

**NURSES' PRACTICE OF THE INTEGRATION OF FAMILY PLANNING AND HIV PREVENTION
SERVICES IN NTCHEU DISTRICT, MALAWI.**

BY

LAPANI CHISI NGALA

STUDENT NUMBER: NGLLAP001

A DISSERTATION SUBMITTED TO THE UNIVERSITY OF CAPE TOWN

In fulfilment of the requirements for

MASTER OF SCIENCE IN NURSING

Faculty of Health Sciences

UNIVERSITY OF CAPE TOWN

SCHOOL OF HEALTH AND REHABILITATION SCIENCES

UNIVERSITY OF CAPE TOWN

UNDER THE SUPERVISION OF:

ASSOCIATE PROFESSOR SINEGUGU DUMA

DIVISION OF NURSING AND MIDWIFERY

MARCH, 2017.

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, Lapani Chisi Ngala, hereby declare that the work on which this dissertation is based is my original work and that I have used the Harvard 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 another university.

I empower the university to reproduce for the purpose of research either the whole or any portion of the contents in any manner whatsoever.

Signature:

Date: 09th March, 2017.

Signed by candidate

ACKNOWLEDGEMENTS

I am sincerely thankful to God for allowing me to come this far with this study. I am sincerely thankful to all the people who supported and encouraged me through the journey of conducting this study and I would like to extend my most sincere gratitude to the following people:

- The nurses' who participated in this study, without whom this study would not have been possible;
- Professor Sinegugu Evidence Duma for her patience, and scholarly guidance and support that encouraged and helped me to achieve the goals of the study as well as my personal growth as a researcher and a scholar;
- Mr Chisomo Ngala, my dear husband, for the financial, psychological, spiritual, emotional and academic support;
- My mum, Anna Chisi, and baby sis Pilirani for your constant prayers and support throughout the progress of the study;
- Leverne for editing my thesis within the specified period of time
- Last but not least, my two adorable sons, Ryan and Liam, for understanding mum when she was busy with her study ... I owe you big time, guys!

List of Abbreviations and Acronyms

AIDS	Acquired Immunosuppressed Diseases
ARV	Antiretroviral
CPD	Continuous Professional Development
DHS	Demographic and Health Surveys
FHI	Family Health International
FP	Family Planning
HIV	Human Immunodeficiency Virus
MTCT	Mother to Child Transmission
MOH	Ministry of Health
PEPFAR	The United States President’s Emergency Plan for AIDS Relief
PMTCT	Prevention of Mother to Child Transmission
STI	Sexually Transmitted Infections
SRH	Sexual and Reproductive Health
UNAIDS	Joint United Nations Programme on AIDS
UNPF	United Nations Population Fund
USAID	United States Agency for International Development
VCT	Voluntary Counselling and Testing
WHO	World Health Organization

Table of Contents

1.0 Overview of the study	1
1.1 Introduction and background to the study.....	1
1.2 Problem statement.....	6
1.3 Rationale of the study.....	8
1.4 Purpose of the study.....	8
1.5 Objectives of the study.....	8
1.6 Research question.....	9
1.7 Operational definitions of terms.....	10
1.7.1. Contraceptive.....	10
1.7.2 Family Planning.....	10
1.7.3 Family planning nurse.....	10
1.7.4 HIV prevention services.....	10
1.7.5 Integration of services.....	10
1.7.6 Nurse practice.....	10
1.8 Conceptual framework.....	11
1.9 Conclusion.....	13
1.10 Outline of Dissertation.....	14
2.0 Literature review	15
2.1 Introduction.....	15
2.2 Approaches to integration.....	16
2.3 Benefits of integration.....	18
2.4 Knowledge of health providers towards integration of family planning and HIV prevention services.....	22
2.5 Attitude of health providers towards integration of family planning and	

HIV prevention services.....	25
2.6 Barriers to practicing integration of family planning and HIV prevention services.....	27
2.7 Conclusion.....	29
3.0 Methodology.....	30
3.1 Introduction.....	30
3.2 Study design.....	30
3.3 Study setting.....	32
3.4 Study population.....	32
3.5 Sampling method.....	33
3.5.1 Inclusion criteria.....	33
3.5.2 Exclusion criteria.....	34
3.6 Sample size determination.....	34
3.7 Recruitment of participants.....	35
3.8 Pilot study.....	35
3.9 Data collection.....	37
3.10 Ethical considerations.....	38
3.10.1 Autonomy.....	39
3.10.2 Confidentiality.....	39
3.10.3 Beneficence and non-maleficence.....	40
3.10.4 Justice.....	41
3.10.5 Risks and benefits.....	41
3.11 Conclusion.....	42

4.0 Data analysis.....	43
4.1 Introduction.....	43
4.2 Data management.....	43
4.3 Data analysis.....	44
4.3.1 Familiarisation and immersion.....	45
4.3.2 Coding.....	45
4.3.3 Inducing themes.....	47
4.3.4 Elaboration.....	49
4.3.5 Interpretation and checking.....	49
4.4 Scientific rigour/trustworthiness of the research.....	50
4.4.1 Credibility.....	50
4.4.2 Confirmation.....	51
4.4.3 Dependability.....	52
4.4.4 Transferability.....	52
4.5 Conclusion.....	53
5.0 Findings.....	54
5.1 Introduction.....	54
5.2 Description of the sample.....	54
5.3 Findings.....	58
5.3.1 Familiarity and awareness of integration of family planning and HIV prevention services.....	74
5.3.1.1 Facilitation on access and acceptability of comprehensive integration Of family planning and HIV prevention services.....	74

