

MODEL FOR TRAINING OF REFLECTIVE NEONATAL NURSES IN A SOUTH- AFRICAN CONTEXT

C.M. MAREE

A thesis submitted in fulfillment of the requirements for the degree of

PHILOSOPHIAE DOCTOR

In the
Department of Nursing Science
School of Health Care Sciences
Faculty of Health Sciences
University of Pretoria

Supervisors:
Prof. S.J.C. Van Der Walt
Dr. G.H. Van Rensburg

November 2007



***Dedicated to my husband Danie, my children Neal and Chris,
and all my students.***



Key terms

Model, reflective learning, reflective neonatal nurses, reflective neonatal practitioners, reflective practice, neonatal nursing practice, higher education, nursing education, education programme, South Africa.

Declaration

I, C.M. Maree, declare that the thesis 'Model for education of reflective neonatal nurses in a South African context' is my own work, and that all the sources used or quoted in this research study have been indicated and reflected by means of complete referencing.

Researcher's Signature

Witness's Signature

Date Signed



Abstract:

Model for education of reflective neonatal nurses in a South African context

In post-basic education of neonatal nurses the challenge is in how to prepare reflective practitioners for their role in neonatal nursing practice. Generic outcomes from SANC and higher education are available that promote the education of reflective neonatal nurses, but do not give much clarity on exactly how this is to be achieved. This prompted the research question: 'How can professional nurses in a South African context be educated to become reflective neonatal nurses?' This study aims to develop a model for the education of reflective neonatal nurses in a South African context.

To achieve the aim of the study, an exploratory and descriptive design was used, which was in essence qualitative and contextual in nature, to develop the model. The model was developed following the process for developing nursing theory: a topic of interest was selected, which was a framework of several concepts; relationships between the concepts supported by evidence was identified and clarified; and relational statements were organised to describe the components of the conceptual model.

The structural components of the model were identified as a purpose (specific learning-, critical- and end-product outcomes of education of reflective neonatal nurses); a framework (higher education, nursing education and neonatal nursing practice in a South African context); dynamics (reflective learning); a recipient (neonatal nurses as students); an agent (neonatal educator); and a procedure (education programme).

The study had three phases that had different goals, but occurred simultaneously, overlapping and interrelating in the process of developing the model. The first phase was identifying and clarifying the concepts related to educational aspects of importance in education of reflective neonatal nurses. It was based on theoretical inquiry, concept analysis and inductive and deductive reasoning to describe the framework of education (higher- and nursing education), reflective learning, neonatal nursing students, role of the educator and educational approaches.

The second phase was identification and clarification of concepts in neonatal nursing practice related to education of reflective neonatal nurses. This was done by means of inductive and deductive reasoning, based on the extensive experience and knowledge of the researcher in the field, followed by literature control and confirmed by peer review of neonatal nursing



experts and/or educators. As a result the competences and professional characteristics expected of reflective neonatal nurses were synthesised and the content outline of an educational programme was deduced.

The third phase was constructing and describing a model for educating reflective neonatal nurses in a South African context, which involved developing relational statements linking the concepts clarified in the previous two phases. Experts in model development, higher education, nursing education and / or neonatal nursing practice evaluated the model in this phase.

Ethical considerations of relevance in this study were especially informed consent by the participants (peer- and expert review), and to give credit to all sources used.

Strategies to enhance trustworthiness included triangulation of sources, prolonged engagement of the researcher, clarification of the underlying assumptions of the study, thick description of the process, and validation by means of peer- and expert review.

Recommendations were made regarding dissemination of the model, practice, education and further research.



Abstrak:

Model vir onderrig van reflektiewe neonatale verpleegkundiges in 'n Suid-Afrikaanse konteks

Na-basiese onderrig van neonatale verpleegkundiges is 'n uitdaging om hulle voor te berei as reflektiewe praktisyns vir hul rol in neonatal praktyk. Generiese uitkomst is beskikbaar van die SARV en hoër onderwys wat die onderrig van reflektiewe neonatale verpleegkundiges aanmoedig, maar dit is nie duidelik oor presies hoe om dit te bereik nie. Dit het aanleiding gegee tot die navorsingsvraag: 'Hoe kan professionele verpleegkundiges in 'n Suid-Afrikaanse konteks onderrig word om reflektiewe neonatale verpleegkundiges te word?' Die studie se doel was om 'n model te ontwikkel vir onderrig van reflektiewe neonatale verpleegkundiges in 'n Suid-Afrikaanse konteks.

