111/j.1365-2648.2012.05946.x
- Nguyen, L., Ropers, S., Nderitu, E., Zuyderduin, A., Luboga, S., & Hagopian, A. (2008). Intent to migrate among nursing students in Uganda: measures of the brain drain in the next generation of health professionals. *Human resources for health*, 6(1), 5. doi:10.1186/1478-4491-6-5
- Nielsen, A., Stragnell, S., & Jester, P. (2007). Educational innovations. guide for reflection using the clinical judgment model. *Journal of Nursing Education*, 46(11), 513-516.
- NIH Office of Extramural Research. (2012). Protecting human research participants. Retrieved from <https://phrp.nihtraining.com/users>
- Nordgren, J., Richardson, S. J., & Laurella, V. B. (1998). A Collaborative preceptor model for clinical teaching of beginning nursing students. *Journal of Nurse Educator*, 23(3), 27-32. USA, Lippincott-Raven Publishers.
- Norman, J. (2012). Systematic review of the literature on simulation in nursing education. *Association of Black Nursing Faculty in Higher Education*, 23(2), 24-28.

- Nursing and Midwifery Board of Australia. (2006). *National competency standards for the registered nurse*. Melbourne VIC 3000 Australia.
<https://www.google.com/search?q=Nursing+and+Midwifery+Board+of+Australia+%282006%29.+National+Competency+Standards+for+the+Registered+Nurse.+Melbourne+VIC+3000+Australia&ie>
- Nyakuni, M. (2002). *A Study on coordination of classroom and clinical teaching in nursing schools of Uganda*. (Master's thesis in Education Management), Makerere University.
- Nyoni, C., & Barnard, A. (2016). Professional nurses' perception of their clinical teaching role at a rural hospital in Lesotho. *African Journal for Health Professional Education*, 8(2), 166-168. doi:10.7196 /AJHPE.2016.v8i2.889
- O'Brien, A., Giles, M., Dempsey, S., Lynne, S., McGregor, M., & Kable, A. (2013). Evaluating the preceptor role for pre-registration nursing and midwifery student clinical education. *Nurse Education Today*, 34(1):19-24.
doi:10.1016/j.nedt.2013.03.015
- Okanga, A. A., Ogur, J. O., & Arudo, J. (2017). Institutional characteristics influencing bachelor of science nursing student performance in the nursing council of Kenya licensure examinations in Kenya. *Journal of Education and e-Learning Research*, 4(1), 28-36. doi:10.20448/journal.509.2017.41.28.36
- O'Leary, R., Yujin, C., & Gerard, C. M. (2012). The skill set of the successful collaborator. *Public Administration Review*, 72, S70-S83. doi:10.1111/j.1540-6210.2012.02667.x
- Omansky, G. L. (2010). Staff nurses' experiences as preceptors and mentors: an integrative review. *Journal of Nursing Management*, 18(6), 697-703. doi:10.1111/j.1365-2834.2010.01145.x
- Ooms, A., Fergy, S., Marks-Maran, D., Burke, L., & Sheehy, K. (2013). Providing learning support to nursing students: a study of two universities. *Nurse Education in Practice*, 13(2), 89-95. doi:http://dx.doi.org/10.1016/j.nepr.2012.07.011
- Packer, M. J., & Goicoechea, J. (2000). Sociocultural and constructivist theories of learning: ontology, not just epistemology. *Educational Psychologist*, 35(4), 227-241.
- Parsell, G., & Bligh, J. (2001). Recent perspectives on clinical teaching. *Medical Education*, 35(4), 409-414. doi:10.1046/j.1365-2923.2001.00900.x
- Pasila, K., Elo, S., & Kaariainen, M. (2017). Newly graduated nurses' orientation experiences: a systematic review of qualitative studies. *International Journal for Nursing Studies*. 71, 17-27. doi:10.1016/j.ijnurstu.2017.02.021
- Passi, V., & Johnson, N. (2016). The impact of positive doctor role modeling. *Medical Teacher*, 38(11), 1139-1145. doi:10.3109/0142159X.2016.1170780
- Perry, B. R. N. (2009). Role Modeling Excellence in Clinical Nursing Practice. *Nurse Education in Practice*, 9(1), 36-44. doi:http://dx.doi.org/10.1016/j.nepr.2008.05.001

- Phillips, J. M. (2006). Preparing preceptors through online education. *Journal for Nurses in Professional Development*, 22(3), 150-156.
- Pierson, W. (1998). Reflection and nursing education. *Journal of Advanced Nursing*, 27(1), 165-170. doi:10.1046/j.1365-2648.1998.00509.x
- Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: myths and strategies. *International Journal of Nursing Studies*, 47(11), 1451-1458. doi:10.1016/j.ijnurstu.2010.06.004
- Rahnavard, Z., Nodeh, Z. H., & Hosseini, L. (2013). Effectiveness of clinical teaching associate model in nursing education: results from a developing country. *Contemporary Nurse: A Journal for the Australian Nursing Profession*, 45(2), 174-181. doi:10.5172/conu.2013.45.2.174
- Ramani, S., & Leinster, S. (2008). AMEE guide no. 34: teaching in the clinical environment. *Medical Teacher*, 30(4), 347-364. doi:10.1080/01421590802061613
- Rew, L., Banner, M., Johnson, K., & Slesnick, N. (2018). Intervention fidelity and facilitator training. *Western Journal of Nursing Research*, 00, 1-18. doi:10.1177/0193945917752092
- Richards, J., & Bowles, C. (2012). the meaning of being a primary nurse preceptor for newly graduated nurses. *Journal for Nurses in Staff Development*, 28(5), 208-213.
- Riley-Douchet, C., & Wilson, S. (1997). A Three-step method of self-reflection using reflective journal writing. *Journal of Advanced Nursing*, 25(5), 964-968. doi:10.1046/j.1365-2648.1997.1997025964.x
- Rush, B., Walsh, N. J., Guy, C. J., & Wharrad, H. J. (2011). A clinical practice teaching and learning observatory: the use of videoconferencing to link theory to practice in nurse education. *Nurse Education in Practice*, 11(1), 26-30. doi:10.1016/j.nepr.2010.06.001
- Ryan, C., & McAllister, M. (2017). Enrolled nurses' experiences learning the nurse preceptor role: a qualitative evaluation *The Australian Journal of Nursing Practice*, 24(3), 267-273. doi:10.1016/j.colegn.2016.04.001
- Sanford, P. G. (2010). Simulation in nursing education: a review of the research. *The Qualitative Report*, 15, 1006-1011. Retrieved from <https://search.proquest.com/docview/757175213?accountid=14500>
- Santiago, A. (2012). *Preceptorship*. Retrieved from <http://healthcareers.about.com/od/p/g/preceptorship.htm>
- Schaubhut, R., & Gentry, J. A. (2010). Nursing preceptor workshops: partnership and collaboration between academia and practice. *The Journal of Continuing Education in Nursing*, 41(4), 155-160. doi:10.3928/00220124-20100326-01
- Schunk, D. H. (1996). *Learning theories: an educational perspective* (6th ed.). University of North Carolina, Greensboro: Pearson.

- Schupbach, J. E. (2012). *Strategies for clinical teaching*. Audiology online, Article 6944. Retrieved from <http://www.audiologyonline.com/articles/strategies-for-clinical-teaching-6944>
- Seibert, S. A., & Bonham, E. (2016). Preparing dedicated education unit staff nurses for the role of clinical teacher. *Journal of Nurses in Professional Development*, *32*(4), 205-211. doi:10.1097/NND.0000000000000268
- Semb, G. B., & Ellis, J. A. (1993). Long-term memory for knowledge learned in school. *Journal of Educational Psychology*, *85*(2), 305-316.
- Serrat, O. (2017). The critical incident technique. *Knowledge Solutions*, *123*, 1077-1083. doi 10.1007/978-981-10-0983-9
- Sharif, F., & Armitage, P. (2004). The effect of psychological and educational counselling in reducing anxiety in nursing students. *Journal of Psychiatric & Mental Health Nursing*, *11*(4), 386-392. doi:10.1111/j.1365-2850.2003.00720.x
- Shin, B.-M., Yoo, H. M., Lee, A. S., & Park, S. K. (2006). Seroprevalence of hepatitis b virus among health care workers in korea. *Journal of Korean Medical Science*, *21*(1), 58-62.
- Smedley, A., & Penney, D. (2009). A Partnership Approach to the Preparation of Preceptors. *Nursing Education Perspectives*, *30*(1), 31-36.
- Smit, E. M., & Tremethick, M. J. (2017). Value of online group reflection after international service-learning experiences: i never thought of that. *Nurse Educator*, *42*(6), 286-289. doi:10.1097/nne.0000000000000381
- Smith, A. (2006). The joys and responsibilities of preceptors *Nursing*, *36*, 9-10.
- Stalmeijer, R. E., Dolmans, D. H. J. M., Wolfhagen, I. H. A. P., Muijtjens, A. M. M., & Scherpbier, A. J. J. A. (2010). The maastricht clinical teaching questionnaire (MCTQ) as a valid and reliable instrument for the evaluation of clinical teachers. *Academic Medicine*, *85*(11), 1732-1738. doi:10.1097/ACM.0b013e3181f554d6
- Stufflebeam, D. L. (1994). Empowerment evaluation, objectivist evaluation, and evaluation standards: where the future of evaluation should not go and where it needs to go. *American Journal of Evaluation*, *15*(3), 321-338. doi:10.1177/109821409401500313
- Sugarman, L. (1985). Kolb's model of experiential learning: touchstone for trainers, students, counselors, and clients. *Journal of Counseling & Development*, *64*(4), 264-268. doi 10.1002/j.1556-6676.1985.tb01097.x
- Summers, D. (Ed.) (2007) *The living dictionary* (10th ed.). England: Pearson Education Limited.
- Sutkin, G., Wagner, E., Harris, I., & Schiffer, R. (2008). What makes a good clinical teacher in medicine? a review of the literature. *Academic Medicine*, *83*(5), 452-466. doi: 10.1097/ACM.0b013e31816bee61

- Taylor, D. C., & Hamdy, H. (2013). Adult learning theories: implications for learning and teaching in medical education: amee guide no. 83. *Medical Teacher*, *35*(11), e1561-e1572. doi:10.3109/0142159X.2013.828153
- Timmins, F., & Kaliszer, M. (2002). Aspects of nurse education programmes that frequently cause stress to nursing students – fact-finding sample survey. *Nurse Education Today*, *22*(3), 203-211. doi:http://dx.doi.org/10.1054/nedt.2001.0698
- Toh, C., Miller, S., & Simpson, T. (2015). The impact of virtual product dissection environments on student design learning and self-efficacy. *Journal of Engineering Design*, *26*(1-3), 48-73. doi:10.1080/09544828.2015.1018149
- Tomlinson, P. S., Thomlinson, E., Peden-McAlpine, C., & Kirschbaum, M. (2002). Clinical innovation for promoting family care in paediatric intensive care: demonstration, role modelling and reflective practice. *Journal of Advanced Nursing*, *38*(2), 161-170. doi:10.1046/j.1365-2648.2002.02160.x
- Tou, S., Tou, W., Mah, D., Karatassas, A., & Hewett, P. (2013). Effect of preoperative two-dimensional animation information on perioperative anxiety and knowledge retention in patients undergoing bowel surgery: a randomized pilot study. *Colorectal Disease*, *15*(5), e256-e265. doi:10.1111/codi.12152
- UBOS. (2016). Uganda demographic and health survey 2016. Retrieved from http://www.ubos.org/onlinefiles/uploads/ubos/pdf%20documents/Uganda_DHS_2016
- Uganda Government. (1995). *The constitution of the republic of Uganda*. Kampala: Parliament of Uganda.
- Uganda Government. (1996). *Uganda nurses and midwives' Act 1996 : Cap 274*. Parliament of Uganda.
- Uganda Nurses and Midwives Council. (2016). Data base: List of accredited nursing schools, cadres of nurses and midwives and other reports. Retrieved from <http://unmc.ug/recognized-schools/>
- Uganda Nurses, Midwives and Nursing Assistants Council. (1962). *Syllabus for registered nurse course*. Kampala:Ministry of Health-Uganda
- Ukot, E., & Eti, D. (2015). *Dedicated education units: an integrative review of literature*. Paper presented at the 26th international nursing research conference: Society of Nursing, Sigma Theta Tau International., San Juan Puerto rico. <http://hdl.handle.net/10755/601687>
- Ulrich, B. (2006). Teaching nurses to teach: a good investment for all, *Nephrology Nursing Journal*, *33*(16) 602-602. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=hch&AN=23694427&site=ehost-live>
- Usher, K., Mills, J., West, C., Park, T., & Woods, C. (2015). Preregistration student nurses' self-reported preparedness for practice before and after the introduction of a capstone subject. *Journal of Clinical Nursing*, *24*(21/22), 3245-3254. doi:10.1111/jocn.12996

- Uys, L., Matua, G. A., Mwizerwa, J., & Erejo, A. (2010). *The evaluation report of the registered and enrolled comprehensive programme in Uganda*. Retrieved from http://ecommons.aku.edu/eastafrica_fhs_sonam:
- Vance, C., & Olson, R. K. (1998). *The mentor connection in nursing*. Springer Publishing Company
- Wade, G. H., & Hayes, E. (2010). Challenges and opportunities associated with preceptored community health clinical experiences. *Public Health Nursing Journal*, 27(5), 459-467. doi:10.1111/j.1525-1446.2010.00879.x
- Ward, A. E., & McComb, S. (2017). Formalizing the precepting process: a concept analysis of preceptorship. *Journal of Clinical Nursing*. doi:10.1111/jocn.14203
- Ward-Smith, P. (2016). The fine print of literature reviews. *Urologic Nursing*, 36(5), 253-254. doi:10.7257/1053-816X.2016.36.5.253
- Weaver, B., & Wuensch, K. L. (2013). SPSS and SAS programs for comparing pearson correlations and ols regression coefficients. *Behavioural Research Methods*, 45(3), 880-895. doi:10.3758/s13428-012-0289-7
- Weitzel, K. W., Walters, E. A., & Taylor, J. (2012). Teaching clinical problem solving: a preceptor's guide. *American Journal of Health-System Pharmacy*: 69(18), 1588-1599.
- Wolpaw, T., Papp, K. K., & Bordage, G. (2009). Using SNAPPS to facilitate the expression of clinical reasoning and uncertainties: a randomized comparison group trial. *Academic Medicine*, 84(4), 517-524. doi:10.1097/ACM.0b013e31819a8cbf
- World Bank. (2017). *Uganda economy update: step by step Let's solve the finance puzzle to accelerate growth and shared prosperity*. Retrieved from The World Bank, 1818 H Street NW, Washington, DC 20433, USA: <http://documents.worldbank.org.ezproxy.uct.ac.za/curated/en/>
- World Medical Association. (2013). World medical association declaration of Helsinki: ethical principles for medical research involving human subjects. *The JAMA Network*, 310(20), 2191-2194. doi:10.1001/jama.2013.281053
- XiaoJing, H., Dan, Z., & MinHua, Z. (2011). Clinical nursing faculty competence inventory - development and psychometric testing. *Journal of Advanced Nursing*, 67(5), 1109-1117. doi:10.1111/j.1365-2648.2010.05520.x
- Yamazhan, T., Durusoy, R., Tasbakan, M., Tokem, Y., Pullukcu, H., Sipahi, O., & Ulusoy, S. (2011). nursing students' immunisation status and knowledge about viral hepatitis in turkey: a multi-centre cross-sectional study. *International Nursing Review*, 58(2), 181-185. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1466-7657.2010.00869.x/full> doi:10.1111/j.1466-7657.2010.00869.x
- Yimeng, G., Kopec, J. A., Cibere, J., Li, L. C., & Goldsmith, C. H. (2016). Population Survey Features and Response Rates: A Randomized Experiment. *American Journal Public Health*, 106(8), 1422-1426. doi:10.2105/AJPH.2016.303198

Zhang, G., Zeller, N., Griffith, R., Metcalf, D., Williams, J., Shea, C., & Misulis, K. (2011). Using the context, input, process, and product evaluation model (cipp) as a comprehensive framework to guide the planning, implementation, and assessment of service-learning programs. *Journal of Higher Education Outreach and Engagement*, 15(4), 57-84.

Appendices

Appendix A: Ethics Approval Letters

Appendix A-i: University of Cape Town Approval



UNIVERSITY OF CAPE TOWN
Faculty of Health Sciences
Human Research Ethics Committee



Room E52-24 Old Main Building
Grootescheur Hospital
Observatory 7975
Telephone (021) 404 7682 • Facsimile (021) 406 6411
Email: post@hrc@uct.ac.za
Website: www.health.uct.ac.za/research/humanethics/forms

27 November 2014

HREC REF: 686/2014

Prof P Mayers
Division of Nursing & Midwifery
Old Main Building

Dear Prof Mayers

PROJECT TITLE: A STRUCTURED AND COLLABORATIVE CLINICAL TEACHING TRAINING PROGRAM AND ITS INFLUENCE ON NURSING PERCEPTORS' SELF REPORTED COMPETENCIES AND CONFIDENCE AT A NATIONAL REFERRAL HOSPITAL IN UGANDA. (PhD candidate Mrs Safinah Kisu Museene)

Thank you for submitting your study to the Faculty of Health Sciences Human Research Ethics Committee for review.

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study.

Approval is granted for one year until the 30th November 2015.

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.

(Forms can be found on our website: www.health.uct.ac.za/research/humanethics/forms)

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal Investigator.

We acknowledge that the PhD (Nursing) student, Safinah Kisu Museene is also involved in this study.

Please quote the HREC reference no in all your correspondence.

Yours sincerely

Signed

PROFESSOR H BLOCKMAN
CHAIRPERSON, FHS HUMAN ETHICS
Federal Wide Assurance Number: FWAC0001637.
Institutional Review Board (IRB) number: IRB00001938

This serves to confirm that the University of Cape Town Human Research Ethics Committee complies to the Ethics Standards for Clinical Research with a new drug in patients, based on the Medical Research Council (MRC-SA), Food and Drug Administration (FDA-USA), International Convention on Harmonisation Good Clinical Practice (ICH GCP) and Declaration of Helsinki guidelines.