5.3.1.2 Educating and counselling clients.....	76
5.3.1.3 Early detection of HIV.....	78
5.3.2 Nurses attitude to integration of family planning and HIV prevention services.....	80
5.3.2.1 Personal and professional benefits of integration of family planning and HIV prevention services.....	80
5.3.2.2 Resentment to integration of family planning and HIV prevention services (negative attitude).....	83
5.3.3 Barriers to integration of family planning and HIV prevention services.....	85
5.3.3.1 Policy-related barriers.....	85
5.3.3.2 Human resource-related barriers.....	86
5.3.3.3 Competence-related barriers.....	89
5.4 Conclusion.....	91
6.0 Discussion of findings, recommendations, limitations and conclusion.....	93
6.1 Introduction.....	93
6.2 Part 1: Familiarity and awareness of integration of family planning and HIV prevention services.....	93
6.2.1 Facilitation on access and acceptability of comprehensive integration of Family planning and HIV prevention services.....	94
6.2.2 Educating and counselling clients.....	96
6.2.3 Early detection of HIV among women of child bearing age.....	96
6.3 Part 2: Nurses attitude towards integration of family planning and	

HIV prevention services.....	97
6.3.1 Personal and professional benefit of integration of family planning and HIV prevention services.....	98
6.3.2 Resentment of practice of integration of family planning and HIV prevention services (negative attitude).....	99
6.4 Part 3: Barriers to practice of integration of family planning and HIV prevention services.....	100
6.4.1 Policy-related barriers.....	100
6.4.2 Human resource-related barriers.....	101
6.4.3 Competence-related barriers.....	103
6.5 Limitations.....	104
6.6 Recommendations.....	104
6.6.1 Recommendations for policy.....	104
6.6.2 Recommendations for nursing education.....	105
6.6.3 Recommendations for National Organisation for Nurses and Midwives in Malawi (NONM).....	105
6.6.4 Recommendations for District Management Team (DHMT).....	105
6.6.5 Recommendation for future research.....	106
6.6.6 Recommendations for practice.....	106
6.7 Conclusion.....	107
References.....	108
Appendix A: Information sheet for interviews.....	131
Appendix B: Research Informed consent.....	134

Appendix C: Semi-structured interviews guide.....	136
Appendix D: Ntcheu District Hospital letter of approval.....	137
Appendix E: NHSRC Malawi approval.....	138
Appendix F: UCT Ethics approval.....	139

Figures and Tables

Figure 1: Map of Ntcheu district catchment area.....	7
Figure 2: Cabana et al.'s (1999) model of assessing facilitators And barriers to knowledge use.....	12
Table 1: Codes.....	47
Table 2: Themes and subthemes	48
Table 3: Summary of themes and examples.....	56

Chapter One

Overview of the study

1.1 Introduction and background to the study

The integration of HIV and sexual reproductive health (SRH) services is known by the international community as an essential health strategy to hasten progress towards the Millennium Development Goals (MDGs) on child health, maternal health and HIV and AIDS, including universal access to HIV and reproductive health services (World Health Organization (WHO)/HIV, United Nations Population Fund (UNFPA), International Planned Parenthood federation (IPPF), Joint United Nations Programme on HIV/AIDS (UNAIDS) & University of California, San Francisco (UNSC), 2009). In 2015, sustainable development goals (SDGs) have been launched to shape the next 15 year development agenda, and complete the unfinished agenda of some of the Millennium Development Goals including child health, maternal health and HIV and AIDS which now falls under SDG number three; Good health and well-being (United Nations, 2015).

The integration approach incorporates HIV client risk assessment, counselling, and referral for HIV services as an integral component of family planning services (Farrell. 2007:3). Integrated HIV and sexual reproductive health services deliver a coordinated response to the dual challenges of high HIV prevalence and unmet needs for family planning (Family Health International (FHI), 2004:31). Integration involves combining HIV services like testing and counselling, treatment and care, and sexual and reproductive health (SRH) services like family planning, maternal and child health, and management of sexually transmitted infections (STIs) within the health sector in order to offer comprehensive health services at one service delivery point or through a strong referral system (International Planned parenthood Federation (IPPF), 2005:5).

In other words, integrating services ensures that if clients were to visit the facility for one reason, providers would address several health issues at the same time. This will not only serve the interests of clients but also those of the providers, as this might bring provider satisfaction through reduced time of interaction with clients and also cost savings (IPPF, 2005:4). In a review about when and where it makes sense to integrate services, Forheit (2006) highlighted that integrated services are thought to expand access to and coverage of critical services and to improve their efficiency; this is the result of reducing duplication of service delivery functions and delivering more services per client contact. Two systematic reviews conclude that integrating sexual reproductive health and HIV services in health care facilities, can increase the uptake of contraception, condom use, HIV testing, and antiretroviral prophylaxis of vertical transmission in Sub-Saharan Africa (Malawi inclusive) (Kennedy, Spaulding, & Brickley, et al., 2010). It is suggested that health services should be considered as integrated when they are offered at the same facility at the same time, and when the same healthcare providers offer services directly or refer clients to another place for services during a single visit. It is further stated that if the integration of services improves clients' access to the services in ways that are more efficient and cost-effective, then it can be redeemed a success (Forheit, 2006:105).

The goal of integration is to provide comprehensive HIV prevention, counselling and testing, and treatment where family planning as an integral component of care (Farrell, 2007:3), since clients of family planning services and clients of HIV/AIDS services share many common needs and concerns. For example, planned pregnancies, and contraceptive needs. Subsequently, the family planning component of care reflects the distinctive needs of HIV-positive individuals to improve SRH outcomes, for example fertility decision making, contraceptive options in relation to HIV status, and use of antiretroviral drugs (ARV) or drugs to treat opportunistic infections. Farrell (2007:3) further says that the family planning component of care is said to address the needs of HIV-negative individuals to prevent infection while achieving their desired fertility goals.