Om die studie se doel te bereik is 'n ondersoekende en beskrywende ontwerp gebruik wat in wese 'n kwalitatiewe en kontekstuele aard het, om die model te ontwikkel. Die model is ontwikkel volgens die proses van verpleegteorie-ontwikkeling: 'n onderwerp van belang is gekies, wat 'n raamwerk was van verskeie konsepte; verwantskappe tussen die konsepte is geïdentifiseer en uitgeklaar ondersteun deur bewyse; en verbandhoudende stellings is georganiseer om die komponente van die konseptuele model te beskryf.

Die strukturele komponente van die konseptuele model is geïdentifiseer as 'n doel (spesifieke leer-, kritiese- en eindproduk-uitkomst van onderrig van reflektiewe neonatale verpleegkundiges); 'n raamwerk (hoër onderwys, verpleegonderwys en neonatale praktyk in 'n Suid-Afrikaanse konteks); dinamika (reflektiewe leer); 'n ontvanger (neonatale verpleegstudente); 'n agent (neonatale dosent); en 'n prosedure (onderrigprogram).

Die studie het drie fases gehad met verskillende doelwitte, maar dit het gelyktydig plaasgevind, oorleuel en gemeenskaplikhede in die proses van ontwikkeling van 'n model gedeel. Die eerste fase was die identifisering en uitklaring van konsepte wat verband hou met onderrigaspekte van belang in die onderrig van reflektiewe neonatale verpleegkundiges. Dit is gebaseer op teoretiese ondersoek, konsepanalise en induktiewe en deduktiewe redenering om die raamwerk van onderrig (hoër- en verpleegonderwys), reflektiewe leer, neonatale verpleegstudente, rol van die dosent en onderrigbenaderings te beskryf.

Die tweede fase was die identifisering en uitklaring van konsepte in neonatale praktyk wat verband hou met die onderrig van reflektiewe neonatale verpleegkundiges. Dit is gedoen deur



middel van induktiewe en deduktiewe redenering, gebaseer op die ekstensiewe ervaring en kennis van die navorser, wat deur literatuurkontrole en gelykes gevalideer is. Die groep het bestaan uit neonatale verpleegeksperts en/of dosente. Na aanleiding daarvan is die bevoedghede en professionele eienskappe wat van reflektiewe neonatale verpleegkundiges verwag word gesintetiseer, en die oorsig van die inhoud van so 'n program is afgelei.

Die derde fase was konstruksie en beskrywing van 'n model vir onderrig van reflektiewe neonatale verpleegkundiges in 'n Suid-Afrikaanse konteks. Hierdie fase het die ontwikkeling van verwante stellings behels wat die uitgeklaarde konsepte uit die vorige twee fases verbind. Eksperts in modelontwikkeling, hoër onderwys, verpleegonderwys en/of neonatale verpleegpraktyk het die model in hierdie fase gevalideer.

Etiese oorwegings van belang in hierdie studie was veral ingeligte toestemming deur die deelnemers (gelyke- en ekspertevaluering), en om erkenning te gee aan alle bronne wat gebruik is.

Strategieë om vertrouenswaardigheid te verhoog het triangulasie van bronne, verlengde betrokkenheid van die navorser, uitklaring van die onderliggende aannames van die studie, digte beskrywing van die proses, en validering deur gelyke- en ekspertgroepe ingesluit.

Aanbevelings is gemaak met betrekking tot disseminasie van die model, sowel as aanbevelings vir praktyk, onderrig en verdere navorsing.



Table of Contents

	Page
Chapter 1: Orientation of the study	
1.1 INTRODUCTION	1
1.2 BACKGROUND OF THE STUDY	1
1.3 PROBLEM STATEMENT AND RESEARCH QUESTION	4
1.4 RESEARCH METHODS	4
1.4.1 Nature of the study design	4
1.4.2 Structural components of proposed model	5
1.4.3 Phases of the study	5
1.4.4 Objectives of the study	6
1.4.5 Significance of the study	7
1.5 FRAME OF REFERENCE	8
1.5.1 Paradigm	8
1.5.2 Assumptions	8
1.5.2.1 Epistemological assumptions	8
1.5.2.2 Ontological assumptions	9
1.5.2.3 Methodological assumptions	10
1.5.3 Conceptual definitions	10
1.5.3.1 Reflective neonatal nurses	10
1.5.3.2 Reflective practice	11
1.5.3.3 Neonatal nursing education	12
1.6 OUTLINE OF THE STUDY	12
1.7 SUMMARY	13
Chapter 2: Research methodology	
2.1 INTRODUCTION	14
2.2 RESEARCH METHODOLOGY	15
2.2.1 Research problem	15
2.2.2 Research aim	15
2.2.3 Research design	15
2.2.4 Process of model development	17
2.2.5 Structural components of the model	17