Appendix A-ii: Uganda National Council for Science and Technology Approval



Uganda National Council for Science and Technology (Established by Act of Parliament of the Republic of Uganda)

03/02/2015

Our Ref: SS 3662

Mrs. Kasi Muscoho
Jinja School of Nursing and Midwifery
Jinja

Re: Research Approval: A Structured and Collaborative Clinical Teaching Training Program and its Influence on Nursing Preceptors' Self Report Competencies and Confidence at a National Referral Hospital in Uganda

I am pleased to inform you that on 12/04/2015 the Uganda National Council for Science and Technology (UNCST) approved the above referenced research project. The Approval of the research project is for the period of 12/01/2015 to 12/04/2015

Your research registration number with the UNCST is **SS 3662**. Please, cite this number in all your future correspondences with UNCST in respect of the above research project.

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

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the research protocol or the consent form (where applicable) must be submitted to the designated local Institutional Review Committee (IRC) or Lead Agency for re-review and approval prior to the activation of the changes. UNCST must be notified of the approved changes within five working days.
3. For clinical trials, all serious adverse events must be reported promptly to the designated local IRC for review with copies to the National Drug Authority.
4. Unanticipated problems involving risks to research subjects/participants or other must be reported promptly to the UNCST. New information that becomes available which could change the risk/benefit ratio must be submitted promptly for UNCST review.
5. Only approved study procedures are to be implemented. The UNCST may conduct impartial audits of all study records.
6. A progress report must be submitted electronically to UNCST within four weeks after every 12 months. Failure to do so may result in termination of the research project.

Below is a list of documents approved with this application:

	Document Title	Language	Version	Version Date
1	Research Proposal	English	N/A	N/A
2	Informed Consent	English	N/A	N/A
3	Preceptors' Survey Questionnaire	English	N/A	N/A
4	Nursing Students Questionnaire	English	N/A	N/A
5	Pre-Preceptors Questionnaire	English	N/A	N/A

Yours sincerely,

Signed

Leah Nawegwa Omongo
for: Executive Secretary
UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

LOCATION/CORRESPONDENCE

The 6 Kintere Road, Ninda
P. O. Box 6881
KAMPALA, UGANDA

COMMUNICATION

TEL: (256) 414 705600, (256) 312 314800
FAX: (256) 414-234579
EMAIL: info@uncst.go.ug
WEBSITE: http://www.uncst.go.ug

Appendix A-iii: National referral hospital Approval

3

TELEPHONE: +256-41554008/1
HOSPITAL
FAX: +256 414-5325591
E-mail: admin@mulago.or.ug
Website: www.mulago.or.ug



MULAGO NATIONAL REFERRAL

P.O. Box 7051
KAMPALA, UGANDA

IN ANY CORRESPONDENCE ON THIS
SUBJECT PLEASE QUOTE NO...

THE REPUBLIC OF UGANDA

16th Jan, 2015.

Mrs. Kisu Museene
Principal Investigator
Jinja School of Nursing and Midwifery.

Dear Museene,

Re: Approval of Protocol MREC: 672: " A Structured and Collaborative Clinical Teaching Training Program and its Influence on Nursing Preceptors' Self Report Competencies and Confidence at A National Referral Hospital in Uganda.

The Mulago Hospital Research and Ethics Committee reviewed your proposal referenced above and hereby grant approval for the conduct of this study for a period of (1) year from 16th Jan. 2015 to 15th Jan, 2016

This approval covers the protocol and the accompanying documents listed below;

- All informed consents.
- Preceptors' survey questionnaire
- Questionnaire for nursing students.
- Pre- preceptors' questionnaire

This approval is subjected to the following conditions:

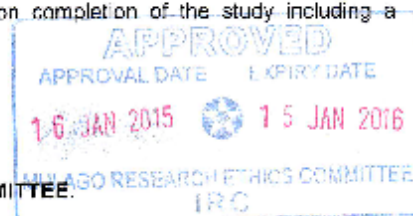
1. That the study site may be monitored by the Mulago research and ethics committee at any time.
2. That you will abide by the regulations governing research in the country as set by the Ugandan National Council for Science and Technology including abiding to all reporting requirements for serious adverse events, unanticipated events and protocol violations.
3. That you will submit this approved protocol and all accompanying documents for approval to UNCST before starting the study. In case of studies involving drug and medical devices, approval must be obtained from the National Drug Authority before starting the study.
4. That no changes to the protocol and study documents will be implemented until they are reviewed and approved by the Mulago Research and Ethics Committee.
5. That you provide annual progressive reports and request for renewal of approval at least 60 days before expiry of the current approval.
5. That you provide an end of study report upon completion of the study including a summary of the results and any publications.

I wish you the best in this Endeavour.

Signed

DR. NAKWAGALA FREDERICK NELSON
CHAIRMAN- MULAGO RESEARCH & ETHICS COMMITTEE.

Vision: "To be the leading centre of Health Care Services"



Appendix A-iv: Regional referral Hospital Approval

3

Jinja School of Nursing and Midwifery
P o Box 43 Jinja
Uganda
Email safinahm2002@hutmil.com
Tel: +256774463085

23rd January 2015

The Chairperson Research and Ethics Committee
Jinja Referral Hospital
P. O. Box 43
Jina



Handwritten signature and text: 'Approved Safinah'

Dear Sir,

Request to Pre test my Instruments for PhD study

Sir, I hereby submit my study synopsis and proposal: **"A structured and collaborative clinical teaching training program and its influence on nursing preceptors' self reported competencies and confidence at a National Referral Hospital in Uganda"** and request for approval to pretest my instruments for PhD study.

My research is a minimal risk study, which has already been approved by Human Research Ethics Committee, Faculty of Health Sciences, University of Cape Town (HREC REF: **888/2014**). My study supervisors are Prof. Pat Mayers and Prof. Sinegugu Duma from the University of Cape Town and the local Adviser is Dr. Rose Chalo Nabirye, from the Department of Nursing Makerere University. I am in contact with my supervisors with full support.

Thank you
Yours faithfully

Signed

Safinah Kisu Muscare
Student Number; MSNSA7001
D.Phil Nursing Student University of Cape town

CC: Prof Pat Mayers (Study supervisor)
CC: Dr. Rose Chalo Nabirye (Local Adviser)

Appendix B: Information Sheet for the Preceptors' Survey

Introduction

I am Safinah Kisu Museene, a PhD Nursing student at University of Cape Town (UCT), conducting a study entitled “*structured and collaborative clinical teaching training program and its influence on nursing preceptors self-reported competencies and confidence at a national referral hospital in Uganda*”. This study is towards a PhD Nursing degree.

Purpose of the study

The purpose of the study is to describe the current clinical teaching practices, design and implement and evaluate a structured and collaborative clinical teaching training program (SCCTTP) for clinical teaching of pre-registration nursing students at Mulago National Teaching and Referral hospital (MNTRH) in Uganda.

This study was approved by the UCT Faculty of Health Sciences Human Research Ethics Committee on the 27th November 2014 protocol number **HREC/REF: 888/2014**. The Uganda National Council for Science and Technology approved this study on the 12th January 2015 protocol number **SS 3662** and Mulago Hospital Research and Ethics committee approved it on 15th January 2015 protocol number **MREC: 672**.

The hospital management identified you as one of clinical nurses who play the role of a Preceptor for nursing students in this hospital that is why we are contacting you. All other nurses with similar roles will be invited to participate in the study.

In this study you will be asked to complete a self-administered questionnaire which will take approximately 35 minutes to be completed. You will be required to provide information about your ward, age, your basic and nursing education. You will also be asked about your understanding of the concepts clinical teaching, clinical teaching methods and models, challenges and ways of improving the clinical teaching challenges.

Risk /benefits

There are no anticipated risks to you as a participant of this study. Taking part and refusing to take part or withdrawing from the study will not affect your current or future employment. There are no direct benefits in participating in this study. Data from this study will be kept for not less than three years. The program to be developed aims at providing registered nurses with training opportunities and resources for their roles as preceptors. The outcome of the study will hopefully provide registered nurses with knowledge and skills for this role.

Payments

No payment will be made to you for participating in the study.

Your rights as a research volunteer

You are free to participate in the study without being denied any benefit as an employee of this organization and there are no penalties for withdrawal from the study.

Confidentiality

The results will be kept confidential to the extent allowed by the law. A study number will be used on the questionnaire not your name. The data from the questionnaire will be kept privately and will only be used for the purposes of this study.

In case you need further information or assistance while on this study;

Please do not hesitate to contact me on telephone number +256712812363 or +256774463085 and e mail- safinahm2002@hotmail.com.

My supervisor for the study is Associate Professor Pat Mayers, Division of Nursing and Midwifery, Faculty of Health Sciences, University of Cape Town

Email: Pat.mayers@uct.ac.za

Co Supervisor is Associate Professor Sinegugu Duma Division of Nursing and Midwifery, Faculty of Health Sciences, University of Cape Town

Email: sinegugu.duma@uct.ac.za

You may also contact

- i. Prof Marc Blockman the Chairperson Human Research Ethics Committee
University of Cape Town Faculty of Health Science
Email humanresearchethicscommittee@uct.ac.za
- ii. Uganda National Council for Science and Technology Email:
uncst@starcom.co.ug. Tel +256414250499/ +256 414705500
- iii. Chairperson Mulago National Referral Hospital P. O Box 70 51 Kampala. Tel
+256414 554001/6/8 Email.info@mulago.or.ug

Appendix C: Consent Form: Preceptors in the survey

I _____ have read the Information Sheet of the survey. I understand what is required of me and I have had all my questions answered. I do not feel that I am forced to take part in this study and I am doing so of my own free will. I know that I can withdraw at any time if I so wish and that it will have no bad consequences for me.

Signed:

Participant

Date and place

Researcher

Date and place

Appendix D: Nursing Preceptors' Survey Questionnaire

Code number.....

Thank you for participating in this study. This questionnaire will take approximately 35 minutes to complete. Please answer all questions. On completion, please return this in the envelope provided to the researcher or assistant.

1. Please indicate the ward in which you are working.....
2. Please indicate the department in which you are working.....
3. Please state your age in years.....
4. What is your highest level of basic formal education?
 - i. O Level []
 - ii. A-level []
5. What are your professional qualifications in nursing? Tick all that apply to you.
 - i. Diploma in Nursing []
 - ii. Diploma in Midwifery []
 - iii. Diploma in Comprehensive Nursing []
 - iv. Diploma in Mental Health []
 - v. Bachelor of Science in Nursing []
 - vi. Masters in Nursing/ Other Masters (Specify) [].....
6. What is your current role in this unit/ward? ***Tick only one of the four options***
 - i. Clinical Nurse []
 - ii. Sub In-charge []
 - iii. Ward manager []
 - iv. Other (Please specify).....
7. What do you understand by the term “***clinical teaching***” in nursing training? ***Please choose by ticking one of the three options that best suit your understanding.***
 - i. Letting nursing students to enter hospital wards and work. []
 - ii. Helping, modelling and guiding a nursing student to learn nursing skills in the clinical areas
[]
 - iii. Guiding nursing students on how to provide nursing care to patients. []

8. Are you involved in clinical teaching of nursing students? ***Tick one of the three options***

- i. Yes []
- ii. No []
- iii. I am not sure []

9. If **yes**, below are teaching methods used by some preceptors, ***Please tick the methods you use when teaching nursing students in your current unit.***

- i. Discussion []
- ii. Demonstration []
- iii. Role play []
- iv. Problem based teaching []
- v. Role modelling []
- vi. Case presentation and discussion []
- vii. Reflective method []
- viii. Explorative method []
- ix. Others (Please specify)..... []

10. In the table below are some of the teaching methods used during clinical teaching, In the Spaces provide, **satisfied=3, not sure=2 and not satisfied =1**. Please tick the level of your satisfaction when using the stated teaching methods in the appropriate box.

SN	Teaching method	Level of satisfaction while using the method		
		Satisfied (3)	Not sure (2)	Not satisfied (1)
i.	Lecturing			
ii.	Discussion			
iii.	Demonstrating			
iv.	Role playing			
v.	Problem based teaching			
vi.	Role modelling			
vii.	Case presentation and Discussion			
viii.	Supervision			
ix.	Objective structured Clinical assessment.			
x.	Student peer teaching			
xi.	One to one student teaching			
xii.	Reflective teaching			
xiii.	Explorative teaching			

11. In the table below are some of the challenges you may be facing while conducting clinical teaching, Please tick in the appropriate box to indicate your level of agreement or disagreement with the listed challenges of clinical teaching. Please note that, **Agree=3, Not sure=2, Disagree=1.**

SN	CHALLENGE	LEVEL OF AGREEMENT/DISAGREEMENT		
		AGREE (3)	NOT SURE (2)	DISAGREE (1)
	High work load			
i	Lack of training in clinical teaching skills			
ii	Lack of opportunity to update knowledge and skills			
v	Lack of incentives and rewards for clinical teaching			
	Poorly equipped facilities			
i	Lack of teaching and learning material for clinical teaching			
ii	Lack of clear guidelines for clinical teaching			
iii	Large numbers of students			
x	Too sick patients who need special attention			
	Limited Time for clinical teaching			
i	Un willing patients for clinical teaching			

12. In the table below are some of the suggestions to be done at Mulago National referral hospital to improve clinical teaching, please tick in the appropriate box to indicate your level of agreement or disagreement with the stated suggestions. Please Note that **Agree=3, Not sure=2, Disagree=1**

SN	SUGGESTIONS TO IMPROVE THE SITUATION	LEVEL OF AGREEMENT/DISAGREEMENT		
		AGREE (3)	NOT SURE (2)	DISAGREE (1)
i	There should be reference materials for clinical teaching			
ii	Incentives and rewards for clinical teaching should be initiated and sustained			
iii	A model for clinical teaching should be designed and used			
iv	Preceptors should be regularly oriented and updated with clinical teaching skills			
v	Facilities need to be equipped with material for patient care			
	Others please specify			

13. In the table below, tick in the appropriate box whether the listed types of training were provided/not provided to enable you to conduct clinical teaching.

SN	TYPE OF TRAINING	Provided	Not Provided
i	Clinical instructor course		
ii	Workshops		
iii	Tutor training		
iv	Ward meetings		
v	Short courses/study days		
vi	Self study		
vii	Journal reading		

viii	Other [please specify]		

14 Do you think the above training was adequate for you to conduct clinical teaching to pre-registration nursing students? **Please tick one of the two in the box below.**

- i. Yes []
- ii. No []

15 If the answer to the above question number 14 is **NO**, What suggestions do you propose to improve your competencies in clinical teaching? **Please tick one the four proposals that you agree with.**

- i. Do a structured short term clinical teaching training while working []
- ii. Do a nine months clinical instructor’s course at Tutors college Mulago []
- iii. Do the two years mentorship training at Nkozi University []
- iv. Do the three year tutorship training at Health tutors college Mulago []

16. In the table below, I have listed five concerns that may be considered not fully covered or provided for in the area of clinical teaching of nursing students. Please only tick the statements you feel are true

SN	CONCERNS OF CLINICAL TEACHING	
i	Students leave the ward when they are still incompetent	
ii	The equipment on my ward is not appropriate for clinical teaching	
iii	Nursing students do not have the right attitude for practice.	
iv	Preceptors are not trained to conduct clinical teaching	
v	Preceptors don’t use a uniform model for clinical teaching	

17. Please write down solutions to improve or eliminate the concerns you ticked in number 16 above.

.....

.....

.....

.....

18. Below are some of the clinical teaching models. Please tick any model that you have ever used in clinical teaching.

- i. Supervision model []
- ii. Preceptorship model []
- iii. Dedicated education unit model []
- iv. Clinical nursing development unit model []
- v. Clinical education unit model []
- vi. Five step micro-skill clinical teaching model []
- vii. One minute clinical teaching model []

END

Thank you for your cooperation and May God bless you.

Appendix E: Information Sheet for Participation in the training program (Intervention Group)

I am Safinah Kisu Museene, a PhD Nursing student at University of Cape Town, conducting a study a study entitled “*structured and collaborative clinical teaching training program and its influence on nursing preceptors self-reported competencies and confidence at a national referral hospital in Uganda*”. This study is towards a PhD Nursing degree.

Purpose of the study

The purpose of the study is to describe to describe the current clinical teaching practices, design and implement and evaluate a structured and collaborative clinical teaching training program (SCCTTP) for clinical teaching of pre-registration nursing students at the Mulago National Teaching and Referral hospital (MNTRH) in Uganda

This study was approved by the UCT Faculty of Health Sciences Human Research Ethics Committee on the 27th November 2014 protocol number **HREC/REF: 888/2014**. The Uganda National Council for Science and Technology approved this study on the 12th January 2015 protocol number **SS 3662** and Mulago Hospital Research and Ethics committee approved it on 15th January 2015 protocol number **MREC: 672**.

The hospital management identified you as one of clinical nurses who play the role of a Preceptor for nursing students in this hospital that is why we are contacting you. All other nurses with similar roles will be invited to participate in the study.

In this study you will be required to attend preceptorship training where you will be taken through various approaches and methods of clinical teaching. This training will take place at Mulago School of nursing and midwifery during working hours. Permission for your release and arrangements to cover up your duties will be sought from the relevant authority of the Hospital. During the training you will be required to complete two self-administered questionnaires which will be provided at the beginning and at the end of training.

Risk /benefits

There are no anticipated risks to you as a participant of this study. Taking part and refusing to take part or withdrawing from the study will not affect your current or future employment. Data from this study will be kept for not less than three years. It is hoped that you will benefit from your exposure to the training.

Payments

Transport expenses will be refunded. Meals and tea will be served during the training.

Your rights as a research volunteer

You are free to participate in the study without being denied any benefit as an employee of this organization and there are no penalties for withdrawal from the study.

Confidentiality

The results will be kept confidential to the extent allowed by the law. A study number will be used on the questionnaire not your name. The data from the questionnaire and other information gathered during training will be kept privately and will only be used for the purposes of this study.

In case you need further information or assistance while on this study; Please do not hesitate to contact me on telephone number +256712812363 or +256774463085 and e mail- safinahm2002@hotmail.com.

My supervisor for the study is Associate Professor Pat Mayers, Division of Nursing and Midwifery, Faculty of Health Sciences, University of Cape Town

Email: Pat.mayers@uct.ac.za

Co-Supervisor: Associate Professor Sinegugu Duma Division of Nursing and Midwifery, Faculty of Health Sciences, University of Cape Town.