Sexually active individuals are at risk of both unintended pregnancies and HIV. Family planning and HIV/AIDS programmes often serve similar populations, particularly in countries with

generalised HIV epidemics (inclusive Malawi) driven by heterosexual transmission (USAID, 2011:5). HIV and family planning interventions have similar target audiences; for instance, nearly half of HIV-infected persons worldwide are women of child-bearing age (UNAIDS, 2004:2). In other words clients of family planning services and clients of HIV/AIDS services share many common needs and concerns. It is therefore believed that offering these services jointly may maximise use of scarce resources, improve client access, increase uptake for both service types and capture otherwise missed opportunities by reaching clients not typically targeted with either family planning or HIV prevention and treatment information (Berer, 2003; Dehne, Snow, & O'Reilly, et al., 2000; Duerr, Hurst, & Kourtis, et al., 2005; Maharaj & Cleland, 2005; Reynolds, Janowitz, & Johnson, et al., 2006).

Malawi is one of the sub-Saharan African countries with the high a HIV prevalence rate and low contraceptive use and the unmet need for family planning services. The HIV prevalence rate is 12.8% among women and prevalence of the use of contraceptives is 58% (National Statistical Office & International Coach Federation (ICF) Macro, 2015-2016:16-44). Of women between the ages of 15 and 49 years, 26% report wanting to space or limit their pregnancies but are not using contraception (National Statistical Office & ICF Macro, 2015-2016:16-44). This is further complicated by the limited number of nurses who are skilled to provide integrated services for SRH and HIV prevention (National Statistical Office & ICF Macro, 2015-2016:16, 44). It is believed that integrating family planning services and HIV services is an effective service delivery approach to address these issues (Iran, McGinn, Mellish, Mtema, & Dindi, 2015:1)

Nurses in Malawi are at the forefront of service provision for HIV prevention and family planning. They are supposed to do this through the integration of HIV and family planning services, which is seen by the WHO as a promising practice to address unmet needs for contraception as well as to reduce mother-to-child transmission; Malawi has shown tremendous political support of integration of services (WHO, 2009:4).

Malawi is a signatory to several global calls for action that advocate for the integration of services, such as the 1994 International Conference on Population and Development (Cairo)

Program of Action and the 2006 Maputo Plan of Action. At national level Malawi has issued several policies and strategies that speak to integrating family planning or SRH and HIV services (Iran, Pappa, & Dindi, 2015). Donors such as USAID and UNFPA support the Malawian Government's efforts to integrate family planning, HIV and other primary health services at the policy, systems, and service delivery levels through projects such as Support for Service Delivery Integration (SSDI) and Sexual and Reproductive Health Rights and UNFPA's Linking HIV and Sexual Reproductive Rights (SRHR). The latter, for example, promotes the linkages between HIV and sexual and reproductive health and rights, policies and services to better strengthen the health system in Malawi and increase access to and use of a broad range of important services (Interagency Working Group on Sexual and Reproductive Health and HIV Linkages (IAWG), nd).

Studies indicate slow progress on the full integration of family planning and HIV services in Malawi. A study of community based family planning and HIV services in Malawi conducted by Management Sciences for Health (MSH) (2010) noted several gaps in integration, and a second rapid assessment in 2010/2011 conducted by the centre for reproductive health, in collaboration with the International Planned Parenthood Federation (IPPF), UNFPA, and others, likewise documented areas of improvement (Mutema, Mayhew, & Mannuela, et al, 2010; Centre for Reproductive Health, 2010; IPPF, 2011). The assessment aimed to determine whether clients accessing HIV services were able to also access family planning services either on site or through referral mechanism. Such integration is expected to result in increased uptake of family planning and HIV services, reduced cost and increased efficiency of services among Family planning clients. The assessment noted several gaps and documented areas of improvement, including improving coordination between Ministry of Health's Reproductive Health Directory (RHD) and HIV/AIDS department, training providers to provide integrated services, and using task shifting to expand access to services (Mutema, Mayhew, & Mannuela, et al, 2010; Centre for Reproductive Health, 2010; IPPF, 2011).

In Malawi reproductive health policy, programmes, and services are shaped by the National Reproductive Health Service Delivery Policy and Standards. This document not only includes family planning, STIs and post-abortion care as essential information for clients seeking

reproductive health services, but also includes HIV services such as voluntary counseling and testing for HIV (VCT), and prevention of mother-to-child transmission of HIV (PMTCT) (Ministry of Health, Republic of Malawi, 2009:11). The HIV and AIDs policy, programmes and strategies are guided by the National HIV and AIDS policy and guidelines. These guidelines provide support for HIV testing and counseling, HIV treatment and care, PMTCT, and syndromic management of STIs (Malawi HIV & AIDS Extended National Action Framework, 2010-2012, Draft).

The USAID Mission in Malawi requested the USAID funded Health Policy Project (HPP) to undertake a comprehensive assessment of the status of family planning and HIV service integration in Malawi to improve understanding of the current state of family planning and HIV integration services on behalf of USAID, Government of Malawi officials, nongovernmental organisation, partners and other stakeholders, and to identify key areas of action. HPP first reviewed 19 national health related policies and guidelines that address family planning, HIV, and the integration of services (Iran, Pappa & Dindi, 2015). In September 2015 final policy review on family planning and HIV integration in Malawi was conducted (Iran, Pappa & Dindi, 2015:6). The policy documents mention various types of HIV services that should be integrated into existing family planning services, such as counseling on HIV prevention, VCT, and dispensing ARVs. The Reproductive Health Service Delivery Guidelines mention the need for provider-initiated counseling and testing among family planning clients who do not know their HIV status. The guidelines also acknowledge that when certain HIV services cannot be provided at the same site as family planning, clear referral mechanisms should be established. The guidelines also mention that family planning providers should be trained in counseling and testing for HIV, there should be proper referral of clients to pre-ART/ART clinics, and HIV-negative women should be counseled on risk reduction and dual protection (Iran, Pappa & Dindi, 2015:6).