Table of Contents (continue)

	Page
2.2.6 Objectives of the study	18
2.2.7 Phase 1: Identification and clarification of concepts related to the educational aspects of educating reflective neonatal nurses	19
2.2.7.1 Purpose and objectives of phase 1	19
2.2.7.2 Approach in phase 1	20
2.2.7.3 Population and sampling	20
2.2.7.4 Data collection	20
2.2.7.5 Data analysis	21
2.2.7.6 Trustworthiness	22
2.2.7.7 Ethical considerations	22
2.2.7.8 Findings of phase 1	22
2.2.8 Phase 2: Identification and clarification of concepts in neonatal nursing practice related to educating reflective neonatal nurses	22
2.2.8.1 Purpose and objectives of phase 2	22
2.2.8.2 Approach in phase 2	23
2.2.8.3 Researcher as instrument	23
2.2.8.4 Literature control	24
2.2.8.5 Peer review of findings	25
2.2.8.6 Trustworthiness of phase 2	26
2.2.8.7 Ethical considerations of phase 2	26
2.2.8.8 Findings of phase 2	27
2.2.9 Phase 3: Construction, description and evaluation of the model for education of reflective neonatal nurses in a South African context	27
2.2.9.1 Purpose and objectives of phase 3	27
2.2.9.2 Construction and description of the model	28
2.2.9.3 Evaluation of the model	29
2.3 STRATEGIES FOR TRUSTWORTHINESS OF THIS STUDY	30
2.3.1 Credibility	31
2.3.2 Theoretical validity	32
2.3.3 Transferability	33
2.3.4 Dependability	33
2.3.5 Confirmability	33



Table of Contents (continue)

	Page
2.3 ETHICAL CONSIDERATIONS	33
2.4 SUMMARY	34
Chapter 3: Framework of neonatal nursing education in the South African context	
3.1 INTRODUCTION	35
3.2 HIGHER EDUCATION IN SOUTH AFRICA APPLICABLE TO NEONATAL NURSING EDUCATION	35
3.2.1 Higher Education Act, no. 101 of 1997	36
3.2.2 South African Qualifications Authority (SAQA)	36
3.2.2.1 Aim of education	37
3.2.2.2 Outcomes-based education (OBE)	38
3.2.3 National Qualifications Framework (NQF)	42
3.2.3.1 Higher education qualifications descriptors	46
3.2.3.2 Higher Education Management Information System (HEMIS)	47
3.2.4 National Standards Bodies (NSBs), Expert Consultative Panels, and Qualifications and Quality Assurance Councils (QCs)	48
3.2.5 Standards Generating Bodies (SGBs)	49
3.2.5.1 Higher Education and Training Standards Generating Body (HET SGB)	49
3.2.5.2 SGB for Nursing	49
3.2.6 Education and Training Quality Assurance Bodies (ETQAs) and Sectoral Education and Training Authorities (SETAs)	50
3.2.6.1 Council on Higher Education (CHE) and Higher Education Quality Committee (HEQC)	50
3.2.6.2 SANC as ETQA/SETA for nursing	51
3.2.7 Skills Development Act and Skills Development Levies Act	52
3.2.8 Additional influences in higher education	53
3.2.8.1 Globalisation, massification and internationalisation	53
3.2.8.2 Changes in the South African higher education landscape due to resizing and shaping	54



Table of Contents (continue)

	Page
3.2.8.3 Focus of the Department of Education on enrolment of students	55
3.2.8.4 Focus of the Department of Education on health science education	56
3.2.9 Tertiary institutions	57
3.3 HEALTH IN SOUTH AFRICA	59
3.3.1 National Health Act, no. 61 of 2003	60
3.3.2 Strategic priorities for the National Health System 2004-2009	60
3.3.3 <i>Batho Pele</i> principles	62
3.3.4 National Human Resource Plan for Health (HRH Plan)	62
3.3.5 New Partnership for Africa's Development (NEPAD)	64
3.3.6 World Health Organization (WHO)	65
3.4 NURSING EDUCATION	65
3.4.1 International historical overview	66
3.4.2 South African historical overview	67
3.4.3 SANC	73
3.4.4 Continuing professional development (CPD)	73
3.4.5 International Council of Nurses: Nurse Practitioner / Advanced Practice Nurse Network (ICN NP/APN Network)	74
3.4.6 Council of International Neonatal Nurses (CINN)	75
3.5 FRAMEWORK FOR EDUCATING REFLECTIVE NEONATAL NURSES	75
3.6 SUMMARY	77
Chapter 4: Neonatal nursing students and reflective learning	
4.1 INTRODUCTION	78
4.2 NEONATAL NURSES AS STUDENTS	78
4.3 PROCESS OF REFLECTIVE LEARNING	80
4.3.1 Learning	80
4.3.2 Reflection, reflective thinking, reflective reasoning and reflective learning	85
4.3.3 Definition of the process of reflective learning	88