Email: sinegugu.duma@uct.ac.za

You may also contact

Prof Marc Blockman, Chairperson Human Research Ethics Committee, University of Cape Town Faculty of Health Sciences

Email humanresearchethicscommittee@uct.ac.za

Uganda National Council for Science and Technology

Email: uncst@starcom.co.ug. Tel +256414250499/ +256 414705500

Chairperson Mulago National Referral Hospital

P. O Box 70 51 Kampala. Tel +256414 554001/6/8

Email.info@mulago.or.ug

Appendix F: Information sheet for the preceptors in the control group

Introduction

I am Safinah Kisu Museene, a PhD Nursing student at University of Cape Town (UCT), conducting a study entitled “*structured and collaborative clinical teaching training program and its influence on nursing preceptors self-reported competencies and confidence at a national referral hospital in Uganda*”. This study is towards a PhD Nursing degree.

Purpose of the study

The purpose of the study is to describe the current clinical teaching practices, design and implement and evaluate a structured and collaborative clinical teaching training program (SCCTTP) for clinical teaching of pre-registration nursing students at Mulago National Teaching and Referral hospital (MNTRH) in Uganda

This study was approved by the UCT Faculty of Health Sciences Human Research Ethics Committee on the 27th November 2014 protocol number **HREC/REF: 888/2014**. The Uganda National Council for Science and Technology approved this study on the 12th January 2015 protocol number **SS 3662** and Mulago Hospital Research and Ethics committee approved it on 15th January 2015 protocol number **MREC: 672**.

The hospital management identified you as one of clinical nurses who play the role of a Preceptor for nursing students in this hospital that is why we are contacting you. All other nurses with similar roles will be invited to participate in the study.

In this study you will be required to attend one day training. At this training you will be required to complete two self-administered questionnaires which will be provided at the appropriate time. Permission for your participation will be requested from the facility management and this will not affect any of your leave privileges.

Risk /benefits

There are no anticipated risks to you as a participant of this study. Taking part and refusing to take part or withdrawing from the study will not affect your current or future training. There are no direct benefits in participating in this study. Data from this study will be kept for not less than three years. The outcome of the study will inform future clinical teaching and training.

Payments

No payment will be made to you for participating in the study.

Your rights as a research volunteer

You are free to participate in the study without being denied any benefit as a nursing student of this organization and there are no penalties for withdrawal from the study.

Confidentiality

The results will be kept confidential to the extent allowed by the law. A study number will be used on the questionnaire not your name. The data from the questionnaire will be kept privately and will only be used for the purposes of this study.

In case you need further information or assistance while on this study;

Please do not hesitate to contact me on telephone number +256712812363 or +256774463085 and e mail- safinahm2002@hotmail.com.

My supervisor for the study is Associate Professor Pat Mayers, Division of Nursing and Midwifery, Faculty of Health Sciences, University of Cape Town

Email: Pat.mayers@uct.ac.za

Co Supervisor is Associate Professor Sinegugu Duma Division of Nursing and Midwifery, Faculty of Health Sciences, University of Cape Town

Email: sinegugu.duma@uct.ac.za

You may also contact

Prof Marc Blockman, Chairperson Human Research Ethics Committee, University of Cape Town Faculty of Health Sciences

Email humanresearchethicscommittee@uct.ac.za

Uganda National Council for Science and Technology

Email: uncst@starcom.co.ug. Tel +256414250499/ +256 414705500

Chairperson Mulago National Referral Hospital

P. O Box 70 51 Kampala. Tel +256414 554001/6/8

Email.info@mulago.or.ug

Appendix G: Informed consent form for participants in the intervention group

I _____ have read the [Informed Consent Information sheet for the Preceptors in the intervention group](#). I understand what is required of me and I have had all my questions answered. I do not feel that I am forced to take part in this study and I am doing so of my own free will. I know that I can withdraw at any time if I so wish and that it will have no bad consequences for me.

Signed:

Participant

Date and place

Researcher

Date and place

Appendix H: Informed consent form for participants in the control group

I _____ have read the [Informed Consent Information sheet for group B Preceptors](#). I understand what is required of me and I have had all my questions answered. I do not feel that I am forced to take part in this study and I am doing so of my own free will. I know that I can withdraw at any time if I so wish and that it will have no bad consequences for me.

Signed:

Participant

Date and place

Researcher

Date and place

Appendix I: Post-training evaluation check list baseline evaluation (day 01 or day 06)

Code number.....

Thank you for participating in this study, you will spend 30 minutes to complete this questionnaire, on completion, please hand it over to the instructor.

On completion, please return this in the envelope provided to the researcher or assistant

SECTION 1: Demographic data

1. Name (use your initials): _____
2. Date of completion: _____
3. How many years have you worked as a nurse? **Write it in years:**
4. Please indicate your ward and department.....
5. What is your highest level of basic formal education? **Please tick in the appropriate box**
 - i. O Level []
 - ii. A-level []
6. What is your highest professional qualification in nursing? **Tick all that apply to you.**
 - i. Diploma in Nursing []
 - ii. Diploma in Midwifery []
 - iii. Diploma in Comprehensive Nursing []
 - iv. Diploma in Mental Health []
 - v. Bachelor of Science in Nursing []
 - vi. Masters in Nursing/ Other Masters (Specify) []
7. What is your current role in your ward? **Tick in one of the options below**
 - i. Clinical Nurse []
 - ii. Sub In-charge []
 - iii. Ward manager []
 - iv. Others (Please specify).....

8. In the table below, indicate your agreement with the statement written in relation to your clinical teaching practice. **Please tick in the appropriate box for each statement.**

Please indicate your level of agreement with the following statements:	Level of Agreement					Unable to comment
	Fully Disagree 1	Disagree, 2	Neutral 3	Agree 4	Fully Disagree 5	
1. I consistently demonstrate how to perform clinical tasks						
2. I clearly explain the important element for the execution of a given task						
3. I create sufficient opportunity for the student to observe me						
4. I serve as a role model as to the kind of nursing students would like to become						
5. I observe students multiple times during patient encounters						
6. I give useful feedback during or immediately after direct observation of the student's patient encounters						
7. I help the student understand which aspects they need to improve						
8. I adjust my teaching activities to the level of experience of students						
9. I offer sufficient opportunities to students to perform activities independently						
10. I support students in activities that they find difficult to perform						
11. I gradually reduce the support given to allow students to perform certain activities more independently						
12. I ask students to provide a rationale for their actions						
13. I help students become aware of gaps in their knowledge and skills						
14. I ask students questions aimed at increasing their understanding						
15. I encourage students to ask me questions to increase their understanding						
16. I stimulate students to explore their strengths and weaknesses						
17. I stimulate students to consider how they could improve their strengths and weaknesses						
18. I encourage students to formulate learning goals						
19. I encourage students to pursue their learning goals						
20. I encourage students to learn new things						
21. I create a safe learning environment						
22. I take sufficient time to supervise students						
23. I am genuinely interested in the students						

9. Rate yourself on an overall assessment (1 – 10) of your own clinical supervision performance (10=excellent): _____/10

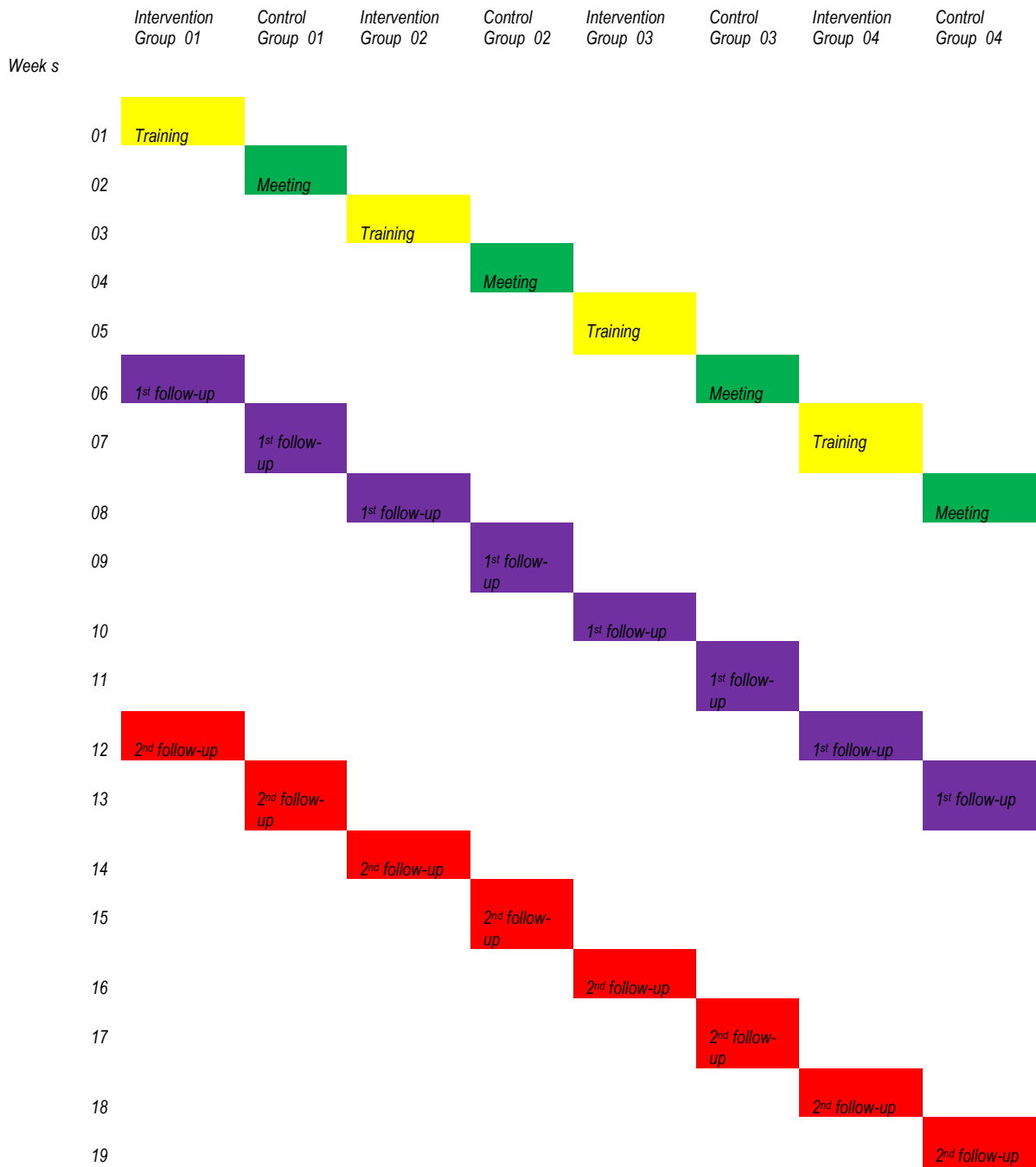
10. What are your strengths as a clinical Preceptor?

11. What areas would you like to improve on as a clinical Preceptor?

Appendix J: Session timetable for implementation of the SCCTTP

Days /Session Time	8. 30hrs	9. 30 hrs	10.30 hrs	11.00 hrs	12.00 hrs	13.00 hrs	14.00 hrs	15.00 hrs
Day 1	Self introductions, Expectations, Norms at the Training, Consent to be part of the study and objectives	Program of the training Pre test	Break	Key concepts (preceptorship, mentorship, preceptor, preceptee and clinical tutor/faculty	Key concepts (preceptorship, mentorship, preceptor, preceptee and clinical tutor/faculty	Lunch	Key concepts (preceptorship, mentorship, preceptor, preceptee and clinical tutor/faculty	Clinical teaching Goals and Objectives
Day 2	Recap of Day 1	Positive clinical teaching environment	Break	Positive clinical teaching environment	Clinical Teaching Strategies	Lunch	Clinical Teaching Strategies	Clinical Teaching Strategies
Day 3	Recap of Day 2	Clinical Teaching Strategies	Break	Clinical Teaching Strategies	Clinical Teaching Strategies	Lunch	Clinical Teaching Models	Clinical Teaching Models
Day 4	Recap of Day 3	Challenges of Clinical Teaching	Break	Challenges of Clinical Teaching	Challenges of Clinical Teaching	Lunch	Challenges of Clinical Teaching	Challenges of Clinical Teaching
Day5	Recap of Day 4	Assessment and Evaluation in Clinical teaching	Break	Assessment and Evaluation in Clinical teaching	Assessment and Evaluation in Clinical teaching	Lunch	Assessment and Evaluation in Clinical teaching	Assessment and Evaluation in Clinical teaching
Day 6	Recap of Day 5	Ethics and Legal issues in clinical teaching	Break	Ethics and Legal issues in clinical teaching	Ethics and Legal issues in clinical teaching	Lunch	Recommendations	Post test Preceptors self evaluation

Appendix K: Training and evaluation schedule: 5th June to 28th October 2015



Key

Yellow = Training

Green = Meeting

Purple = first follow

Red = second follow-up

Appendix L: Pre- post questionnaire for clinical teaching knowledge assessment

Code number.....

Thank you for participating in this study, you will spend 30 minutes to complete this questionnaire, on completion, please hand it over to the instructor.

On completion, please return this in the envelope provided to the researcher or assistant

SECTION 1: Demographic data

1. What are the initials of your names.....
2. What is the date today:
3. How many years have you worked as a nurse?
4. How many years have you conducted clinical teaching to nursing/midwifery students?
.....
5. What is the ward and department you are currently working on
6. What is your highest level of basic formal education? **Please tick in the appropriate box**
 - a. O Level []
 - b. A-level []
7. What is your highest professional qualification in nursing? Tick only the highest
 - Diploma in Nursing []
 - Diploma in Midwifery []
 - Diploma in Comprehensive Nursing []
 - Diploma in Mental Health []
 - Bachelor of Science in Nursing []
 - Masters in Nursing/ Other Masters (Specify) []
8. What is your current role in your ward? **Tick in one of the options below**
 - Clinical Nurse []
 - Sub In-charge []
 - Ward manager []
9. What is do you understand by term; “Preceptorship”? 2 marks
10. List four benefits of positive preceptorship to the Hospital management? (4 Marks)

11. List four benefits of positive preceptorship to the Preceptor? (4 Marks)
12. List four benefits of positive preceptorship to the Preceptee (student nurse/
midwifery)? (4 Marks)
13. List five barriers to positive preceptorship. 5 Marks
14. List five qualities of a good preceptor. 5 marks
15. List five roles of a preceptor in the clinical area. 5 marks
16. What is the goal of clinical teaching? 2 marks
17. List five clinical teaching strategies used in the clinical settings? 5 marks
18. List five factors considered in a conducive clinical teaching environment. 5 marks
19. List five clinical teaching challenges that you have encounter and mention how you
managed them. 5 Marks

20. List four methods of assessment used in the clinical area. 5 Marks

21. List three important ethical issues in clinical teaching? 3 Marks

22. If you are to score your competence confidence level in clinical teaching, Out of 100%, what would you score yourself?%

End

Thank you.

Appendix M: Marking guide for clinical teaching knowledge assessment questionnaire

1. What is do you understand by term; “**Preceptorship**”? 2 marks

Answer

Preceptorship is the process where a more experienced practitioner (preceptor) provides training and observation time to a less experienced trainee (Happell, 2009). For the SCCTTP, qualified nurses and midwives were the practitioners / preceptors and the nursing and midwifery students were the trainees/ preceptees

2. List four benefits of positive preceptorship to the Hospital management? (4 Marks)

Answer

- a. Increased satisfaction and retention of students, graduates and staff in the facility
- b. Promoted consistency and continuity of education and training in the clinical environment
- c. High opportunities for lifelong learning and professional development
- d. Increased development and enhancement of practitioners’ skills resulting in improved quality care delivery in the facility.

3. List four benefits of positive preceptorship to the Preceptor? (4 Marks)

Answer

- a. Job satisfaction
 - b. Personal development and self-fulfilment
 - c. Interpersonal, teaching and leadership skill development
 - d. Clinical skills through reflection and evaluation of own practice
 - e. Opportunity for lifelong learning and professional development
4. List four benefits of positive preceptorship to the Preceptee (student nurse/ midwifery)? (4 Marks)

Answer

- a. Guidance and coaching by clinical experts
- b. Maximising clinical time for learning and facilitating ~~fasten~~ the transition into independent practice
- c. Promotion of attainment of positive professional attitudes, behaviours and skills
- d. Increasing their psychomotor, communication, problem solving, assertiveness and confidence skills
- e. Decreasing stress and anxiety through a supportive teaching and learning environment.

5. List five barriers to positive preceptorship.

5 Marks

Answer

- i. Detrimental effects on productivity; some organisations especially the administrative arm think that when clinicians perform the role of teaching, they use the time for providing patient care. They view this as a way of wasting productive time for patient care and limiting productivity.
- ii. Practice designed not to include students; some organisations do not include education and training in their organisational philosophy and objectives. When education and training is lacking then preceptorship implementation becomes a big challenge.
- iii. Patients' expectations for care provider's attention; naturally many people prefer the competent practitioner's services and resist learner's services. This challenge can be solved through proper communication to clients/patients and supervisors availability for training and education.
- iv. Discomfort with the teaching role; some people are not comfortable with the teaching role, which may be due to lack of training or an issue of preference. With good leadership this can be solved.
- v. Short duration of the precepting experience; clinical areas are busy with activities which most of the time require immediate attention. This poses a challenge to clinical teaching though with good planning this can be managed.

6. List five qualities of a good preceptor.

5 marks

Answer

- i. They are clear, organised, accessible, supportive and compassionate
- ii. They are able to establish rapport, provide direction and feedback
- iii. They exhibit integrity and respect for others
- iv. They demonstrate clinical competence
- v. They utilise planning and orientating strategies
- vi. They possess a broad repertoire of teaching methods
- vii. They engage in self-evaluation and reflection (Stalmeijer et al., 2010)
- viii. They target their teaching to learners

7. List five roles of a preceptor in the clinical area.

5 marks

Answer

- a. Orienting the students to the clinical setting, patient population, health care team, and key aspects of nursing care delivery in the clinical environment
- b. Reviewing all nursing interventions/ procedures to be carried out by students.