Finding out how nurses are practising integration of family planning and HIV prevention services in Ntcheu district, Malawi, in line with the policy and guidelines is necessary in order to effectively combat the spread of HIV and promote family planning in the country.

1.2 Problem statement

Despite evidence to show that positive attitude, appropriate knowledge and good practice skills of nurses are important in order to effectively combat the spread of HIV and promote family planning, no research has been conducted in Malawi to understand the nurse's practice in the integration of family planning and HIV prevention services. It is imperative to investigate and describe the nurses' practice in the integration of family planning and HIV prevention services in Ntcheu district, Malawi (Figure 1), in order to understand the nature of their practice in service integration.

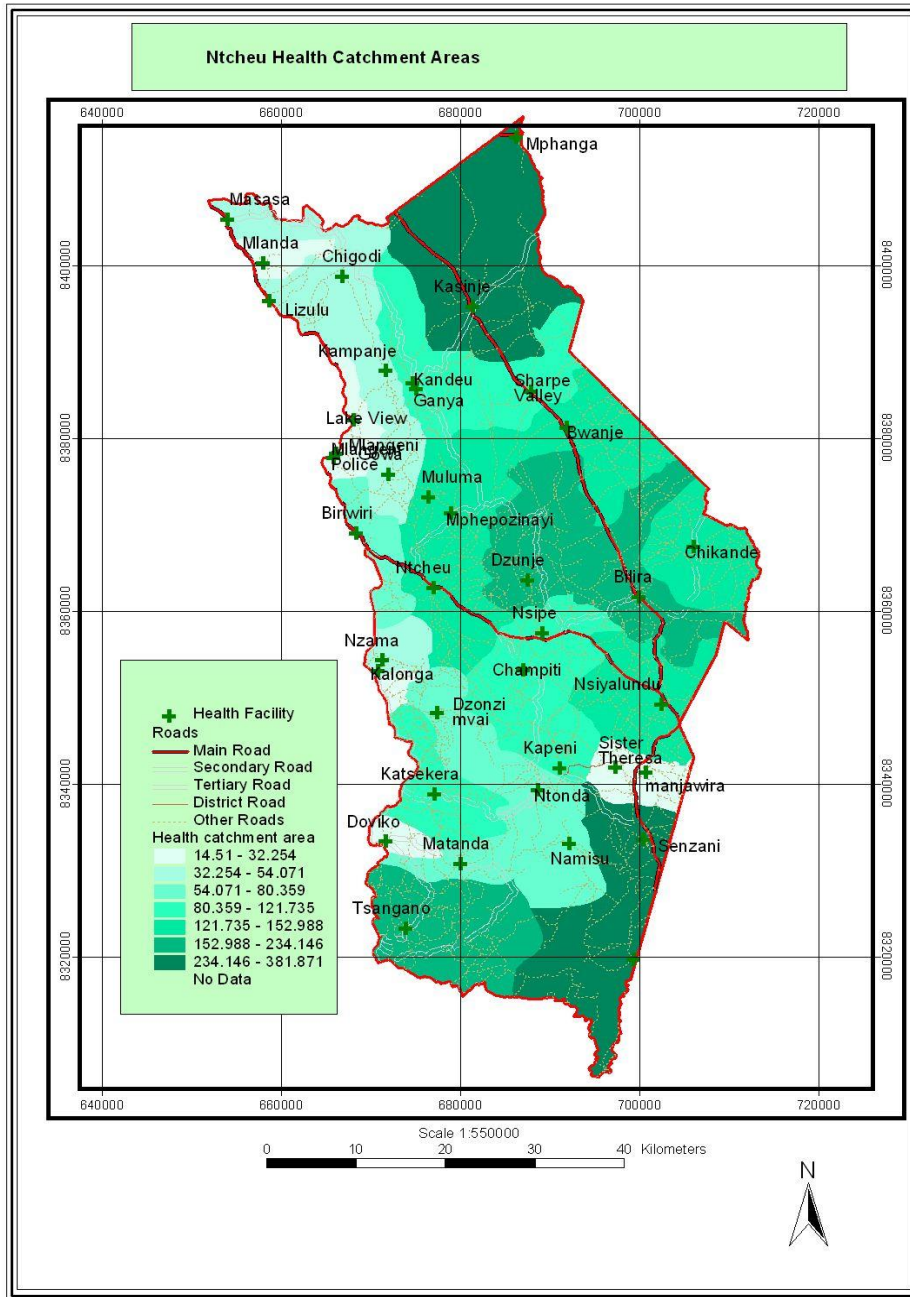


Figure 1 showing Map of Ntcheu District catchment area.

1.3 Rationale of the study

The rationale for conducting this study was to investigate how nurses are practising integration of family planning and HIV prevention in the Ntcheu district of Malawi, so as to identify any gaps in order to improve nurses' practice in integration of family planning and HIV prevention services according to the relevant guidelines or policy. The identified gaps would influence future plans for possible in-service trainings, refresher courses and mentorship programmes to improve the nurses' practice in integration of family planning and HIV prevention services in Ntcheu district, Malawi.

1.4 Purpose of the study

The purpose of the study was to explore and describe nurses' practice in the integration of family planning and HIV prevention services in Ntcheu district, Malawi.