Table of Contents (continue)

	Page
4.4 APPLIED COMPETENCES AND REFLECTIVE LEARNING	95
4.4.1 Practical competences	96
4.4.2 Reflexive competences	97
4.4.2.1 Reflexive competences in the descriptive phase	98
4.4.2.2 Reflexive competences in the reflective phase	100
4.4.2.3 Reflexive competences in the critical / emancipatory phase	103
4.4.3 Foundational competences	105
4.4.3.1 Types of knowledge: hidden, scientific and personal knowledge	106
4.4.3.2 Hierarchy of levels of knowledge	107
4.5 PROFESSIONAL CHARACTERISTICS AND REFLECTIVE LEARNING	112
4.5.1 Values and worldview	112
4.5.2 Self-perception and emotional status	113
4.5.3 Interaction with the outside world	114
4.5.3.1 Non-reflective practitioners	115
4.5.3.2 Reflective practitioners	116
4.5.3.3 Critically reflective practitioners	118
4.5.3.4 Most suited practitioners for reflective neonatal nursing practice	120
4.5.4 Lifelong learning	121
4.6 OUTCOMES OF REFLECTIVE LEARNING	122
4.6.1 Reflective and critically reflective practice	123
4.6.2 Outcomes in terms of South Africa's higher education framework	126
4.6.2.1 Critical outcomes	127
4.6.2.2 Specific learning outcomes	128
4.6.2.3 End-product outcomes	128
4.6.3 Barriers to reflective learning	129
4.6.3.1 Barriers related to individuals involved	129
4.6.3.2 Barriers related to circumstances	130
4.6.3.3 Barriers related to the education programme	131
4.7 SUMMARY	131



Table of Contents (continue)

	Page
Chapter 5: Competences and professional characteristics expected of reflective neonatal nurses	
5.1 INTRODUCTION	132
5.2 ATTRIBUTES AND DEMANDS OF NEONATAL NURSING PRACTICE AND COMPETENCES EXPECTED OF REFLECTIVE NEONATAL NURSES	133
5.2.1 Neonatal patients	134
5.2.2 Neonatal nursing practice environment	138
5.2.3 Family-centred care	141
5.2.4 Multi-professional teamwork	144
5.2.5 Professional nursing practice	146
5.2.5.1 Managerial aspects	146
5.2.5.2 Ethico-legal aspects	148
5.2.5.3 Professional and personal outcomes	151
5.3 PROFESSIONAL CHARACTERISTICS DEMANDED BY NEONATAL NURSING PRACTICE	153
5.3.1 Value-system and perception of the world	153
5.3.2 Perception of self and emotional status	153
5.3.3 Interaction with the outer world	153
5.4 CONTENT OUTLINE AND EXPECTED OUTCOMES OF PROGRAMME FOR EDUCATION OF REFLECTIVE NEONATAL NURSES	154
5.5 SUMMARY	158
Chapter 6: Approaches to educating reflective neonatal nurses	
6.1 INTRODUCTION	159
6.2 TEACHING REFLECTIVE NEONATAL NURSES	159
6.3 ROLE OF THE EDUCATOR IN REFLECTIVE EDUCATION	162
6.3.1 Information processing	162
6.3.2 Planning and implementation	163
6.3.3 Evaluation and assessment	166
6.3.4 Qualities required of reflective educators	168



Table of Contents (continue)

	Page
6.3.5 Conclusive remark	170
6.4 EDUCATIONAL APPROACHES	170
6.4.1 Behavioural approaches	170
6.4.2 Cognitive-constructivist approaches	171
6.4.3 Humanistic approaches	172
6.4.4 Social approaches	172
6.4.5 Reflective approaches	173
6.5 SUITABLE APPROACHES FOR EDUCATING REFLECTIVE NEONATAL NURSES	176
6.6 SUMMARY	181