- c. Directly supervising all clinical skills acquisition for all students performing the skill for the first time and until the preceptor is confident that the student can perform them independently
 - d. Fostering critical thinking by questioning the students with regard to the rationale for the nursing /medical interventions
 - e. Immersing and engaging students in clinical practice experience by integrating them into the practice setting.
 - f. Negotiating clinical learning objectives prior to each clinical experience
- ii. Assisting in the assessment of students performance through;
 - a. Giving verbal feedback
 - b. Completing written evaluation forms
 - c. Informing clinical faculty of student progress and any other issue related to clinical practice
 - iii. Assisting students to revise clinical objectives by noting progress and identifying additional experience together with the clinical faculty.

8. What is the goal of clinical teaching? 2 marks

Answer

- i. Increase the students' nursing/midwifery knowledge and skills and refine practice to efficiency and effectiveness levels
 - ii. Increase clinical independence of students and prepare students for optimum health outcome with patients and ensure that the students become competent, compassionate, independent and collaborative clinicians.
9. List five clinical teaching strategies used in the clinical settings? 5 marks

Answer

The strategies include; role modelling, case presentation, collaborative learning situation, sink and swim approach, manipulated structure approach, reflection and journaling, self-directed learning, one -minute method, assignment directed reading, coaching, role playing and demonstration

10. List five factors considered in a conducive clinical teaching environment. 5 marks

Answer

- 1. Availability of resources
- 2. Attitude and personality of the preceptors
- 3. Preparations made for student

4. Organization of the facility
5. Policies and protocol for student learning

11. List five clinical teaching challenges that you have encounter and mention how you managed them. 5 Marks

Answer

1. Inappropriate preparation of the preceptors for the role of precepting
2. Inadequate resources in the clinical area
3. Competing demands (nursing patients and precepting nursing/midwifery students)
4. Gaps in communication (schools/facilities/preceptors/students)
5. Large numbers of students who are beyond the capacity of the clinical facility
6. Lack of clear guidelines for precepting

12. List four methods of assessment used in the clinical area. 5 Marks

Answer

Include; “Mini-Clinical Evaluation Exercise (mini-CEX), Clinical Encounter Cards (CEC), Clinical Work Sampling (CWS), Blinded Patient Encounters (BPE), Direct Observation of Procedural Skills (DOPS), Case-based Discussion (CbD), Multi-Source Feedback (MSF)”. In Uganda we mainly use direct observation of procedural skill, Objective Structured Clinical Assessment (OSCE) and subjective reporting through confidential reports.

13. List three important ethical issues in clinical teaching? 3 Marks

Answer

1. Respect for person and Autonomy
2. Fairness and justice
3. Confidentiality
4. Privacy
5. Informed consent

14. If you are to score your competence confidence level in clinical teaching, Out of 100%, what would you score yourself?
%

End

Appendix N: Week 6 and week 12 post-training: preceptors' follow-up evaluation questionnaire

Code number.....

Thank you for participating in this study, you will spend 30 minutes to complete this questionnaire, on completion, please hand it over to the instructor.

On completion, please return this in the envelope provided to the researcher or assistant

SECTION 1: Demographic data

1. What is the initials of your names.....

What is the date today:

Self-evaluation of precepting skills, in the table below, indicate your agreement with the statement written in relation to your clinical teaching practice. *Please tick in the appropriate box for each statement.*

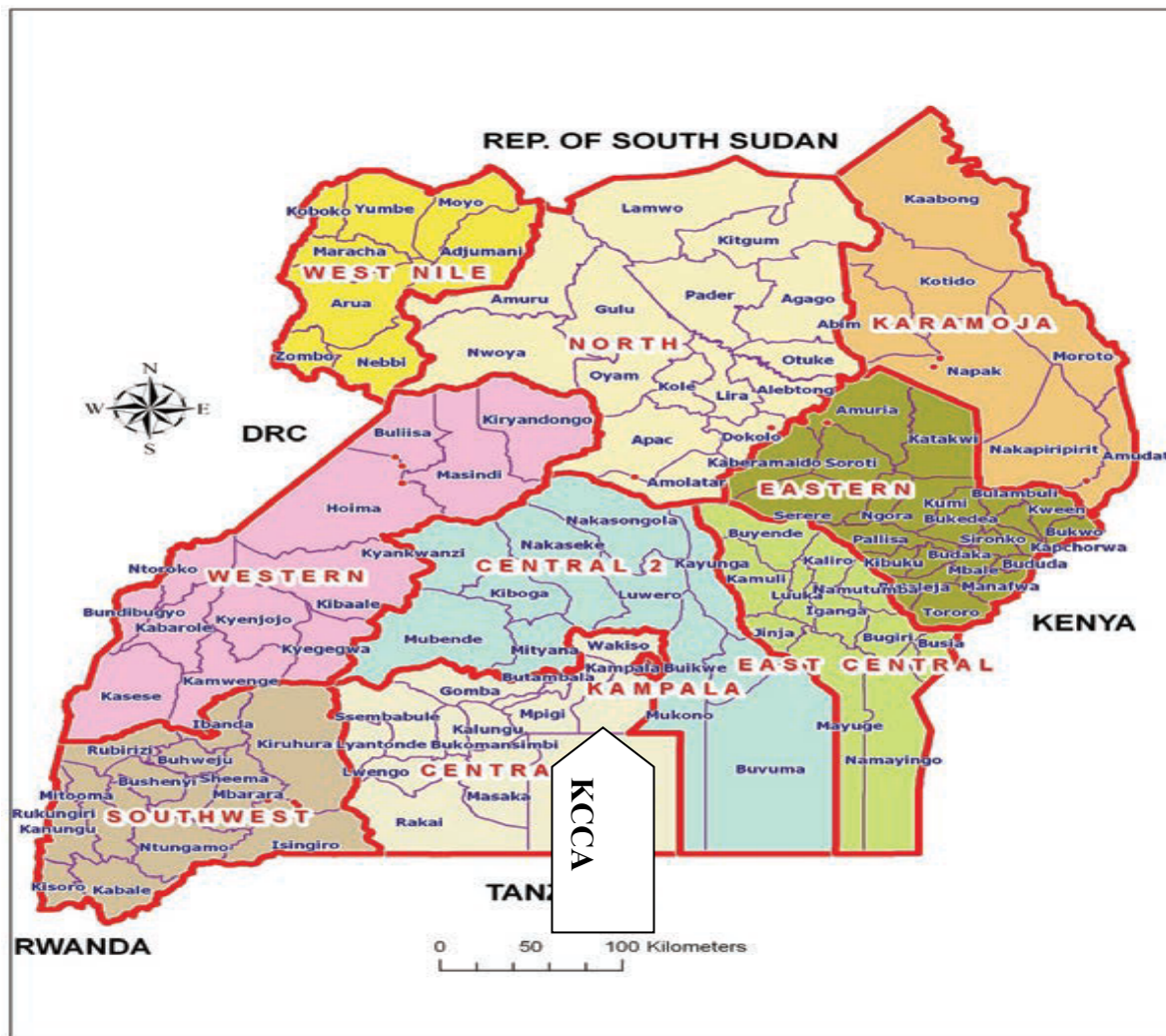
<i>Please indicate your level of agreement with the following statements:</i>	Level of Agreement					Unable to comment
	Fully Disagree 1	Disagree, 2	Neutra 1 3	Agree 4	Fully Agree 5	
1. I consistently demonstrate how to perform clinical tasks						
2. I clearly explain the important element for the execution of a given task						
3. I create sufficient opportunity for the student to observe me						
4. I serve as a role model as to the kind of nurse/midwife would like to produce						
5. I observe students multiple times during patient encounters						
6. I give useful feedback during or immediately after direct observation of the student's patient encounters						
7. I help the students to understand which aspects they need to improve						
8. I adjust my teaching activities to the level of experience of students						

9. I offer sufficient opportunities to students to perform activities independently						
10. I support students in activities that they find difficult to perform						
11. I gradually reduce the support given to allow students to perform certain activities more independently						
12. I ask students to provide a rationale for their actions						
13. I help students become aware of gaps in their knowledge and skills						
14. I ask students questions aimed at increasing their understanding						
15. I encourage students to ask me questions to increase their understanding						
16. I stimulate students to explore their strengths and weaknesses						
17. I stimulate students to consider how they could improve their strengths and weaknesses						
18. I encourage students to formulate learning goals						
19. I encourage students to pursue their learning goals						
20. I encourage students to learn new things						
21. I create a safe learning environment						
22. I take sufficient time to supervise students						
23. I am genuinely interested in the students						

2. Rate your own current clinical teaching competencies on a scale of 0 – 10, where 0 is no change in clinical teaching practice and 10 is excellent positive change in clinical teaching practice.....

3. Provide reasons with examples for your rating in number 4 above.

Appendix O: Map of Uganda showing whereabouts in KCCA the NRH is located



Appendix P: Permission to Use the MCTQ from Ms. Renée Stalmeijer (email copy)

Dear Museene,

Please find enclosed the original paper describing the Maastricht Clinical Teaching Questionnaire. I permit you to use this instrument under the condition that in your work you will always refer to the original publication.

Good luck with your PhD in Nursing!

All the best,

Renée Stalmeijer

Ms. Renée Stalmeijer, PhD

Director Master of Health Professions Education

www.maastrichtuniversity.nl/she

Assistant Professor Department for Educational Development & Research FHML

Affiliated Scholar The Wilson Centre for Research in Education

Universiteitssingel 60, 6229 ER, Maastricht

P.O. Box 616, 6200 MD Maastricht, The Netherlands

T +31 43 388 57 35 begin_of_the_skype_highlighting +31 43 388 57

35 FREE end_of_the_skype_highlighting F +31 43 388 57 79

Visiting Address UNS60 room N5.14

Appendix Q: The SCCTTP /Preceptor Training End of Day Evaluation

Date.....

Please make comments on the questions below

1. What did you find **useful** about today?
2. What was your **greatest learning**?
3. What is that **something** that you still need to learn/work on?
4. What aspects of today could have been improved? Suggestions for future sessions
5. What **feedback** do you have for the facilitators to the **training style?** (etc)
6. Any other comments, venue, timing etc

Appendix R: SCCTTP Trainers guide (Manual)



THE STRUCTURED AND COLLABORATIVE CLINICAL TEACHING TRAINING PROGRAM



TRAINER'S GUIDE

FAIMER[®]

Foundation for Advancement of International Medical Education and Research

Author: Safinah K. Museene
Supervisors: Prof. Pat Mayers
Prof. Sinegugu Duma

TABLE OF CONTENTS



About the Author.....	iv
Foreword.....	v
Acronyms.....	vi
Operational definitions.....	vii
Acknowledgement.....	ix
Schedule for Implementation.....	x
Section I: Preceptorship and its concepts.....	1
1.2 Additional reading/notes.....	2
1.2.1 Influencing Factors for becoming a Preceptor.....	2
1.2.2 Benefits of Positive Preceptorship.....	2
1.2.3 Barriers to preceptorship.....	3
1.2.4 Qualities of good preceptors.....	4
1.2.5 Roles of Clinical Faculty/Tutor in relation to teaching and management of students on clinical rotation.....	4
1.2.6 Roles of a Preceptor in relation to teaching and management of students on clinical rotation.....	5
1.2.7 Roles of a Preceptee while on clinical rotation in the clinical facilities and units.....	5
Section two: Strategies for clinical teaching.....	7
2.2 Additional reading/notes.....	9
2.2.1 Goal for Clinical teaching.....	9
2.2.2 Positive learning environment.....	10
2.2.3 Factors for consideration in setting a conducive environment.....	10
2.2.4 Teaching strategies.....	12
2.2.5 Factors that Influence Students' Learning.....	15
2.2.6 Clinical teaching models.....	17
Section three: Challenges of Clinical Teaching and Strategies to overcome them.....	19
3.2 Additional reading/resources.....	21
3.2.1 Strategies to overcome clinical teaching challenges.....	21
3.2.2 Stress.....	22
3.2.3 Conflict Resolution.....	23
3.2.4 Clinical Book.....	24
Section four: Assessment, Evaluation and Feedback in clinical teaching.....	25
Samples for the OSCE activity.....	27
Direct Care Clinical Experience: Preceptor's Evaluation of Student Learning.....	29
Self evaluation of precepting skills.....	33
4.2 Additional reading/resource.....	35
4.2.1 Assessment and Evaluation in clinical teaching and learning.....	35
4.2.2 What do we assess/ evaluate?.....	35
4.2.3 Constructive Feedback.....	36
Section five: Ethics and legal issues of clinical teaching.....	37
5.2 Additional reading/resources.....	38
5.2.1 Code of Ethics for Nurses.....	38
5.2.2 Ethical and legal issues to be observed in clinical teaching;.....	39
Appendices.....	42
Permission 1.....	42
Permission 2.....	43
Permission 3.....	44
Pictorial.....	45
References and biography.....	47

ABOUT THE AUTHOR



Safinah K. Museene is a Principal of a health training institution which trains nurses and midwives. She provides over all leadership for both theoretical and clinical instruction of the teaching and learning processes. She worked in department of obstetrics, gynaecology and neuro surgery at Mulago national teaching and referral hospital as a nursing officer (RM/RN) from 1993- 2000. There after she joined the education arena where she is working to-date.

Safinah has worked with many educational organizations and boards including Mulago school of nursing and midwifery, Kampala international university, Kibuli school of nursing and midwifery, Health Tutors college- Mulago and Butabika Clinical officers school. Currently she is the Principal of the Jinja school of nursing and midwifery.

She serves on many boards and councils including Uganda nurses and midwives examinations board, Palliative care Association in Uganda, Jinja regional referral hospital Board, International institute of health sciences Jinja, Iganga school of nursing and midwifery, Jinja district awards and sanctions committee and the Association of principals of health training institutions in Uganda.

She is a 2009 Sub Saharan Faimer Regional Institute (SAFRI) fellow and a faculty of SAFRI which operates from South Africa. She was an external midwifery examiner for Kigali health institute and a member of the team that developed the East Africa generic curriculum for child rights health professions She has contributed to the development of many nursing and midwifery curricula in Uganda.

Safinah has a Masters in Medical education, BscN, Advanced Diploma in Tutorship, Certificate in Registered nursing and midwifery. She studied at Mulago School of Nursing and Midwifery, Health Tutors' College Mulago, Agakhan University and Moi University. Currently she pursuing a PhD in Nursing at University of Cape Town in South Africa

FOREWORD



This structured and collaborative clinical teaching training program (SCCTTP) has been developed as a collaborative venture emphasising the competence-based and active learning approach. The collaboration is through sharing resources from the schools/colleges/Universities and Health facilities (hospitals and units) in order to support clinical teaching. The resources are in the form of the human resources (preceptors and tutors), equipment and sundries, knowledge, policies and philosophies which can promote safety and quality clinical teaching and training. It is anticipated that this collaboration shall strengthen the relationship (shared responsibility for clinical teaching) between health training institutions (tutors/faculties) and training hospitals / units (preceptors).

Kolb's experiential learning style theory states that learning takes place through four stages: Doing and having an experience (Concrete experience), Reviewing and reflecting on the experience (Reflective Observation), Concluding and learning from experience (Abstract conceptualisation) and Planning/trying out what you have learned (Active experimentation). In this manual it is anticipated that the core competencies for precepting will be enhanced through a short term training program that emphasises Kolb's and other learning theories. The competencies to be improved include: clinical teaching, problem solving, conflict resolving, provision of constructive feedback, assessment and evaluation, professionalism, respect and interpersonal skills. This envisaged after training, the preceptors will be able to utilise the acquired competencies in their day to day precepting role. The preceptors' manual will be used to guide them.

This manual has been organised into five sections: preceptorship and its related concepts, strategies for clinical teaching, strategies to overcome challenges of clinical teaching, assessment, evaluation and feedback in clinical teaching, and ethics and legal issues of clinical teaching. Each section has an introduction, learning outcomes, key concepts, focus questions, activities/ exercises (case studies and scenarios that illustrate key learning areas) and additional readings and notes.

The training has been designed as a six-day program. This time arrangement does not demand for many days off the working station. This innovation is an initiative to manage the Ugandan situations of human resource constraint. Improving preceptor's competencies while ensuring coverage of the clinical areas is the major focus of this innovation. The structured content is aimed at facilitating preceptors to improve on their competencies and confidence in conducting clinical teaching in an organized manner.

Safinah K. Museene, Prof. Pat Mayers and Prof. Sinegugu Duma
Division of Nursing and Midwifery
Faculty of Health Science
University of Cape Town

ACRONYMS



ANA:	American Nurses Association
ACN:	Assistant Commissioner Nursing
HoDN:	Head of Department Nursing
IUD:	Intra Uterine Device
JRRH:	Jinja Regional referral Hospital
JSNM:	Jinja School of Nursing and Midwifery
Mak :	Makerere University
MNTRH:	Mulago National Teaching and Referral Hospital
MoEST&S:	Ministry of Education Science Technology and Sports
MSNM:	Mulago School of Nursing and Midwifery
NGT:	Nasal Gastric Tube
N.o.K:	Next of Kin
RM:	Registered Midwife
RN:	Registered Nurse
SAFRI:	Sub Saharan Faimer Regional Institute
SCCTP:	Structured and Collaborative Clinical Teaching Training program
TIET:	Tutor Instructor Education and Training
UNMC:	Uganda Nurses and Midwives Council

OPERATIONAL DEFINITIONS



A preceptor is a practitioner (nurse/midwife) who assumes his/her daily work routines in addition to being a role model, socializer and an educator of nursing/midwifery students. The concept “preceptor” is used to mean a mentor in some settings.

Assessment is a process of gathering and discussing information from various sources in order to develop an understanding of what students know and can do with their knowledge as a result of educational experience.

Clinical tutor/Instructor is somebody attached to a nursing school/ college and has undergone clinical instructor training by a recognized institution.

Clinical teaching is a series of deliberate actions to guide the student in her/his learning. It involves sharing and establishing mutual experiences on both parts of teaching and learning. It is carried out in an environment of support and trust.

Conflict is where facts, desires or fears pull or push participants against each other. It can also be referred to as a form of friction, disagreement or discord arising within a group when the belief or action of one or more members is resisted or unacceptable by one or more members in the group.

Ethics is branch of knowledge that deals with moral principles or the study of right and wrong.

Evaluation is the act of determining whether the training in terms of inputs, process, output and impact was worthwhile in developing the intended product. For our case the intended product of clinical teaching in hospital is a nurse or midwife and for the SCCTP is the preceptor.

Individual differences are the variation amongst humans that distinguishes or differentiates them from one another and make one a unique individual. They either originate from their hereditary traits or from the environment they stay in.