1.5 Study objectives

In line with Cabana et al.'s (1999) modified model of assessing facilitators and barriers to knowledge use, which guided the study, the objectives of the study were:

- To explore and describe nurses' familiarity with and awareness of integration of family planning and HIV prevention services in Ntcheu District, Malawi.
- To explore and define nurses' attitudes towards integration of family planning and HIV prevention services in Ntcheu District, Malawi.
- To explore and describe nurses' perceived barriers to the integration of family planning and HIV prevention services in Ntcheu District, Malawi.

1.6 Research question

How do nurses practice the integration of family planning and HIV prevention services in Ntcheu district, Malawi?

1.7 Operational definition of terms

For the purposes of the study, the following definitions were used:

1.7.1 Contraception: Contraception or birth control is the practice of preventing or reducing the possibility of becoming pregnant (Ministry of Health, 2011).

1.7.2 Family planning: This is a programme that allows individuals and couples to determine the number of children they want to have, when to have them, and at what intervals (Ministry of Health, 2007:8).

1.7.3 Family planning nurse: A health worker trained to provide information and services relating to acceptable contraceptive methods (WHO, 2016)

1.7.4 HIV Prevention services: Refer to practices done to prevent the spread of HIV/AIDS (WHO, 2016).

1.7.5 Integration of services: Is this approach healthcare providers use opportunities to engage the client in addressing broader health and social needs than those prompting the health encounter (Farrell, 2007:3).

1.7.6 Nurses Practice: Is the act of a learned skill. For example integration of family planning and HIV prevention services is a learned skill which nurses acquire and then practice

1.8 Conceptual framework

Based on the literature reviewed, this study utilised a modified conceptual framework for assessing facilitators and barriers to knowledge use by Cabana et al. (1999:1458-1465) in relation to nurses' practice of integration of family planning and HIV prevention services. The model assesses performance facilitators and barriers to physician adherence to guidelines (Cabana et al., 1999: 1458). The conceptual framework has three domains, namely knowledge, attitude, and behaviour.

The knowledge domain includes familiarity and awareness. In the current study, the knowledge domain related to the influence of nurses' familiarity and awareness with policy and guidelines on HIV and family planning integration services in their practice. This domain guided the development of the first research objective, to explore and describe nurses' familiarity with and awareness of integration of family planning and HIV prevention services in Ntcheu district, Malawi.

The attitude domain includes agreement, self-efficacy and motivation. In this study, the researcher used only motivation, hence the conceptual framework for assessing facilitators and barriers to knowledge used by Cabana et al. (1999:1458-1465) was modified by leaving out agreement and self-efficacy. This domain guided the second objective, to explore and describe nurses' attitudes towards integration of family planning and HIV prevention services in Ntcheu district, Malawi.

The behaviour or barrier domain includes external barriers and environmental barriers. In this study the researcher related the barriers to policy, human resources and the competence of providers and again modified the conceptual framework of Cabana et al. (1999:1458-1465) (Figure 2). This domain guided the third and last objective, to explore and describe nurses' perceived barriers to the integration of family planning and HIV prevention services in Ntcheu District, Malawi.