Chapter 7: Development and description of the model

7.1 INTRODUCTION	182
7.2 METHODOLOGY OF MODEL DEVELOPMENT	182
7.2.1 Process of model development	183
7.2.2 Components of model	184
7.3 DESCRIPTION OF THE MODEL	184
7.3.1 Framework for educating reflective neonatal nurses	187
7.3.1.1 South African higher education	188
7.3.1.2 Nursing education in South Africa	189
7.3.2 Neonatal nursing students	191
7.3.3 Reflective learning	192
7.3.4 Programme outcomes	194
7.3.4.1 Critical outcomes	194
7.3.4.2 Specific learning outcomes	195
7.3.4.3 End-product outcomes	203
7.3.5 Role of the educator in educating reflective neonatal nurses	211
7.3.6 Education programme for educating reflective neonatal nurses	215
7.3.6.1 Outline of content	215
7.3.6.2 Educational approaches for educating reflective neonatal nurses	215
7.4 SUMMARY	217



Table of Contents (continue)

	Page
Chapter 8: Evaluation of model, limitations, conclusions and recommendations	
8.1 INTRODUCTION	218
8.2 EVALUATION OF THE MODEL	218
8.2.1 Input from expert review	219
8.2.2 Adjustments made to the model	220
8.3 CONCLUSIONS	220
8.4 LIMITATIONS OF THE STUDY	225
8.5 RECOMMENDATIONS	225
8.5.1 Dissemination of the model for education of reflective neonatal nurses	225
8.5.2 Recommendations for nursing education	226
8.5.2 Recommendations for neonatal nursing practice	227
8.5.2 Recommendations for research	227
8.6 SUMMARY	229
References	230
Annexures	
Annexure 1: Summary of attributes and demands of neonatal nursing practice	258
Annexure 2: Letter of invitation and informed consent for peer review of phase two's findings	263
Annexure 3: Letter of invitation for expert review to evaluate model	265
Annexure 4: Summary of research methodology	269
Annexure 5: Personal reflection on study	270



List of Tables

Table 2.1:	Summary of components or 'agents' of model	18
Table 2.2:	Objectives of the different phases	18
Table 2.3:	Number of responding experts per field of expertise	30
Table 3.1:	Differences between traditional education and outcomes-based education	39
Table 3.2:	NQF for higher education	43
Table 3.3:	SAQA and NQF terminology	44
Table 3.4:	Higher education qualification descriptors in neonatal nursing education	47
Table 4.1:	Summary of learning theories	81
Table 5.1:	Foundational and practical competences related to neonatal patients	138
Table 5.2:	Foundational and practical competences related to neonatal nursing practice environment	141
Table 5.3:	Foundational and practical competences related to family-centred care	144
Table 5.4:	Foundational and practical competences related to multi-professional teamwork	146
Table 5.5:	Foundational and practical competences related to managerial aspects of neonatal nursing practice	147
Table 5.6:	Foundational and practical competences related to ethico-legal professional practice	151
Table 5.7:	Foundational and practical competences related to professional and personal outcomes	152
Table 5.8:	Outline of contents and expected outcomes of a programme for education of reflective neonatal nurses	155
Table 6.1:	Educational approaches for educating reflective neonatal nurses	179
Table 7.1:	Agents of the model as applied to this study	184
Table 8.1:	Number of responding experts per field of expertise	219
Table 8.2:	Evaluation of model by experts	219



List of Figures

Figure 1.1:	Schematic overview of the study	6
Figure 3.1:	Framework for education of reflective neonatal nurses in a South African context	76
Figure 4.1:	Process of reflective learning	94
Figure 4.2:	Applied competences	111
Figure 7.1:	Schematic presentation of methodology applied in study	183
Figure 7.2:	Model for education of reflective neonatal nurses in a South African context	185
Figure 7.3:	Framework for education of reflective neonatal nurses in a South African context	188
Figure 7.4:	Process of reflective learning	193
Figure 7.5:	Applied competences	196
Figure 7.6:	End-product outcomes	204
Figure 7.7:	Educator's role in educating reflective neonatal nurses	211
Figure 8.1:	Model for education of reflective neonatal nurses in a South African context	224



List of Abbreviations

CHE	Council on Higher Education
CINN	Council of International Neonatal Nurses
CPD	Continuing Professional Development
ETQA	Education and Training Quality Assurance Body
HEMIS	Higher Education Management Information System
HEQC	Higher Education Quality Committee
HET SGB	Higher Education and Training Standards Generating Body
HRH Plan	National Human Resource for Health Plan
ICN NP/APN Network	International Council of Nurses International Council of Nurses: Nurse Practitioner / Advanced Practice Nurse Network
NEPAD	New Partnership for Africa's Development
NICUs	Neonatal Intensive Care Units
NQF	National Qualifications Framework
NSB	National Standards Body
OBE	Outcomes-Based Education
QC	Qualifications and Quality Assurance Council
SANC	South African Nursing Council
SAQA	South African Qualifications Authority
SETA	Sectoral Education and Training Authority
SGB	Standards Generating Body
WHO	World Health Organization