Learning is a process through which people change as a result of experience (Kolb, 2014). This change may be behaviour, ideas, insight or perception. The learning is noted in the student’s change of personal and professional skills, attitude and behaviours as s/he practices nursing and midwifery care.

Legal issues in clinical teaching rotate around the supervisory role of a preceptor, confidentiality, duty to protect and provision of standard care. It is important to

appreciate that ethics are internal and are observed by self while legal issues are external and are enforced by stated laws.

Nursing ethics is a branch of applied ethics that concerns itself with the activities in the field of nursing. Nursing ethics share many principles with the medical ethics including the principles of beneficence, non-maleficence and respect for autonomy.

Preceptee is a nursing or midwifery student undergoing clinical rotation and being guided by a preceptor.

Preceptorship is the process where a more experienced practitioner (preceptor) provides training and observation time to a less experienced trainee (Happell, 2009). In this document, qualified nurses and midwives are the practitioners / preceptors and the nursing and midwifery students are the trainees/preceptees.

Stress is a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his /her resources and endangering his /her well being.

Teaching strategies are the procedures or direction to follow as you conduct clinical teaching. They may also be called methods or approaches of teaching.

Tutor/Faculty is somebody who has undergone training in tutorship education and has been certified by a professional council.

ACKNOWLEDGEMENT



I am very appreciative to all those who contributed to the success of this guide. The tireless efforts of my supervisors Professor Pat Mayers and Prof Sinegugu Duma of University of Cape Town is highly appreciated and recognized.

The nursing and education experts including Dr. Rose C. Nabirye (Mak HoDN), Dr. Jane Egau, (MoEST&S TIET) Ms. Beatrice Amuge (ACN MNTRH), Ms. Mary Mubeezi (UNMC), Mrs. Catherine Odeke Ag Commissioner Nursing (MoH), Ms. Sarah Namaganda (JSNM), Ms. Tinah Nakimera (JSNM), Ms. Judith Cherotich (JSNM) and Ms Christine Awuru (JRRH), Ms. Reginah Namukwaya (JRRH), Ms Joyce Namuli (JRRH), Ms. Jennipher M. Konso (MSNM) and Mr. Johnson Musinguzi (JSNM). Their contributions and efforts in the areas of clinical teaching and educational strategies are highly appreciated.

The preceptors of Jinja Regional Referral Hospital who were used in the pretesting of this guide are appreciated. Their input and recommendation were very useful in the designing process. I cannot forget the entire staff and students of Jinja School of Nursing and Midwifery, whose support and patience is highly appreciated.

To all of us I just say May Allah bless you abundantly!

Materials needed for implementation of the SCCTP

- i. At least two trainers
- ii. Writing material (booklets)
- iii. Bucher papers
- iv. Pens
- v. Pencils
- vi. Projector and laptop
- vii. Hand outs
- viii. Clinical teaching equipment from the skills laboratory e.g. linen models, beds, trolleys etc
- ix. Room with power and sitting facilities
- x. Clinical nurses
- xi. Masking tapes
- xii. Markers
- xiii. Refreshment

Schedule for Implementation

DAYS	8.00	8.30	9.30	10.30	11.00	12.00	13.00	14.00	15.00
1	Registration	Self introductions, Expectations, Norms Training objectives Consent to be part of the study	Program of the training Pre test	Break	Key concepts (preceptorship, mentorship, preceptor, preceptee and clinical tutor/faculty	Key concepts (preceptorship, mentorship, preceptor, preceptee and clinical tutor/faculty	Lunch	Key concepts (preceptorship, mentorship, preceptor, preceptee and clinical tutor/faculty	Clinical teaching Goals and Objectives
2	Registration/	Recap of Day 1	Positive clinical teaching environment	Break	Positive clinical teaching environment	Clinical Teaching Strategies	Lunch	Clinical Teaching Strategies	Clinical Teaching Strategies
3	Roll call	Recap of Day 2	Clinical Teaching Strategies	Break	Clinical Teaching Strategies	Clinical Teaching Strategies	Lunch	Clinical Teaching Models	Clinical Teaching Models
4	Registration/	Recap of Day 3	Challenges of Clinical Teaching	Break	Challenges of Clinical Teaching	Challenges of Clinical Teaching	Lunch	Challenges of Clinical Teaching	Challenges of Clinical Teaching
5	Roll call	Recap of Day 4	Assessment and Evaluation in Clinical teaching	Break	Assessment and Evaluation in Clinical teaching	Assessment and Evaluation in Clinical teaching	Lunch	Assessment and Evaluation in Clinical teaching	Assessment and Evaluation in Clinical teaching
6	Registration/ Roll call	Recap of Day 5	Ethics and Legal issues in clinical teaching	Break	Ethics and Legal issues in clinical teaching	Ethics and Legal issues in clinical teaching	Lunch	Recommendations	Post test Preceptors self evaluation

Section One:

PRECEPTORSHIP AND ITS RELATED CONCEPTS

This section will introduce the participants into the world of preceptorship. The session will help the preceptors to understand the meaning of the concepts related to preceptorship/mentorship and how they can appreciate the preceptorship role.

Section learning outcomes



This section will provide the preceptors with the opportunity to:

1. Explain the meaning of the key concepts: preceptorship/mentorship, preceptor/mentor, preceptee and clinical tutor/faculty.
2. Identify reasons for choice of preceptorship career
3. Identify qualities of a good preceptor
4. Identify roles of key stakeholders in preceptorship

Key concepts for the section

Preceptorship, Preceptor, Preceptee and Tutor/Faculty



Focus questions for the Section



- Why should one become a preceptor?
- What are the benefits of good preceptorship?
- What are various roles for the key stakeholders in preceptorship?

Activities for the session

1. Assign participants in groups to discuss the questions below;
 - a. What motivates qualified nurses and midwives to take on the preceptorship role?
2. Ask participants;
 - a. Individually to reflect on when they were approached by a junior nurse seeking guidance on whether it is worthy and beneficial to become a preceptor. (Five minutes)
 - a. To discuss in groups their reflections using the questions below and later present to the larger group;
 - What was your response?
 - If you encouraged her/him to take on the role, what were the benefits that you illustrated in your guidance?

- If you discouraged her/him what are the challenges and barriers you illustrated in your guidance?
3. In groups, assign participants to reflect and role play their personal experience as nursing/midwifery students.
 - a. How they perceived the three roles; preceptee, ward managers, tutors/faculty from nursing/midwifery school or university.
 4. Guide and direct the participants through the activities
 5. Refer the participants to the additional reading/ notes below.

1.2 Additional reading/notes

1.2.1 Influencing Factors for becoming a Preceptor

The decision to become a preceptor is based on various reasons. A few are listed below and more will be discovered during the training.

- i. Personal satisfaction and desire to give feedback to students
- ii. As a response to your own personal experiences with the previous preceptors, if it was good then you are motivated to take on the role of precepting.
- iii. The desire to bridge or correct a mistake /incompetence in practice and fear of passing out incompetent nurses and midwives.

1.2.2 Benefits of Positive Preceptorship

There are several benefits of preceptorship. These benefits are grouped under three categories; employer/facility leadership, preceptor and preceptee benefits. Some are provided below:

When there is positive preceptorship with in the health facility there is great satisfaction by **leadership/ Employer** in being involved in education and training. As part of education and training the facility leadership benefit in a way that there is:

- a. Increased satisfaction and retention of students, graduates and staff in the facility
- b. Promoted consistency and continuity of education and training in the clinical environment
- c. High opportunities for lifelong learning and professional development
- d. Increased development and enhancement of practitioners' skills resulting in improved quality care delivery in the facility.

The **Preceptors** benefit from positive preceptorship in a way that they feel satisfied as being part of the team that influence practices and training. This improves;

- a. Job satisfaction
- b. Personal development and self-fulfilment

- c. Interpersonal, teaching and leadership skill development
- d. Clinical skills through reflection and evaluation of own practice
- e. Opportunity for lifelong learning and professional development

The **Preceptees** benefit from positive preceptorship in a way that they are provided with an opportunity for:

- a. Guidance and coaching by clinical experts.
- b. Maximising clinical time for learning and facilitating the transition into independent practice.
- c. Promotion of attainment of positive professional attitudes, behaviours and skills.
- d. Increasing their psychomotor, communication, problem solving, assertiveness and confidence skills.
- e. Decreasing stress and anxiety through a supportive teaching and learning environment.

1.2.3 Barriers to preceptorship

There are also barriers to preceptorship, they include:

- i. Detrimental effects to productivity; some organisations especially the administrative arm think that when clinicians perform the role of teaching, they use the time for providing patient care. They view this as a way of wasting productive time for patient care and limiting productivity.
- ii. Practice designed not to include students; some organisations do not include education and training in their organisational philosophy and objectives. When education and training is lacking then preceptorship implementation becomes a big challenge.
- iii. Patients' expectations for care provider's attention; naturally many people prefer the competent practitioner's services and resist learner's services. This challenge can be solved through proper communication to clients/patients and supervisors availability for training and education.
- iv. Discomfort with the teaching role; some people are not comfortable with the teaching role which might be due to lack of training or an issue of preference. With good leadership this can be solved.
- v. Short duration of the precepting experience; clinical areas are busy with activities which most of the time require immediate attention. This poses a challenge to clinical teaching though with good planning this can be managed.

1.2.4 Qualities of good preceptors

Good preceptors possess the following qualities;

- i. They are clear, organised, accessible, supportive and compassionate

- ii. They are able to establish rapport, provide direction and feedback
- iii. They exhibit integrity and respect for others
- iv. They demonstrate clinical competence
- v. They utilise planning and orientating strategies
- vi. They possess a broad repertoire of teaching methods
- vii. They engage in self-evaluation and reflection
- viii. They target their teaching to learners

1.2.5 Roles of Clinical Faculty/Tutor in relation to teaching and management of students on clinical rotation

In a collaborative manner, as earlier observed, there is a great linkage between the hospital and the nursing colleges/universities that relates to service provision and clinical teaching. Identification of preceptors, coordination of clinical activities and liaising with the clinical area and the nursing college are examples of the linkages. The clinical faculty or clinical instructor/tutor is key in maintaining these relationships (University of Virginia School of Nursing, 2014).

Below are some of the roles that are performed by the clinical faculty/tutor to enhance positive preceptorship:

- i. Serving as resource between students and preceptors by;
 - a. Being available for students and preceptors either physically, telephonically or via the internet.
 - b. Regularly meet with the preceptors and students in the clinical areas at least once in every two weeks
 - c. Assuming a primary responsibility for problem solving of students issues
 - d. Evaluating preceptors and reviewing students' evaluations of preceptors
- ii. Ensuring that clinical objectives are met by;
 - a. Providing the preceptors with a copy of the program curriculum and clinical books
 - b. Assisting the students to formulate appropriate clinical goals
 - c. Guiding the students and preceptors to select alternative clinical experiences to support achievement of learning objectives.
 - d. Meeting with students at mid-semester to review progress towards individual and course objectives
 - e. Participating in regular clinical conferences with the preceptors and students.
- iii. Assessing students' performance for the clinical component for the course grade by reviewing all the clinical log books and reports/portfolio.
- iv. Performing the collaboration role by acting as link between the hospital and the school.

1.2.6 Roles of a Preceptor in relation to teaching and management of students on clinical rotation

The preceptor:

- i. Provides direct supervision and guidance of students by;
 - a. Orienting the students to the clinical setting, patient population, health care team, and key aspects of nursing care delivery in the clinical environment
 - b. Reviewing all nursing interventions/ procedures to be carried out by students.
 - c. Directly supervising all clinical skills acquisition for all students performing the skill for the first time and until the preceptor is confident that the student can perform them independently
 - d. Fostering critical thinking by questioning the students with regard to the rationale for the nursing /medical interventions.
 - e. Immersing and engaging students in clinical practice experience by integrating them into the practice setting.
 - f. Negotiating clinical learning objectives prior to each clinical experience
- ii. Assisting in the assessment of students performance through;
 - a. Giving verbal feedback
 - b. Completing written evaluation forms
 - c. Informing clinical faculty of student progress and any other issue related to clinical practice
- iii. Assisting students to revise clinical objectives by noting progress and identifying additional experience together with the clinical faculty.

1.2.7 Roles of a Preceptee while on clinical rotation in the clinical facilities and units

Every preceptee (nursing or midwifery student) while on clinical rotation in the health facilities and units, performs the following roles:

- i. Negotiates with the preceptor and faculty to schedule clinical days
- ii. Participates in the orientation to clinical areas
- iii. Notifies management about his or her absence and other challenges to clinical rotation
- iv. Provides written learning outcomes to the preceptors and tutors
- v. Demonstrates motivation initiative and willingness to learn in the clinical setting
- vi. Assumes responsibility for learning by asking pertinent questions and being prepared for clinical experience
- vii. Demonstrates stewardship by acting with integrity in an accountable and responsible way to ensure professional nursing care is provided to patients/clients.
- viii. Keeps faculty/tutors informed about clinical experience including any concern regarding students' role, client and student safety, standard of conduct,

- performance and ethics.
- ix. Requests appropriate assistance when doing a new skill or uncertain about how to perform a skill.
 - x. Only provides nursing/midwifery care to the level taught and determined competency by the preceptor and faculty/tutor.
 - xi. When performing any nursing intervention including administering medications, the student reviews information about the procedure/medicine and makes sure that s/he appreciates the indications, contra-indication, action, interaction, side effects and age specific considerations for the procedure/ medicine. S/he makes sure that s/he knows why the patients/clients are undergoing the procedure /receiving the medication and performs any indicated assessment.
 - xii. Assesses own progress towards meeting clinical outcomes and communicates learning needs to faculty/tutor and preceptor.
 - xiii. Is open to constructive criticism from faculty/tutor and preceptor and uses feedback to improve nursing practice
 - xiv. Meets clinical outcomes as indicated in the curriculum and course syllabus
 - xv. Completes written clinical performance self-evaluation, assessing the attainment of clinical outcome.

Source: Schupbach, J. E. (2012).

Section Two:

STRATEGIES FOR CLINICAL TEACHING

This section introduces the preceptors to various clinical teaching strategies. The participants will practice the use of various clinical teaching strategies and appreciate how and when to use them.



A preceptor demonstrating to nursing students on a simulator the insertion of a nasal gastric tube

This section will provide the preceptors with the opportunity to:

1. Describe the goals of clinical teaching
2. Demonstrate the ability to create positive clinical teaching/learning environment
3. Use various teaching strategies in the clinical setting.

4. Identify nursing clinical teaching models that are used in other settings

Key concepts for the section

- i. Clinical teaching
- ii. Learning
- iii. Teaching strategies
- iv. Clinical teaching models



- What are the goals of clinical teaching?
- How do you use the clinical teaching strategies?
- What are the factors that influence learning in the clinical areas?
- What are critical clinical incidents?



Activities for your session

1. Ask participants to;
 - a. Discuss the goals of clinical teaching.
 - b. Discuss the factors to be considered for setting a conducive environment for clinical teaching.
 - c. Identify various teaching strategies.
2. In groups, assign each participant a clinical teaching strategy: ask him/her to prepare and conduct clinical teaching using the assigned strategy in his/her small groups. Let her/him practice the skill and then present to the entire group in plenary.
 - a. Ask participants to critique the teaching process noting the following: organization and preparation, teaching methods/strategies used in the session; attitudes and responses of each (students and preceptor), teaching models used in the session, application of an ethical frame work while teaching, application of learning theories and nursing theories in teaching.
3. Allow preceptors to practice the various teaching strategies
4. Ask preceptors to reflect and demonstrate how they ensure that the core competences of nursing are learned.
5. Ask participants to read the scenario below and discuss using the stated questions.

Scenario 01

You are observing a nursing student passing a nasal gastric tube, as s/he starts, you comment; "You have not made a prayer"..... S/he continues with the procedure and before s/he positions the client... You quickly conclude that s/he does not know the procedure. You tell her/him that you do not have time to continue observing her/him when s/he doesn't know the procedure.

- a. What do you learn out of this scenario?
- b. Review with the participants the key issues to be considered while observing students' learning in the clinical area.

Key Issues for consideration while observing students when practicing/performing a procedure.

When conducting observation of a nursing student the following are very important to follow in order to enhance learning;

- Examine your values and biases that may influence observation of students in the clinical practice and judgment about clinical performance
- Do not rely on the first impressions for these might change significantly with further observation of the student
- Make a series of observations before drawing conclusions about clinical performance
- Give feedback to the student on a continual basis of observations made and inform the student of the progress in meeting the clinical competencies.
- Focus observations on the outcomes of the clinical or competencies to be achieved
- When the observation reveals other aspects of performance that need further development, share these with the student and use the information as a way of providing feedback on performance
- Discuss observations with students, obtain their perceptions of performance and be willing to modify when a different perspective is offered.

6. Guide preceptors in writing clinical journals and critical incidents.
7. Ask participants to brain storm on the clinical teaching models
8. Guide, direct and advise them to refer to session notes.

2.2 Additional reading/notes

2.2.1 Goal for Clinical teaching

Nursing is a service profession where learning the art and science of nursing and midwifery demands high cognitive skills and firmly rooted practice. Understanding and sharing the goals for clinical is very important. Burns, Beauchesne, Ryan-Krause, and Sawin (2006) stated five main reason/goals for clinical teaching. The goals are to;

- i. Increase the students' nursing/midwifery knowledge and skills
- ii. Refine practice to efficiency and effectiveness levels.
- iii. Increase clinical independence of students.
- iv. Prepare students for optimum health outcome with patients and ensure that the students become competent, compassionate, independent and collaborative clinicians.

In clinical teaching, the preceptor use of teaching strategies promotes the development of critical thinking, reasoning and communication skills, , facilitates the integration

of theory practice., The clinical teaching strategies further promote socialization, development of ethical framework, use of evidence based practice, development of psychomotor skills and working effectively with other discipline.

The clinical teaching strategies originate from various theories of learning (experimental, adult learning, cognitive, behaviorism, development and humanistic learning theories) maximize learning and acquisition of clinical competencies (Knowles, 1980; Kolb, 2014; Schupbach, 2012).