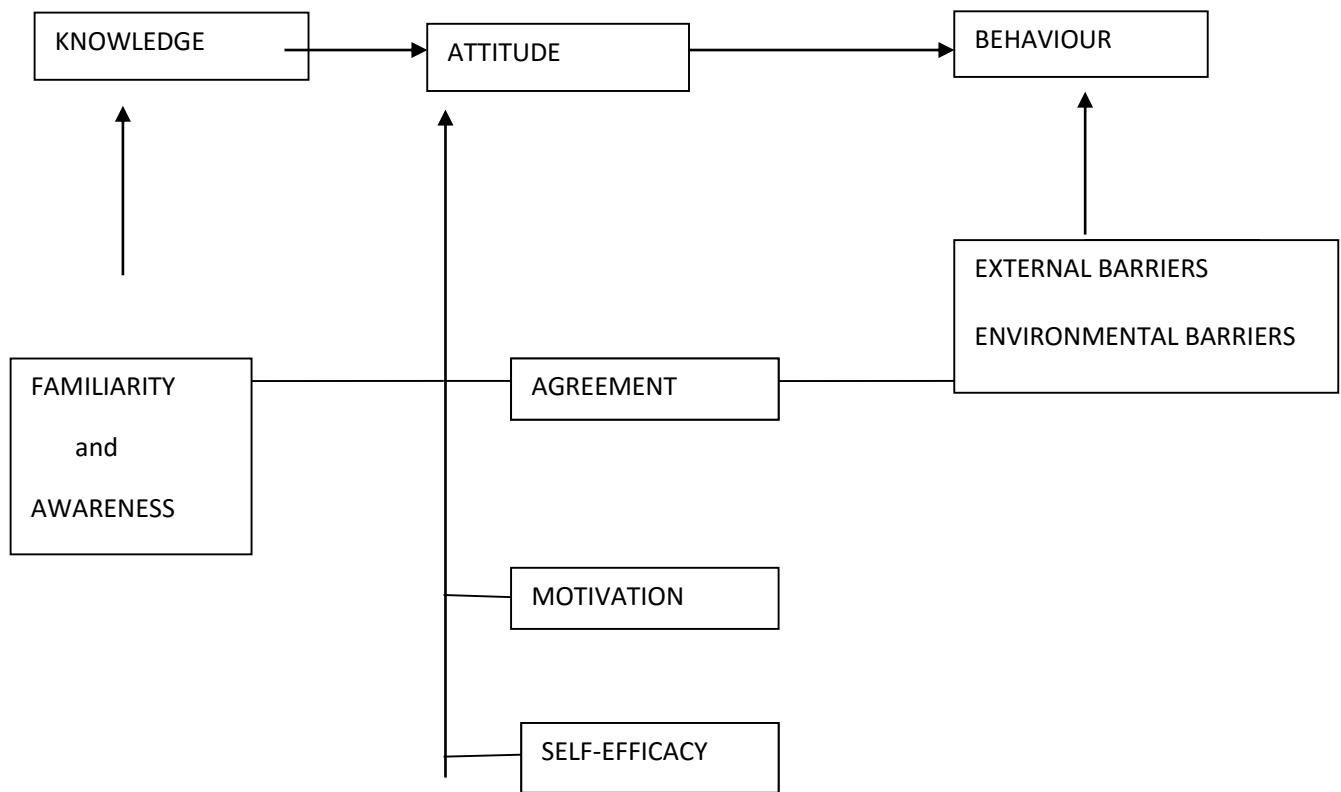


Figure 2: Conceptual framework for assessing facilitators and barriers to knowledge use (Cabana et al., 1999)

1.9 Conclusion

This chapter outlined the introduction and background to the study, rationale of the study, problem statement and purpose of the study, objectives of the study, research question and definition of basic terms. The conceptual framework used to guide the researcher was also outlined.

The next chapter outlines the review of literature pertaining to nurses' practice in the integration of family planning and HIV prevention services.

1.10 Outline of dissertation

Chapter One describes the background of the study, the problem statement, purpose of the study, objectives of the study, research question and rationale for conducting the study. It concludes with the definition of terms that are related to the study and the conceptual framework that guided the study.

Chapter Two discusses the literature reviewed in relation to nurses' practice of integration of family planning and HIV prevention services.

Chapter Three presents the methodology of the study, which includes study design, study setting and population, sampling method, inclusion and exclusion criteria, sample size determination, recruitment of participants, the pilot study, data collection and ethical considerations. A limitation of the study concludes this chapter.

Chapter Four provides the details of data management and data analysis methods used in this study. It concludes with details of how trustworthiness was achieved.

Chapter Five presents the results and findings of the study.

Chapter Six includes the discussion of the findings, recommendations and limitations, and concludes the report of the study.

Chapter Two

Literature review

2.1 Introduction

This chapter outlines the literature included in the study, which includes the literature review that was conducted prior to the development of the research proposal and data collection and during data analysis.

Literature review was conducted prior to data collection in order to provide the researcher with background information on the study phenomenon, for development of the proposal (Notar & Cole, 2010:2; Johnston, 2007:64). It was also conducted to inform the researcher of the work that has been done in Malawi and other countries. This is further supported by Burns and Grove (2005:189,192), who state that literature review provides the researcher with knowledge on what is known and what is not yet known about the phenomenon being studied

Literature review identified the dearth of literature on nurses' practice in integration of family planning and HIV prevention services in Malawi. This identified gap is in line with the assertion of Burns and Grove (2005:189,192) that literature review allows for identification of gaps in the knowledge base on the phenomenon being studied.

Literature reviewed during data analysis was used to confirm the discovered themes and subthemes as findings and to allow for discussion of findings. This enhanced the interpretation of data and the objectivity of this data interpretation. This is also in agreement with Burns and Grove (2005:189,192), who argue that knowing the details of a research problem during data collection and analysis can influence the way in which the researcher views the research problem.

The following search engines were used to search for data: CINAHL, MEDLINE, Africa-wide information, EBSCOHOST and Google Scholar. The dates used for the Google Scholar search

items were from 2000 to date. For other databases the dates were from 2012 to 2014 for searching literature from around the world. The search terms used included: nursing practice, integration, nurses, family planning, HIV health services.

The literature review is discussed under the following headings: approaches or models of integration, benefits of integration, and knowledge of health providers on integration of family planning and HIV prevention services, attitude of providers to integration of family planning and HIV prevention services, and barriers to integration of family planning and HIV prevention services.

2.2 Approaches to integration (models)

Literature reviewed indicate different approaches or models to integration of family planning and HIV prevention services that have been used successfully in different countries. These include integrating family planning into HIV counselling and testing; integrating HIV counselling and testing into family planning services; integrating family planning into PMTCT services and integrating family planning into HIV treatment, care, and support programmes (Ringheim, Yeakey, Sines, et al., 2009:3).

Integrating HIV counselling and testing into family planning services and integrating family planning into HIV counselling and testing entails the addition of HIV counseling and testing services into standard family planning services, and standard family planning services into HIV counseling and testing settings respectively, thus widening the reach of HIV prevention as well as family planning messages (Liambila, Askew & Gathitu, et al., 2008:22). In Kenya two models of counseling and testing were piloted by the Population Council and Kenyan Ministry of Health. These were the integration of HIV testing in the family planning clinics and referrals of family planning clients to specialised HIV counseling and testing services. Results showed improved quality of services. HIV testing during family planning counseling increased from 39% to 88% of family planning clients being offered an HIV test. The additional time to provide the counseling and testing services was less than five minutes, representing a substantially lower cost per client than counseling and testing at a stand-alone centre (Liambila, Askew, & Gathitu,

et al., 2008:23). The conclusion was that adding HIV counseling and testing into family planning services was possible in that setting.

A similar study in Tanzania on one model of counseling and testing was conducted by FHI and Tanzanian Ministry of Health. This was a facilitated referral model where clients in counseling and testing were routinely screened for risk of unintended pregnancies and provided with family planning education. Those identified as having unmet need for family planning were physically accompanied by counseling and testing provider to the family planning unit for informed choice counseling and method provision. The study found that the facilitated referrals intervention produced positive effects on family planning use among counseling and testing clients. Method specific use increased among sexually active clients, especially for injectables (7 to 16 percent). Reported consistent condom use also increased, and dual method use more than doubled (12 to 31 percent). And a 4% decrease in unmet need for family planning was also observed (FHI, 2008). These findings supported the need for the current study in Malawi where the nurses' practice in the integration of family planning and HIV prevention has not been researched sufficiently.

Literature reviewed on integrating family planning into PMTCT services indicated that in Lesotho healthcare providers reached out to women who were enrolled for PMTCT before delivery in order to assist them to prevent unintended pregnancies. It was reported that providers' knowledge and practice improved, clients viewed the postpartum visits as important to their health and the health of their babies, and clinics reported an increase in the number of women attending postpartum care visits (Warren & Phafoli, 2008:23-25). The reported findings supported the current study in Malawi, where not much is known on how nurses are practising integration of family planning and HIV prevention services.

Integrating family planning into HIV treatment, care, and support programmes has shown that as the health and well-being of HIV-positive women improves with ART, women reconsider their fertility decisions regarding their sexuality and reproduction (UNFPA & WHO, 2006:57). The Lighthouse Trust in Malawi conducted a study on integration of reproductive health

services into HIV care, which found that integration and availability of the service increased the uptake of reproductive health services (Phiri, Feldacker, & Mlundira, et al., 2013:2). It also found that the service was accepted by clients, and adding reproductive health services did not interfere with the standard service for ART (Phiri, Feldacker, & Mlundira, et al., 2013:2). However, the views of the nurses in practising this kind of integration of family planning and HIV prevention services were not explored, thus raising the need for the current study.

2.3 Benefits of integration

Empirical evidence suggests that integrating family planning with HIV services is beneficial and feasible (Kennedy, Spaulding, & Brickley, et al., 2010:79; IPPF, UNPF, & UNAIDS, et al., 2011:3). For instance, reviews by Dehne, Snow, & O'Reilly, et al. (2000: 362) showed some evidence of increased client satisfaction with integrated services. In Cambodia (Best, 2004; IPPF, 2006), Ethiopia (Kaba & Alem, 2006), Kenya (Liambila, Askew, & Gathitu, et al., 2008), South Africa (Mullick, Khoza, & Askew, et al., 2006) and the Dominican Republic (IPPF, 2006) clients reported appreciation at being able to gain access to a broader range of services. Maharaj (2004:25) also found that integrated services are seen as benefitting clients because they reduce their travelling times and save them the inconvenience of coming to the clinic on many separate occasions. In Latin America, at the family planning clinics of Sociedade Civil Bem-Estar Familiar (BENFAM) in Brazil, client satisfaction increased after provision of integrated services, and clients also appreciated the high quality of services offered (Becker, Leitman & Fathalla, 1997:1-27).

Literature reviewed showed numerous studies which suggest that both “one-stop-shop” models of integrated service delivery and referral-based approaches can improve family planning access and use (Mark, Meinzen-Derr, & Stephenson, et al., 2007; Stephenson, Bartel, & Rubards, et al., 2012; FHI, 2012; Wilcher, Adamchak, & Cates, et al., 2013; Baumgartner, Green, & Mpangile, et al., 2013; Grossman, Onono, & Newmann, et al., 2013) among the clients. It is suggested that integration leads to improved continuity of repeat clients (Fullerton, Fort & Johal, 2003). Most of the studies evaluating interventions to deliver SRH services to

women living with HIV have reported positive outcomes, including increases in voluntary contraceptive use or in completed referrals from HIV services to family planning clinics (Kennedy, Spaulding, & Brickley, et al., 2010; Wilcher, Adamchak, & Cates, et al., 2013; Lopez, Hilgenburg, & Chen, et al., 2013). Furthermore, programmes in Zimbabwe, Kenya, Malawi, Tanzania, and Ethiopia found that community-based provision of integrated services contributed to large increases in new family planning clients (Crystal, Pacque-Margolis, & Kotellos, et al., 2012; Daniel, Banzi, & Mkini, et al., 2012).

Other studies indicated that integration of new service components with family planning or reproductive health services can increase access to services such as those for STIs/HIV-transmission prevention among clients (Chege, 2001), referrals for HIV testing and counseling (Liambila, Askew, & Gathitu, et al., 2008), and STI care within family planning or reproductive health services.

Literature reviewed further suggested that integration of services reduces the unmet need for contraceptive use. For instance, a study conducted by the Integra Initiative (2013) found that there was an existing unmet need for SRH services among women living with HIV, including family planning. It was reported that integrated services helped women realise their fertility intentions and meet their contraceptive needs. Two studies further acknowledged a decrease in the incidence of pregnancies following integration of family planning and HIV services, thus indicating that integration helped in reducing the unmet needs for contraceptive use (Ngure, Heffron, & Mugo, et al., 2009; Wall, 2013).

Some programmes reported increased service uptake after integration (Campbell & Lambey, 2002; Rob, Hossain, & Khan, et al., 2005; Abera & Mengistu, 2006; Kaba & Alem, 2006; Mphuru, Barone, & Perchal, et al., 2006; WHO, UNPF, & IPPF, et al., 2008), and one found improved continuity of repeat clients after service integration (Fullerton, Fort, & Jorhal, 2003). The study findings supported the need to find out how nurses are practicing integration of family planning and HIV prevention services in Ntcheu district, Malawi.

The literature further suggested that integration improves HIV-related indicators. For instance, in Haiti, Peck (2013) found that integrating additional services including family planning within HIV programmes increased the uptake of HIV testing by 62 times over a 15-year period.

Another study conducted in Zimbabwe reported that offering integrated family planning and HIV services through community health workers contributed to increases in contraceptive use and referrals to VCT centers, and also led to improvements in client attitudes and knowledge about both family planning and HIV (Crystal, Pacque-Margolis, & Kotellos, et al., 2012). These study findings support the current study on how nurses are practicing integration of family planning and HIV prevention services in Ntcheu district, Malawi.