2.2.2 Positive learning environment

Maintaining the environment conducive and positive for learning is one of the core responsibilities of nursing preceptors. Burns et al. (2006) in their experience with first year students who had not begun clinical rotation, discovered that students always have expectations from their preceptors which include:

- Being approachable and non-intimidating to students.
- Making clinical teaching expectations clear.
- Challenging the student's knowledge.
- Allowing some independence.
- Providing encouragement.
- Communicating with students.
- Showing interest in the student's growth.
- Giving constructive specific feedback.
- Understanding that students learn at different pace and therefore exhibit patience for the slower learners.
- Modeling best practices and being good role models.
- Assisting students to overcome feelings of nervousness, lack of confidence, or feeling of being overwhelmed.
- Developing trust in students.

2.2.3 Factors for consideration in setting a conducive environment

There are several factors considered in setting a conducive clinical teaching environment, they include;

a. **Personality of Preceptors and preceptee**

The varying personalities for both students and preceptors need to be appreciated. Preceptors need to appreciate that students are human beings, they need respect and they are being prepared to become future clinicians. The students therefore need to be prepared in a humane manner. On the other hand, preceptors also have different personalities and work under stressful clinical conditions where there is no room for error (Happell, 2009; Myrick & Yonge, 2005; Yonge, Myrick, Ferguson, & Lughana, 2005). Valuing students enhances the preceptor's openness and respect for the student perspective. The more positive the relationship is, the better the learning environment and the more students learn clinical skills.

Much as the various preceptors' personalities need to be recognized and

appreciated, it should be noted that students have difficulties with hate; discrepancies across supervisors, supervisors who distance themselves and not willing to facilitate student work, supervisors who are too quick to correct or tell the students the next step, distant or non-communicative supervisors and supervisors who discuss negative feedback in public. Preceptors should avoid these attributes that hinder students' learning.

b. **Preceptor and Preceptee trust**

Trust is another issue of a positive learning environment. Preceptors need to value students' responsibilities in the clinical areas. Through spending time with students a mutual understanding is developed where openness, honest, respect, caring and a trusting climate is established. This climate promotes learning. A fearful learning environment limits the student's ability to think critically and also to communicate well with the preceptors. The preceptors' ability to value, work with and support the students is essential in providing an environment which is conducive for critical thinking and reasoning.



c. **Equipment and Physical environment**

The equipment and physical environment is another important issue in creating a conducive environment. Quiet and private spaces provide the best environment for clinical teaching and It reduces the overall destruction of high paced clinical activities. Students need space however small it might be to carry out their learning tasks and also reflect on clinical work. Private space should be used for providing feedback. The environment should have the required equipment, standards, policies and adequate staff. There should also be commitment to student learning and provision of diverse learning opportunities at the health facilities.

d. **Developing a good pre plan for students' clinical placement**

Preceptors need to develop good pre-plans for receiving students, and also hold brief interview with the students a day before they start working in the clinical facility. This helps them to determine the students' skills level and provide them chance to discuss clinical goals and learning styles that the preceptor expects students to follow. At this brief, preceptors share their history and learning styles, review facility policies and procedures and delineate students /facility expectations clearly. By doing this the preceptors promotes a positive clinical teaching environment.

2.2.4 Teaching strategies

There are a number of clinical teaching strategies that have been recommended by various clinicians. These strategies include role modeling, case presentation, collaborative learning situation, sink and swim approach, manipulated structure approach, reflection and journaling, self directed learning, one minute method, assignment directed reading, coaching, role playing and demonstration (Benner, 1982a; Furney et al., 2001; Linfield Good Samaritan School of Nursing, 2013; Schupbach, 2012; Ulrich, 2006). In the table below is a description, advantages and disadvantages of the clinical teaching strategies.

Teaching strategy	Advantages	Disadvantages
Modeling is where the preceptor demonstrates the skill while the student is in the background and learns in a passive manner.	It is best for less experienced students beginning to translate classroom knowledge into clinical setting. It is also useful in integration of complex problems, use of critical thinking and active listening	Bad practices/skill may be copied as the student assumes that everything done by a preceptor is right.
Collaborative learning situation is an approach where the preceptor develops or selects a case and the students work with the preceptor to discuss a possible case history, possible diagnoses, patient's needs, possible interventions, evaluation strategies and recommendations. The student and the preceptor share in decision-making.	It allows the preceptor and student to act as a team in the discussion of a case, development of differential diagnoses and developing nursing care plans. It can be used at all levels; for straightforward cases for beginners and complicated cases for advanced learners. It promotes brainstorming. It supports beginners especially in building their confidence as the preceptor works with them. It may be a step back for the preceptor for the advanced learners	It demands for more time from the side of the preceptor especially for the beginners

Teaching strategy	Advantages	Disadvantages
Sink or swim approach is where a preceptor is responsible for the students' action and available for consultation. The student is left to work independently.	It is good for advanced students who need independence to put into practice the previous experience.	It causes a lot of anxiety for beginner as they may still need close support from the preceptors.
Reflection is an act of mirroring of what has taken place in the student clinical life experience. Here the students take information, think about it, integrate it, and apply it to the appropriate patient or scenario.	Promotes critical thinking and reasoning. It enhances student independence in patient care	It requires skillful facilitation and patience from the preceptor
Manipulated structure approach in an approach where cases are carefully selected by the preceptor for the student's skills level in an effort to improve basic skills. This is aimed at giving students early success and boosts their confidence	It creates a positive learning environment and positive communication between the preceptors and the students. It is highly rewarding	It may be time consuming.
Self-directed learning Here the students develop their own learning goals and questions. They also develop their plan of care with minimal or no close supervision and guidance from the preceptor.	It is a very effective strategy for transitional and competent proficient learners with experience who have developed some skills, better understanding and judgment of their learning needs.	It may be misleading to the beginners as they may not know what is required at their levels
Assignment directed reading is where a preceptor assigns a student with a topic to search for more information and write a synopsis. It is very useful especially for beginners.	It is an active learning approach where a student can act as a teacher. Senior students adapt this as an approach to learning.	It requires facilitation and management of correction of weaknesses in time
Role play It is a strategy where learners perform a skit that represents the intended skill to be learnt.	It is exciting and good for all stages of learning. It mimics the real world.	Not all skills can be role played

Teaching strategy	Advantages	Disadvantages
<p>One minute method is an approach mainly used in medicine though it can as well be used in nursing especially when there is limited time. In this approach the student assesses the patient and describes to the preceptor what is going on in a very brief time. The preceptor then challenges the student to provide supporting information to defend his or her assessment. The student is free to draw conclusions from all available resources and critique. The preceptor then provides immediate feedback about what was done well and provides generalized information in which the student can apply to later cases.</p>	<p>This approach promotes critical thinking and decision-making. It helps the student to immediately appreciate learned skills. Later allows the preceptor to probe and check learning</p>	<p>It requires preparation of the preceptor.</p>
<p>Coaching is when the preceptor guides the student verbally through a test or procedure with an intention of keeping the student safe and efficient with a technique they have not mastered. For example when teaching nursing and midwifery students insert an Intra Uterine Device (IUD). The preceptor will first use a dummy for some time with the student through guidance and positive feedback until s/he is sure that the students are able and then they are allowed to handle real patients.</p>	<p>It strengthens professional relationship between the student and preceptor. It gives nursing students confidence to practice hence acting as motivation to learn.</p>	<p>It requires experience for the preceptor to develop the skill. It might be boring to the fast learners.</p>
<p>Journaling is a strategy where students express their thoughts about the clinical week/ learning experience through reflection, research and writing. This strategy is mainly used by students at bachelors level.</p>	<p>It promotes critical thinking and reasoning and therefore promoting constructive active learning. It promotes lifelong learning as the action of reflection requires further reading to make sense of what you are doing.</p>	<p>It is challenging to beginners. It requires some level of critical thinking, reasoning and writing.</p>

Teaching strategy	Advantages	Disadvantages
Demonstration is a strategy where a preceptor performs a skill while the students observe and then requests them to do the same while she observes and corrects them to ensure that the skill is learned.	It is the best method for all beginners. Promotes learning as the students directly observe the performance of skill. It allows immediate questions and immediate responses	It is time consuming. It is best for few numbers of students. It requires experience on the preceptor's side.

2.2.5 Factors that Influence Students' Learning

There are several factors that promote learning, they include;

Belief in self

Students learn when they believe in themselves and when they have a need to learn. Open communication, mutual trust, and a supportive relationship between the preceptor and the preceptee will support the belief factor and promotes learning (Elisabeth, Christine, & Ewa, 2009)

Learning style

Students have different learning styles; there are those who learn by hearing (auditory style), some learn by seeing (visual style), and some learn by performing (kinesthetic). Linfield Good Samaritan School of Nursing (2013) in their preceptors manual stated that though students have learning style preference, a great number of them process information through multiple senses. Shams and Seitz (2008) and Schupbach, (2012) stated that learning retention happens at 10% of what the student **reads**, 20 % of what the student **hears**, 30 % of what the student sees, 50 % of what the student **sees** and **hears** and 75-90 % of what student **hears, sees and does**.

It is therefore very important to demonstrate, communicate and also allow students to perform in order for them to learn the required skill. Role modeling by the preceptor includes "thinking out loud" to analyze her/his clinical judgments. Burns et al. (2006) stated that the practice of thinking aloud assists students to gain insight of the concept and skills for formulating thoughtful questions. Students should be encouraged to demonstrate psychomotor skills, clinical judgment, formation of professional identity, as well as, reflection and self-evaluation to improve learning.

Knowing that the environment you are working in is safe

Students learn best in a clinical environment that is safe and respectful (Henderson, Briggs, Schoonbeek, & Paterson, 2011). Students need a welcoming environment and where they feel safe and supported when they make mistakes. Students need to feel supported, rather than being judged. Respect and recognition of individuality is essential for a safe environment as it promotes learning skills in the clinical areas.



A Photo of a Preceptor interacting with nursing students, please note the respect, relaxation and comfort demonstrated in this photograph

Organization and planning

Students learn when proper arrangements and plans have been made for them (Schmidt, 1993). As a preceptor, you need to determine:

- The skills the students need to practice
- The kind of diagnoses they will learn
- The usual medication and diagnostic tests they will encounter
- The non-patient care experience (leadership, policy, legal, safety etc) you will provide and,
- The need for clarity/consultation with the faculty.

Proper organization and planning promotes learning.

Work allocation of 2nd year nursing students on clinical rotation for surgical nursing

Ward: x (surgery)

Period:

Name of Student	Monday	Tuesday	Wednesday	Thursday	Friday
SKM	Pre-operative care	Provide immediate post operative nursing care	Review patients' laboratory results before surgery	Formulate peri operative nursing diagnosis	Assist surgeon in provision of informed consent
SN	Review patients' laboratory results before surgery	Provide immediate pre-operative care	Formulate peri operative nursing diagnosis	Assist surgeon in provision of informed consent	Provide immediate post operative nursing care
TNN	Formulate peri operative nursing diagnosis	Review patients' laboratory results before surgery	Assist surgeon in provision of informed consent	Provide immediate pre-operative care	Provide immediate post operative nursing care
JM	Assist surgeon in provision of informed consent	Formulate peri operative nursing diagnosis	Pre-operative care	Provide immediate post operative nursing care	Review patients' laboratory results before surgery
AN	Provide immediate post operative nursing care	Assist surgeon in provision of informed consent	Review patients' laboratory results before surgery	Formulate peri operative nursing diagnosis	Provide immediate pre-operative care

Prepared by Sr. SK

Ward In-charge

2.2.6 Clinical teaching models

There are a number of clinical teaching models, which are aimed at providing a framework for clinical teaching and fostering learning in the clinical area. A number of them have been outlined below:

The supervision clinical teaching model is widely used in many nursing programs worldwide (Chisengantambu, Penman, & White, 2005; Hall-Lord, Theander, & Athlin, 2013). It involves a group of students being supervised by a preceptor either on a one to one or in a small group basis. In this framework the preceptor who may be an employee of the training institution takes on the role of

supervising students in the clinical areas and also making close linkages between the school and the clinical facility.

The collaborative or Partnership model (dedicated education unit or clinical nursing development unit or clinical education unit model) also known as the dedicated education unit/ clinical nursing development unit/clinical education unit model refers to the clinical teaching model that operate on structured partnership between the health care agency and tertiary institution (Gaberson & Oermann 2010; Newton, Jolly, Ockerby, & Cross, 2012). The advantages of this model include the fostering of collaboration between clinicians and academia, availability of opportunities for training of clinicians/preceptors, encouragement of peer teaching and extended placement of students in the clinical area.

The five steps micro-skills clinical teaching model helps the learner to learn and also enables the clinical teacher to teach, assess, instruct and provide feedback effectively. This model, according to Neher, Gordon, Meyer, and Stevens (1992), promotes clinical teaching and learning, commitment, probing for evidence, teaching of the general rules, learning and correction of mistakes. The main advantage of this model is the promotion of learning in the busy clinical area using a simple structured guided approach.

The preceptorship model focuses on the relationship between the preceptor (experienced clinical nurse/midwife) and preceptee who is a nursing/midwifery student (Gaberson & Oermann 2010; Happell, 2009). In this model, the preceptor acts as a role model with a responsibility to inspire students to develop clinical skills and appreciate the importance and inherent values of nursing practice. The advantages of this model include enhancement of self-esteem and confidence, promotion of the development of critical thinking and judgment skills, promotion of personal and professional satisfaction and reduction of staff turnover (DeCicco, 2008; Gaberson & Oermann 2010; Myrick & Yonge, 2002)

The novice to expert model (Benner, 1982b) is another widely used model in nursing. This model recognizes the importance of incremental skill performance based on experience and education. It states that becoming an expert requires gaining experience through the five levels, i.e. novice, advanced beginner, competent, proficient and expert. The advantage of this model is the promotion of proportional learning or surface learning until a whole in-depth understanding is acquired.

This section introduces the preceptors to the challenges of clinical teaching and precepting. The session will help the preceptors to recognize clinical teaching challenges and identify strategies for managing them.

Section Three:

CHALLENGES OF CLINICAL TEACHING AND STRATEGIES TO OVERCOME THEM

This section introduces the preceptors to the challenges of clinical teaching and precepting. The session will help the preceptors to recognize clinical teaching challenges and identify strategies for managing them.

Section learning outcomes

This section will help you to provide the preceptors with the opportunity to;

1. Identify various challenges associated with clinical teaching
2. Demonstrate management of various clinical teaching challenges
3. Identify stressors to nursing/midwifery students on clinical rotation

Key concepts for the section

- i. Clinical teaching challenges
- ii. Conflict
- iii. Stress
- iv. Individual differences

Focus questions for the Section

- What are clinical teaching challenges?
- What are the commonest causes of students' misconduct during clinical rotation?
- How do you manage challenges of clinical teaching?

Activities for the session

1. Assign participants in three groups to discuss using the guiding questions below;
 - a. What challenges have you ever encountered while conducting clinical teaching?
 - b. What strategies did you use to manage the stated challenges?
2. Ask participants to:
 - a. Role-play three of the challenges cited above.
 - b. Discuss the issues reflected in the role-play.

3. Ask participants to read and discuss scenario 02 below;

Scenario 02

Five nursing students were allocated on your ward. Almost at the end of the clinical rotation, student K, who did not attend the first day orientation and has scarcely been seen on the ward confronts you with a fully recorded clinical book requesting you to authenticate her cases. She has two months remaining to complete her program and she desperately needs your signature. Due to her lack of attendance you decline to sign. Later you discover she has forged your signature.

- a. What weaknesses have you discovered in this scenario 02
- b. Illustrate how best you would have managed her to prevent this situation occurring
- c. How would you deal with forgery of your signature?

Key points for learning from scenario 02 above

Preceptors responsibility in regard to receipt of a new group of students on clinical rotation and thereafter:

- i. Meet them on the first day and confirm that they are all present.
- ii. Obtain their expectation and clinical rotation objectives.
- iii. Determine the clinical competence level.
- iv. Explain to them the ward routine.
- v. Tell them your procedure of management especially in relation to patient care and student management.
- vi. Compile a duty roster for them
- vii. Either on weekly or daily basis assigns them duties and supervises them. This promotes individual responsibility and allows you to monitor their availability.
- viii. Instruct the students to document in their notebooks all the procedures they perform with you.
- ix. Routinely cross check their clinical books

4. Guide, direct and recommend additional readings/notes.

3.2. Additional reading/resources

3.2.1 Strategies to overcome clinical teaching challenges

The challenges encountered during clinical teaching range from stress of handling very stubborn students (Chang, Lin, Chen, Kang, & Chang, 2015) to the stress of nursing very sick patients. The challenges include:

- Inappropriate preparation of the preceptors for the role of precepting
- Inadequate resources in the clinical areas
- Competing demands (nursing patients and precepting nursing/midwifery students)
- Gaps in communication (schools/facilities/preceptors/students)
- Large numbers of students who are beyond the capacity of the clinical facility
- Lack of clear guidelines for precepting

These challenges can be minimized by:

- i. Proper communication and highlighting needs and policies of the clinical area: Communicating the set goals and assignment to students on clinical rotation including briefing them on issues of clinical experience a day before patient encounter is an important practice in managing clinical challenges. Yonge (1997) in a study of assessing and preparing students for distance preceptorship placements recommended that the preceptor, on the day before the patient encounter, should describe the pressures of the clinical area to the students. S/he establishes the students' learning styles and needs before the first day on the ward/unit. Through orientation and reviewing rotation/clinical objectives, s/he also sets priorities for the students to accomplish and set activities to be completed by the end of each day which s/he has to communicate to students regularly.
- ii. Proper planning and determining the additional help needed for precepting students. This help may be from another staff member or service provider who may be requested to teach or spend time with the students in accessory facilities such as laboratories or the pharmacy. You may also plan to use the Internet to answer a question for unanswered issues for discussion thereafter. In summary, the preceptor needs to anticipate scenarios that may arise when she is not available and have pre-planned interventions to manage such situations
- iii. Deciding on how to provide care to the patients and also conduct clinical teaching can also be used to manage challenges of clinical teaching. This can be done by:

- a. Working with the student as you assess and while the student observes what you are doing.
 - b. Having students take the history, then you do the physical examination and rotate tasks for the next patient.
 - c. Helping the student recognize what to include in a focused history and examination for the presenting concern without going into contextual or tangential issues.
 - d. Assigning the student to patients whom you know are able to tolerate extended time with students.
 - e. Set time limits for every student for clinical teaching.
- iv. Allocating time for case presentation through setting limits on length of presentation time is also used to minimize challenges of clinical teaching. This can be done by assigning a clear time limit for students' presentations. For example you may assign a student to only present history and physical examination in five minutes then diagnosis and care plan in five minutes while still with the patient and then other information can be presented later. This helps to manage time manage time well without stressing the patient by over staying at the bed side.
 - v. Proper allocation and utilization of resources and advocating for additional resources either from the colleges of nursing or from the health facility is another way of improving working environment and decreasing stressors in the clinical area.
 - vi. Appreciating the various stressors in the clinical area and their mitigation.
 - vii. Ensuring that guidelines for precepting are provided and adhered to.

3.2.2 Stress

Studies on nursing education have reported that clinical rotation is very stressful to students (Museene, 2015; Timmins & Kaliszer, 2002). The stressors discovered include:

- i. Fear of handling patients
- ii. Dealing with death and dying
- iii. Handling very ill patients
- iv. Handling emergencies
- v. Fear of being reprimanded when an unintentional mistake is made during the learning activities
- vi. Work load
- vii. Interpersonal relations (staff, tutors, preceptors and fellow students)
- viii. Academic stress (examinations, assignment, and completion of clinical books)
- ix. Social economic stress (fees clearance)

- x. Exhaustion (both students and preceptors)
- xi. Limited time allocated for clinical rotations.
- xii. Congested wards with patients and students.
- xiii. Inadequate facilitation/ reward for precepting (tutors /preceptors).
- xiv. Being reprimanded in front of staff and patients.
- xv. Conflict between ideal and real.



A well prepared trolley for general assessment of a mother after delivery: Some of the resources on this trolley may be lacking in some settings.

The stressors listed above, if not well managed, may result into clinical teaching challenges. Some of the stressors are inevitable and others can be prevented and controlled by proper precepting. As preceptors, we need to understand our students, guide and be available for them. Sometimes students just need somebody to listen to them or guidance from a senior person in the profession.

3.2.3 Conflict Resolution

Conflicts are unavoidable where there are two or more people. Conflicts can create challenges to clinical teaching. Resolved conflicts between the preceptor and the student promote personal and professional growth. It leads to goal achievement, increased mutual respect, and enhanced ability to work together (Linfield Good Samaritan School of Nursing, 2013; Museene, 2015). Conflicts can be resolved using the following steps:

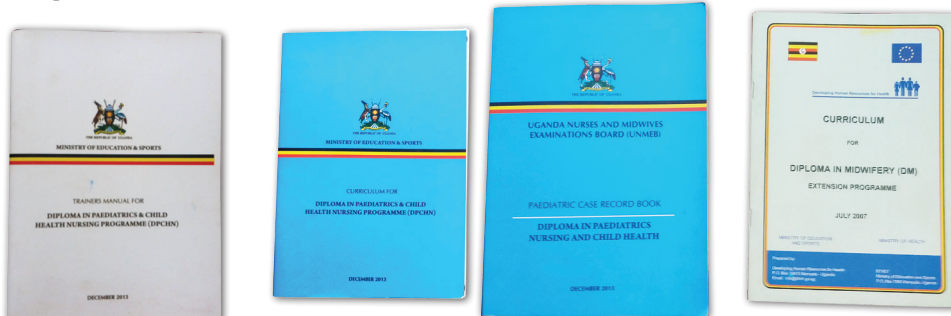
- i. In situations of conflict, a preceptor is advised to remain calm and try to build mutual respect by being courteous and engaging in positive feedback with the student. Listen to the student with empathy and understanding. Use

- “I” and “we” messages instead of “you” messages. Clarify feelings expressed by the student. If helpful, allow the student to vent his/her feelings to relieve frustration and encourage problem solving.
- ii. Listen carefully to the student, and accurately identify the issues clearly and concisely from both viewpoints. Understand how the student’s motivation and goals have resulted in him/her adoption of a particular position. Recognize how the conflict is affecting the work relationship between you and the student. Express respect for the student’s opinion and the need for his/her cooperation to solve the problem.
 - iii. Separate “the problem from the person” with respect to the student so that real issues can be discussed without damaging the working relationship. Identify the root cause of the problem using neutral words, and analyze the opportunity for improvement. Discuss the situation in a non-confrontational way until both of you agree as to what the problem is.
 - iv. Explore solutions to resolve the problem. Allow the student a fair amount of input in generating solutions. Be open to all ideas, including those one that were not considered before. Arrive at a workable solution and action plan that is acceptable to both (you and the student).
 - v. Implement the action plan and determine its effectiveness in resolving the conflict.

3.2.4 Clinical Books

Uganda as in other countries utilises clinical books to guide and assess clinical skill acquisition. The clinical books are used to prescribe competencies for the various course units in nursing and midwifery, which students must complete before the end of their training. Completion of these competencies is evaluated at regular intervals until the final stage of professional council registration. Every competence in the book should be verified and authenticated by a qualified nurse. Management of these books has been cited as one of the challenges of clinical teaching which is either student- or preceptor- related. Having a mutual understanding with the students and encouraging them to complete these books when they are still with you is the best way to avoid challenges related to clinical books management.

Samples of clinical books



Section Four:

ASSESSMENT, EVALUATION AND FEEDBACK IN CLINICAL TEACHING

This section introduces the preceptors to various assessment, evaluation and feedback approaches.



A Photo of a Preceptor Assessing Students

Session learning outcome

This session will enable you to provide opportunities to preceptors to;

1. Identify various ways of assessing and evaluating students' learning
2. Demonstrate best practices of assessment, evaluation and provision of feedback

Key concepts for the section

- i. Assessment
- ii. Evaluation
- iii. Feedback

Focus questions for the Section



- How do you determine that students are learning the skills to manage patients /clients in your facility?
- What are the various approaches used to assess and evaluate learning in the clinical settings?

Activities for your session

1. Ask participants to:
 - a. Reflect and recall the various assessment, evaluation and feedback approaches that were used during their training or those that they have ever used in clinical teaching.
 - b. Role-play in groups of three; each group focusing on one of the following: Assessment, Evaluation or Feedback.
 - c. Present the role-play to the whole group.
 - d. Provide feedback about the role play citing approaches used, what worked well and the limitations observed
2. In groups of five participants, read and critique the feedback scenarios below:

Participants (Core Group)

You are the preceptor taking a group of five nursing students for a bed side clinical teaching session. The student you request to demonstrate performs the examination of the abdomen poorly. You tell the student about his/her poor performance in front of all the other students. You make the following points:

1. The student has poor skills and is at risk of failing the course
2. The student does not perform at optimum potential
3. You have heard from other preceptors that the student is also weak in other skills

Participants (Mighty group)

You are one of five nursing students at a bed side clinical teaching session, performing an examination of the abdomen. You perform the examination badly and the preceptor starts to criticise you in front of the group of students. You try to make the following points:

1. You would prefer to receive the feedback privately away from the other students
2. You are very nervous and intimidated by the preceptor
3. You have never been shown how to examine the abdomen
4. You would like to improve your skills

Participants (Excellent group)

You are part of five nursing students for a bed side clinical teaching session in which one of your friends is asked to perform an abdominal examination. The student performs the examination poorly and you try to give the student some silent tips. At the end, the preceptor starts to criticise the student when you are all present.

What learning do you get out of the above three scenarios?

3. Ask participants to develop scenarios, check lists and assess acquisition of the skills listed below using the Objective Structured Clinical Examination (OSCE)
 - a. Conducting abdominal examination of a pregnant lady (palpation)
 - b. Dressing a wound
 - c. Taking a patient's history on admission

Examples for the OSCE activity

i. Scenario for conducting abdominal examination of a pregnant Woman

In this station, there is a pregnant woman waiting to be examined

Instructions:

- Conduct abdominal examination
- Record the findings .
- When the bell rings, move to the next station.

Key aspects to assess

No	Key aspects to assess
1	Explains the procedure
2	Provides privacy
3	Washes hands and warms them
4	Inspects abdomen
5	Carries out light abdominal palpation to exclude tenderness
6	Carry out hypochondriac palpation (for spleen and liver)
7	Estimates height of fundus
8	Carries out deep pelvic palpation
9	Carries out fundal palpation
10	Carries out lateral palpation
11	Listens to the foetal heart correctly
12	Gives feedback to the mother
13	Makes mother comfortable and thanks her

ii. Scenario for conducting dressing of a clean wound

At this station there is a patient waiting for wound dressing. The trolley is ready at the bed side

Instructions:

- Conduct wound dressing
- When the bell rings, move to the next station.

Key aspects to assess

No	Key areas to assess
1	Greets the patient and explains the procedure to him/her
2	Screens the bed and positions the patient
3	Washes hands
4	Puts on clean gloves
5	Loosens and remove the outer dressing on the wound
6	Washes hands and dries with a towel
7	Puts on sterile gloves
8	Protects the wound with a sterile dressing drape
9	Cleans surrounding area of the wound
10	Takes new set of forceps and cleans wound from within outwards using one swab at ago
11	Dries wound and places sterile dressing
12	Secures dressing with strapping
13	Ensures patient's comfort
14	Clears away all equipment

iii. Scenario for taking patient's history on admission

At this station, Ms. MK has come to the Out Patient Department and finds you at the reception/ triage station.

Instructions

- Take her particulars then send her to see the Doctor.
- When the bell rings, move to the next station

Key aspects to assess

	Key areas to assess
1	Create rapport
2	Explain procedure to the mother
3	Make patient comfortable
4	Ask for: Name , Age, Religion, Tribe, Occupation, Next of Kin (N.o.K), Relation to N.o.K, Occupation of N.o.K
5	Presenting complaint
6	Record the above information
7	Thank the patient
8	Direct patient to the next intervention level (doctor's room)

4. Ask preceptors to complete the evaluation forms below;

Direct Care Clinical Experience: Preceptor's Evaluation of Student Learning

Student:								
Year:								
Semester Course:	one	two	three	four	five	six		
Grade								
ALL course outcomes must be met to pass clinical performance for this clinical rotation								
Clinical Agency Sites:								
Clinical Teaching Associate:								

Directions: Clinical tutor will evaluate the student and indicate below if the student met each course outcome for this rotation by placing a \checkmark **or** **x** in the appropriate box. Please include comments to support the rating for each outcome.

Note: All course outcomes must be met to pass clinical performance.

Course Outcomes	Met	Not Met
<p>1. Use ethical reasoning to provide healthcare for diverse clients and populations.</p> <ul style="list-style-type: none"> • Discusses ethical issues that may be associated with client care • Upholds the code of ethics when providing nursing care <p>Comments:</p>		
<p>2. Integrate appropriate information and technologies to achieve effective healthcare outcomes.</p> <ul style="list-style-type: none"> • Uses healthcare information data bases and technologies • Applies theoretical knowledge from nursing and liberal education in planning and providing care <p>Comments:</p>		
<p>3. Communicates effectively and collaboratively to provide client-centered nursing care in health care communities.</p> <ul style="list-style-type: none"> • Communicates professionally in all interactions • Demonstrates competency and accountability in verbal and written communication of care • Maintains confidentiality • Describes effective approaches to conflict resolution <p>Comments:</p>		
<p>4. Apply principles of stewardship, management and leadership to support healthcare quality and safety within complex organizational systems.</p> <ul style="list-style-type: none"> • Acts professionally by arriving on time, using time effectively, being self directed in learning, and dressing and behaving appropriate to role • Demonstrates competence and accountability in the roles of planner, coordinator, and provider of care • Manages care of multiple clients during a shift or manages care of one critically ill client during a shift • Uses critical thinking as a basis for clinical reasoning during client care • Implements nursing skills during client care in an accurate, safe and consistent manner • Identifies client care situations that may require referral to ICU team or higher facility • Demonstrates a habit of reflective practice on role development and client care <p>Comments:</p>		
<p>5. Provide nursing care that incorporates diverse values and perspectives</p> <ul style="list-style-type: none"> • Provides nursing care that supports the strengths of individuals and their families and community • Demonstrates behaviors during client care that support cultural values • Discusses the role of nurses/midwives in leading and managing a diverse client population • Provides nursing care that incorporates a global health perspective <p>Comments:</p>		

Course Outcomes	Met	Not Met
<p>6. Integrate the knowledge from the liberal arts and sciences to inform nursing practice across the lifespan.</p> <ul style="list-style-type: none"> • Draws both broadly and specifically from liberal education in nursing role • Identifies and discuss healthcare issues in the context of world health issues and concerns <p>Comments:</p>		
Course outcome	Met	Not Met
<p>7. Employ evidence-based strategies and reflective practice to provide holistic nursing care.</p> <ul style="list-style-type: none"> • Demonstrates collaborative decision-making with nursing and other disciplines in providing holistic nursing care • Demonstrates self-reflection on goal development with preceptor, tutor, and in praxis seminar • Presents/discusses research findings with preceptor, Faculty tutor and in praxis seminars <p>Comments:</p>		
<p>8. Integrate knowledge of policies, finance, and regulatory environments to influence health care.</p> <ul style="list-style-type: none"> • Applies legal and regulatory standards when providing nursing care • Demonstrates approaches in nursing practice to reduce health-care costs <p>Comments:</p>		

Narrative Reflection

What strengths have you observed in this student’s nursing practice?

What area(s) of nursing practice does the student need to improve?

What are your recommendations to facilitate the student’s growth in nursing practice?

Date:.....

Signature of Preceptor:

Preceptor Printed Name

Signature of Student:

Student’s Printed Name

Note: Clinical evaluations will be filed for 3 years after graduation, at which time they will be shredded. The nursing faculty recommends that nursing students keep a copy of all clinical evaluations in their individual professional file.

Source: *Clinical Teaching Associate 46 2013-2014 Edition (Preceptor)Manual (Linfield Good Samaritan School of Nursing, 2013)*

Self evaluation of precepting skills

In the table below, indicate your agreement with the statement written in relation to your clinical teaching practice. **Please tick in the appropriate box for each statement.**

Please indicate your level of agreement with the following statements:	Level of Agreement					Unable to comment
	Fully Disagree 1	Disagree, 2	Neutral 3	Agree 4	Fully Disagree 5	
1. I consistently demonstrate how to perform clinical tasks						
2. I clearly explain the important element for the execution of a given task						
3. I create sufficient opportunity for the student to observe me						
4. I serve as a role model as to the kind of nurse/midwife would like the student to become						
5. I observe students multiple times during patient encounters						
6. I give useful feedback during or immediately after direct observation of the student's patient encounters						
7. I help the student understand which aspects they need to improve						
8. I adjust my teaching activities to the level of experience of students						

9. I offer sufficient opportunities to students to perform activities independently						
10. I support students in activities that they find difficult to perform						
11. I gradually reduce the support given to allow students to perform certain activities more independently						
12. I ask students to provide a rationale for their actions						
13. I help students become aware of gaps in their knowledge and skills						
14. I ask students questions aimed at increasing their understanding						
15. I encourage students to ask me questions to increase their understanding						
16. I stimulate students to explore their strengths and weaknesses						
17. I stimulate students to consider how they could improve their strengths and weaknesses						
18. I encourage students to formulate learning goals						
19. I encourage students to pursue their learning goals						
20. I encourage students to learn new things						
21. I create a safe learning environment						

22. I take sufficient time to supervise students						
23. I am genuinely interested in the students						

9. Rate yourself on an overall assessment (1 – 10) of your own clinical supervision performance (10=excellent): _____/10

Guide, direct and advise participants to refer to session notes.

4.2 Additional reading/resource

4.2.1 Assessment and Evaluation in clinical teaching and learning

In education, assessment and evaluation informs the teaching process (formative) and also provides accountability for the teaching activities (Frias & Takahashi, 2002).

Assessment and evaluation provides meaningful information that is required before, during and after the clinical rotation experience. The purposes of assessment and evaluation range from gauging whether the student has sufficient knowledge and skills for practice at the designated level for the clinical rotation, to providing feedback that encourages or discourages a specific behavior. Evaluation also helps the preceptor to identify a student clinical learning problem that will require additional coaching for the success of clinical experience. Evaluation and assessment is a continuous process that will require data collection, making judgments, providing feedback, identifying problems, and if necessary coaching to achieve the intended results.

Norcini and Burch (2007) in the study “Workplace-based assessment as an educational tool” described six approaches that are normally used in clinical teaching “*Mini-Clinical Evaluation Exercise (mini-CEX), Clinical Encounter Cards (CEC), Clinical Work Sampling (CWS), Blinded Patient Encounters (BPE), Direct Observation of Procedural Skills (DOPS), Case-based Discussion (CbD), Multi-Source Feedback (MSF)*”. In Uganda we mainly use direct observation of procedural skill, Objective Structured Clinical Assessment (OSCE) and subjective reporting through confidential reports.

4.2.2 What do we assess/ evaluate?

We evaluate to determine whether students have the required competences in the areas below:

- i. Knowledge and critical reasoning
- ii. Psychomotor skills (nursing procedures)
- iii. Interpersonal and inter-professional communication skills (interaction)
- iv. Professional behaviour and professional development (professionalism)

- v. Ethical reasoning and behaviour (professionalism)
- vi. Leadership and organizational skills (resource mobilization, management and utilization)
- vii. Documentation and record management skills and observation of legal frameworks
- viii. Critical inquiry and evidence based practice

4.2.3 Constructive Feedback

Constructive feedback from the Preceptor is crucial to the students' professional development, satisfaction in the preceptor/student relationship, and motivation to improve clinical performance. Linfield Good Samaritan School of Nursing (2013), in their manual for training nursing preceptors stated that, constructive feedback can be given using the following steps:

- i. State the topic to be discussed with the student and why it is important. Provide the specifics of what you personally observed. Avoid "need to" or "yes" and "but" phrases. With positive feedback, express appreciation. With negative feedback, express concern. Provide a balance between the amount of positive and negative feedback you give the student.
- ii. Describe observations of the student's clinical performance and not interpretations, assumptions or judgments. When describing observations, note when and where the clinical incident happened, who was involved, and the positive or negative consequences. Note your reaction to the incident. Avoid terms like "right or wrong" and "good or bad". Focus on the student's behaviour but not his/her personal qualities.
- iii. Give constructive feedback to the student as close as possible to when the clinical performance incident occurred. Feedback needs to be given to the student on a frequent basis and in small doses (Taylor & Hamdy, 2013). Avoid feedback overload by focusing on two or three points at a time.
- iv. Give the student an opportunity to respond to the constructive feedback. If the student is hesitant, ask an open-ended question to elicit a response (e.g., Tell me, "What are you thinking?").
- v. Offer specific suggestions to assist the student to improve clinical performance.
- vi. Summarize the discussion. If positive feedback was given to the student, emphasize the significant points you wanted to convey. If negative feedback was given, stress the main things the student could do differently. The summary should convey your desire to help the student be successful in improving his/her clinical performance. Assessment and feedback must be well structured to correlate with the intended program outcome. This is so because assessment and feedback provided drive learning (Taylor & Hamdy, 2013).
- vii. Assessment and feedback must be well structured to correlate with the intended program outcome. This is so because assessment and feedback provided drive learning (Taylor & Hamdy, 2013)

Section Five:

ETHICS AND LEGAL ISSUES OF CLINICAL TEACHING

This section introduces the preceptors to ethics and legal issues observed in clinical teaching.

Session learning outcome

This session provides preceptors with the opportunity to:

1. Describe the importance of ethical practice in clinical teaching
2. Discuss how to apply the ethical code of conduct for nurses in clinical teaching
3. Demonstrate professionalism while conducting clinical teaching

Key concepts for the section

- i. Ethics
- ii. Nursing ethics
- iii. Legal issues in clinical teaching

Focus Question for the Session

1. How do you ensure that the patient and the student are protected without compromising the nursing and midwifery profession?

Activities for your session

1. Ask participants to
 - a. Reflect and recall the various ethical dilemmas that they have ever encountered while conducting clinical teaching.
 - b. Discuss in groups of five participants the above dilemmas indicating how they affected their practice and how they managed them.
 - c. Present to the whole group their results as the facilitator gives feedback, guided by these questions. What approaches were used? What worked well? What limitations that were observed?)
2. Ask participants to read the case study and answer the following questions

Scenario 01

You are on a unit where patient S is admitted with a medical condition. You are only two qualified staff with four nursing students on clinical rotation. Both of you (the qualified staff) are busy with other patients, and Patient S is due for her medications. You instruct one of the nursing students to give the medication to patient S. As the nursing student gives the medication to patient S, the patient feels uncomfortable and demands for more information about the drug from the nursing student. The nursing student seems not to be able to respond appropriately to the question being asked and later she tells the patient that she is a first year nursing student. This makes patient S irritable, she raises her voice and threatens to sue the organization for using students to provide care for her.

- What ethical issues were violated in this scenario?
- How will you handle this situation?
- How best would you have handled this situation from the beginning.

Key Issues from Case study 01

ISSUES OBSERVED	SOLUTIONS
Lack of guidelines for student involvement in patient care	Set guidelines and if possible obtain informed consent for involvement in clinical learning and teaching from patient/client on admission
Not seeking patient's consent	Seek consent before conducting any procedure or before any encounter with the patients
Not supervising the student while giving medication	Supervise all students' work
Using student as qualified nurses.	Ensure students act in their capacity as trainees.

NB: All client charters for teaching hospitals and facilities should always include a clause that students are part of the care team.

Guide, direct and advise participants to refer to session notes.

5.2 Additional reading/resources

5.2.1 Code of Ethics for Nurses

The ultimate goal for any nursing college, association or professional council is to have professionals who are cognizant of adherence to the nursing code of ethics. Nursing as a profession is built on a strong foundation of values, duties and commitments known as nursing ethics (Brown & Finnell, 2015; Fowler, 2010). These nursing ethics guide the professionals on how to conduct themselves and practice as nurses. Preceptors, as professional nurses and midwives, should be aware that the patient is priority number one and then the students, although both have fundamental rights. Preceptors need to know that sometimes nursing and midwifery students are unaware or may have knowledge deficiencies on ethical issues. They therefore need to properly model and guide students as they provide nursing/midwifery services and conduct of clinical teaching. Fowler (2010, p. 143) noted nine nursing ethics provisions including the following:

1. The nurse, in all professional relationships, practices with compassion and respect for the inherent dignity, worth, and uniqueness of every individual, unrestricted by considerations of social or economic status, personal attributes, or the nature of health problems.
2. The nurse's primary commitment is to the patient, whether an individual, family, group or community.
3. The nurse promotes, advocates for, and strives to protect the health, safety, and rights of the patient.
4. The nurse is responsible and accountable for individual nursing practice and determines the appropriate delegation of tasks consistent with the nurse's obligation to provide optimum patient care.
5. The nurse owes the same duties to self as to others, including the responsibility to preserve integrity and safety, to maintain competence, and to continue personal and professional growth.
6. The nurse participates in establishing, maintaining and improving health care environments and conditions of employment which is conducive to the provision of quality health care and consistent with the values of the profession through individual and collective action.
7. The nurse participates in the advancement of the profession through contributions to practice, education, administration and knowledge development.
8. The nurse collaborates with other health professionals and the public in promoting community, national and international efforts to meet health needs.
9. The profession of nursing, as represented by associations and their members, is responsible for articulating nursing values, maintaining the integrity of the profession and its practice, and shaping social policy.

5.2.2 Ethical and legal issues to be observed in clinical teaching;

Normally learning takes place in a service setting such as an acute care unit/ward or rehabilitative unit/ward. Learning also takes in all places where patients/clients are found such as communities, schools and homes. In these settings although nursing and midwifery students are observed and guided, they are still considered less skilled to provide satisfactory and cost effective nursing services (Gaberson, Oermann, & Shellenbarger, 2014). As we conduct clinical teaching and expect learning to take place, the following must be observed:

Respect for persons

In most cases preceptors expect nursing students to respect them and yet preceptors do not respect nursing students. Students need to be communicated to in a gentle manner and to be shown that you are interested in what they are doing. Respect for students demonstrates a trusting respectful environment, which signifies the preceptor's values/ethical principle of respect for human dignity and autonomy. Preceptors' practice of respect for students acts as a modeling strategy to students to adopt the respect for human dignity and autonomy principles. The respect for students should be observed during assessment and evaluation. Marks for students should be provided at individual level and if it requires sharing, consent must be sought from the owner of the marks. Negative feedback should always be provided in privacy.

Fair and Justice

The ethical standard of justice refers to fair treatment/judgment of each person using the same standard. Preceptors need to evaluate students using the same criteria and without bias. Preceptors should not favour some students by praising, supporting or offering them better learning opportunities than other students. Preceptors should endeavour not to show any unfair practice during clinical teaching as this may be copied by students as a normal practice.

Informed consent

Patients need to understand that nursing students are not qualified nurses; preceptors should always introduce them to patients as nursing students and not as junior nurses, young nurses or colleagues as this may be misleading. At any encounter with the patients or clients students must communicate that they are nursing students studying to become nurses and they or their preceptors should always obtain consent before conducting any encounter with the patient. Patients need to be informed that their cooperation in nursing education /clinical learning is entirely voluntary and they have freedom to withdraw at any time. Some organizations obtain the informed consent for nursing education on admission by requesting patient to sign an appended form; this practice needs to be encouraged in all organizations.

Confidentiality

Preceptors must respect all the information provided to them by their patients and this practice must be taught to nursing and midwifery students. During their learning, students should endeavour not to give information that identifies the patient unless there is clear need to know. Students should not discuss patients' information in public, cafeteria, bus-park, lifts, corridors, and waiting rooms where third parties can over hear their conversation. Ideally patients should be informed the scope of spread of the information they have provided. Medical records and documentation is equally important in this area.

Ethical dilemmas and training

Sometimes nursing students are on the front line when there is a conflict with ethical standards. Ideally preceptors need to model appropriately in such instances. In most cases many of these issues are not structured in the curriculum but they do happen. The most important point to note as far as handling ethical dilemma is concerned, is to appreciate that they cause confusion which results into stress to students, hence compromising learning. This might cause a negative impact on the morale and development of the student as a professional.

Work place protection

Clinical areas have numerous risks ranging from infections to sexual and legal harassment. Preceptors have a responsibility of making working areas safe for practice for students either individually or through collaboration. They need to guide and advise students under their care on the right ways of observing policies and legal guideline for the facility. Students also need to be guided on how to practice and observe human/patients' rights.

Appendices

Permission 1

(email copy)

Thanks. Permission granted. Please cite the material wherever they are used as:
Schupbach, J.E. (2012). Strategies for clinical teaching. *AudiologyOnline*, Article 6944. Retrieved from www.audiologyonline.com. Used with permission.

Wishing you much success with your study.

Best regards,

Carolyn

Hello,

Can you please send me a link to the information you are referring to? Once I review the material we will be able to respond accordingly.

Thank you,

Carolyn

Carolyn Smaka, AuD

Editor in Chief

Message

I am Ugandan, Principal of a nursing school. I am conducting PhD nursing study at University of Cape Town South Africa. I am looking at the preparedness of preceptors for conducting clinical teaching of nursing students. During my search for literature, I came across your manual for clinical teaching. I am writing requesting for permission to use part of your work in the implementation of my study. Thank you.

Submitted Information

Name	Safinah Kisu Museene
Email	safinahm2002@hotmail.com
Phone	+25677463085

Permission 2

(email copy)

From: jdpierce@linfield.edu
To: safinahm2002@hotmail.com
Subject: Re: Permission to use some of the information in your manual Clinical Teaching Associate (Preceptor) Manual
Date: Mon, 9 Mar 2015 16:58:54 +0000

Jonathon;

You may pass this message on.

You have permission to use the Linfield- Good Samaritan School of Nursing Clinical Teaching Associate Manual in your doctoral dissertation. Please acknowledge Linfield and the faculty who wrote the manual in any written work. Thank you.

Mallie Kozy PhD RN

Professor and Dean Linfield Good Samaritan School of Nursing

2255 NW Northrup St.

Portland, OR 97210

p. 503-413-8080

f. 503-413-6846

From: museene safinah <safinahm2002@hotmail.com>

Date: Tuesday, March 3, 2015 at 2:40 AM

To: "webmaster@linfield.edu" <webmaster@linfield.edu>

Subject: Permission to use some of the information in your manual Clinical Teaching Associate (Preceptor) Manual

In my literature search for my PhD study, I came across your PDF manual 'for Clinical Teaching Associate (Preceptor) Manual 2014-2015. I have found the information in it very useful for my PhD work. I am Ugandan and studying preceptors' competences in clinical teaching of nursing students at one of the referral hospitals. I am pursuing this PhD with University of Cape town. I am therefore requesting for permission to use some of your work in my study. Thank you.

Hajat Safinah Kisu Museene

**PhD Candidate (University of Cape Town) Mob +256 712812363/
+25677463085 Off. +256 434120550**

Permission 3

Permission to Use the MCTQ from Ms. Renée Stalmeijer (email copy)

Dear Museene,

Please find enclosed the original paper describing the Maastricht Clinical Teaching Questionnaire.

I permit you to use this instrument under the condition that in your work you will always refer to the original publication.

Good luck with your PhD in Nursing!

All the best,

Renée Stalmeijer

Ms. Renée Stalmeijer, PhD

Director Master of Health Professions Education

www.maastrichtuniversity.nl/she

*Assistant Professor Department for Educational Development & Research
FHML*

Affiliated Scholar The Wilson Centre for Research in Education

Universiteitssingel 60, 6229 ER, Maastricht

P.O. Box 616, 6200 MD Maastricht, The Netherlands

T +31 43 388 57 35 begin_of_the_skype_highlighting +31 43 388 57

35 FREE end_of_the_skype_highlighting F +31 43 388 57 79

Visiting Address UNS60 room N5.14

REFERENCES

- Benner, P. (1982a). From novice to expert *The American Journal of Nursing.*, 82(3), 402-407. doi: 10.2307/3462928
- Benner, P. (1982b). *From novice to expert* Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/6917683>.
- Brown, C. S., & Finnell, D. S. (2015). Provisions of the Code of Ethics for Nurses: Interpretive Statements for Transplant Nurses. [Article]. *Nephrology Nursing Journal*, 42(1), 37-44.
- Burns, C., Beauchesne, M., Ryan-Krause, P., & Sawin, K. (2006). Mastering the Preceptor Role: Challenges of Clinical Teaching. *Journal of Pediatric Health Care*, 20(3), 172-183. doi: 10.1016/j.pedhc.2005.10.012
- Chang, C.-C., Lin, L.-M., Chen, I. H., Kang, C.-M., & Chang, W.-Y. (2015). Perceptions and experiences of nurse preceptors regarding their training courses: A mixed method study. *Nurse Educ Today*, 35(1), 220-226. doi: 10.1016/j.nedt.2014.08.002
- Chisengantambu, C., Penman, J., & White, F. (2005). Preceptors central to nursing workforce. *Australian Nursing Journal*, 13(1), 35-35.
- DeCicco, J. (2008). Developing a preceptorship/mentorship model for home health care nurses. *Journal of Community Health Nursing*, 25(1), 15-25. doi: 10.1080/07370010701836310
- Elisabeth, C., Christine, W.-H., & Ewa, P. (2009). Teaching during clinical practice: Strategies and techniques used by preceptors in nursing education. *Nurse Educ Today*, 29(5), 522-526. doi: 10.1016/j.nedt.2008.11.012
- Fowler, D. M. (2010). Code of Ethics for Nurses -Interpretation and Application *American nurses Association* Retrieved from www.nursesbooks.org/ebooks/download/CodeofEthics.pdf
- Frias, M. A., & Takahashi, R. T. (2002). Assessment of the teaching-learning process: its meaning for students holding a high school diploma or equivalent and attending a nursing program. *Rev Esc Enferm USP*, 36(2), 156-163.
- Furney, S. L., Orsini, A. N., Orsetti, K. E., Stern, D. T., Gruppen, L. D., & Irby, D. M. (2001). Teaching the one-minute preceptor: A randomised controlled trial. *Journal of General Internal Medicine*, 16(9). Retrieved from doi:10.1046/j.1525-1497.2001.016009620.x
- Gaberson, K., & Oermann, M. (2010). *Clinical Teaching Strategies in Nursing, Third Edition*: Springer Publishing Company.
- Gaberson, K., Oermann, M. H., & Shellenbarger, T. (2014). *Clinical Teaching Strategies in Nursing, Fourth Edition*: Springer Publishing Company.
- Hall-Lord, M. L., Theander, K., & Athlin, E. (2013). A clinical supervision model in bachelor nursing education - purpose, content and evaluation. *Nurse Educator Practitioner*, 13(6), 506-511. doi: 10.1016/j.nepr.2013.02.006
- Happell, B. (2009). A Model of PRECEPTORSHIP in Nursing: Reflecting the

- Complex Functions of the Role. *Nursing Education Perspectives*, 30(6), 372-376. doi: 10.1043/1536-5026-30.6.372
- Henderson, A., Briggs, J., Schoonbeek, S., & Paterson, K. (2011). A framework to develop a clinical learning culture in health facilities: ideas from the literature. *International Nursing Review*, 58(2), 196-202. doi: 10.1111/j.1466-7657.2010.00858.x
- Knowles, M. (1980). *The modern practice of adult education: Andragogy versus pedagogy*. Rev. and updated ed. Englewood Cliffs, NJ: Cambridge Adult Education.
- Kolb, D. A. (2014). *Experiential Learning: Experience as the Source of Learning and Development*. Pearson Education.
- Linfield Good Samaritan School of Nursing. (2013). *Clinical Teaching Associate (Preceptor) Manual*. Portland.
- Museene, K. S. (2015). A survey of nursing preceptors' clinical teaching practices at a National Teaching and Referral Hospital, Kampala. (Nursing, Trans.): University of Cape Town.
- Myrick, F., & Yonge, O. (2002). Preceptor questioning and student critical thinking. *Journal of Professional Nursing*, 18(3), 176-181. doi: 10.1053/jpnu.2002.124485
- Myrick, F., & Yonge, O. (2005). *Nursing Preceptorship: Connecting Practice and Education*. Philadelphia: Lippincott Williams and Wilkins.
- Neher, J. O., Gordon, K. C., Meyer, B., & Stevens, N. (1992). A five-step "microskills" model of clinical teaching *Journal of the American Board of Family Practitioners*, 5(4), 419-424.
- Newton, J. M., Jolly, B. C., Ockerby, C. M., & Cross, W. M. (2012). Student centredness in clinical learning: the influence of the clinical teacher. *Journal of Advanced Nursing*, 68(10), 2331-2340. doi: 10.1111/j.1365-2648.2012.05946.x
- Norcini, J., & Burch, V. (2007). Workplace-based assessment as an educational tool: AMEE Guide No. 31. *Medical Teacher*.
- Schmidt, G. H. (1993). Foundations of Problem based learning: Some explanatory notes. *Medical Education*.
- Schupbach, J. E. (2012). Strategies for clinical teaching. *AudiologyOnline*, Article 6944. Retrieved from www.audiologyonline.com.
- Shams, L., & Seitz, A. R. (2008). Benefits of multisensory learning. *Trends in Cognitive Sciences*, 12(11), 411-417. doi: <http://dx.doi.org/10.1016/j.tics.2008.07.006>
- Timmins, F., & Kaliszer, M. (2002). Aspects of nurse education programmes that frequently cause stress to nursing students – fact-finding sample survey. *Nurse Educ Today*, 22(3), 203-211. doi: <http://dx.doi.org/10.1054/nedt.2001.0698>

- Ulrich, B. (2006). Teaching Nurses To Teach: A Good Investment For All, Editorial, *Nephrology Nursing Journal*, pp. 602-602. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=hch&AN=23694427&site=ehost-live>
- University of Virginia School of Nursing. (2014). Orientation Manual for Clinical Faculty and Graduate Teaching Assistants, from www.nursing.virginia.edu
- Yonge, O. (1997). Assessing and preparing students for distance preceptorship placements. [Article]. *Journal of Advanced Nursing*, 26(4), 812-816. doi: 10.1046/j.1365-2648.1997.00316.x
- Yonge, O., Myrick, F., Ferguson, L., & Lughana, F. (2005). Promoting effective preceptorship experiences. *Journal of Wound Ostomy and Continence Nursing*, 32(6), 407-412.

Pictorial



The facilitator shows the preceptor how they can use resources in clinical teaching to students



The facilitator demonstrating a broad smile as she encounters the patient for the first time to the Preceptors as the best way to reassure patient comfort.



One of the participants demonstrating good listening skills as a way of ensuring effective communication.



Preceptors in one of session during pretesting of SCCTTP



Preceptors during the pretesting of SCCTTP

NB: Permission to use the photographs in the document was obtained by the author from all the persons appearing in the photographs

References and biography

TRAINER'S GUIDE