The literature also suggests that integration strengthens male involvement in family planning. A study in Kenya reported that HIV-positive men preferred to receive family planning information and services in HIV care settings rather than maternal and child health or family planning clinics, which are oriented primarily to mothers and babies (Steinfeld, Newmann, & Onono, et al., 2013). Several studies demonstrated that the integration of family planning into HIV services has the potential to engage men in family planning, HIV testing and treatment of STIs (Stephenson, Bartel, & Rubards, 2012; Ngure, 2009; Khu, Vwalika, & Karita, et al., 2012; Wall, 2013; Mphuru, Barone, & Perchal, et al., 2006; Budiharsana 2002; Lafort, Sawadogo, & Delvaux, et al., 2003).

A study in Ethiopia, a setting with a relatively lower prevalence of HIV, reported that integrated services offered an expanded range of services and was associated with attracting atypical clients to family planning clinics, especially men (Bradley, Gillespie, & Kidanu, et al., 2009). A study in Bangladesh on integration of family planning and HIV prevention services also showed an increase in male clients, although most sought only general health services rather than family planning or HIV counselling and testing (Rob, Khan, & Hossain, et al., 2005). These study findings support the current study on the need to find out how integration of HIV and family planning is being practiced by nurses in Ntcheu district, Malawi.

The literature reviewed show that integrating family planning and HIV programmes can potentially reduce the costs of service provision by maximizing productive use of erratic health system resources, and can also reduce the costs for clients by avoiding the need to seek services through several appointments. It was presumed that integration of STIs (HIV) services with family planning and maternal and child health services could offer cost savings by sharing staff, facilities, equipment, and other administrative and overhead costs (Askew & Berer, 2003).

A South African study indicated that cost-effectiveness was achieved when clinic staff had sufficient time to provide HIV testing to all clients (Homan, Reynolds, & Janowitz, et al., 2006) and: a Kenyan study showed that adding HIV testing to family planning services increased costs only marginally; the combined costs amounted to less than half the estimated costs of a stand-alone VCT site (Liambila, Askew, & Gathitu, et al., 2008). A systematic review by Sweeney, Obure, & Maier, et al. (2012) further report the cost-effectiveness of integrating HIV services with other health services; the integration of family planning was highly cost-effective or cost-saving compared to non-integration models. A study by Integra Initiative (2013) in Zimbabwe indicated that integration had the potential to facilitate efficiency gains in some contexts, for example by optimizing provider workload in the provision of HIV counseling and testing. A study conducted in Kenya on costs associated with the integration of family planning into HIV care and treatment services found that integration was feasible, inexpensive to implement, and cost-efficient in that setting (Shade, 2013). Two studies in Zimbabwe pointed to the importance of staff having excess time before service integration begins if cost-effectiveness or improved productivity is to be achieved after new services are added (Janowitz, Barbara, & Johnson, et al., 2002; Foreit, 2006). These study findings support the current study's need to find out how integration of family planning and HIV prevention services is being practiced by nurses in Ntcheu district, Malawi.

2.4 Knowledge of health providers on integration of family planning and HIV prevention services

The literature reviewed revealed that health providers play a crucial role in determining access to and quality of, reproductive health services (Shelton, 2001:152-155) and influence childbearing decision-making among HIV-infected men and women (Myer, Morroni, & El-Sadr, 2005:698-700; Feldman & Maposhere, 2003:162-173). A five-country study (Rwanda, Ethiopia, South Africa, Kenya and Tanzania) reported a need to improve provider knowledge and attitudes because providers make a sharp distinction between contraceptive methods that are best for HIV-positive and HIV-negative women. The findings revealed that the majority of counselling and testing providers in all countries but Rwanda said that condoms were the best method for HIV-positive women to use. Counselling and testing providers in South Africa indicated that condoms were the best method for HIV-negative women to use, and few providers correctly defined dual methods use or dual protection (Adamchak, Janowitz, & Grey, et al., 2010:28). A study conducted in KwaZulu-Natal to determine providers' ability and preparedness to prevent the spread of HIV among teenagers found that despite the providers' awareness of AIDS, they perceived their role as promoting contraception. Family planning staff rarely considered the possibility of prescribing condoms together with a more reliable contraceptive method, because condoms were perceived as an unreliable method of contraception and their use was discouraged (Karim, Whyte & Karim, 1992:361).

Further studies have revealed factors that can influence integration of family planning and HIV prevention services. For instance, pre-service education and in-service training were identified as critical to the success of integration of HIV and family planning services (Crystal, Pacque-Margolis, & Kotellos, et al., 2012:2). In Kenya a peer mentoring project was launched with the aim of building integration capacity. This project encouraged information sharing among health providers to improve quality of care. And results showed improved knowledge and skills among the health providers (Ndwiga, Warren & Abuya, 2011: slide 4). These findings support the need to find out how nurses in Ntcheu district of Malawi are practising integration of family planning and HIV prevention, as the findings may lead to improved quality of care for clients.

Several studies on integration have found that most healthcare providers have not been trained in family planning services (Nielsen-Bobbit, Kikumbi, & Motta, et al., 2011; FHI, 2010b) or had limited or outdated information about family planning and HIV prevention (Farrell, Nagendi & Efem, 2011; Holt, Lince, & Hargey, et al., 2011; Kennedy, Saulding, & Brickley, et al., 2011). In Rwanda fewer than half of the providers of HIV services had been trained in family planning and only about one-quarter in family planning services specifically for HIV-positive women; most of South African providers lacked pre-service training in family planning; Kenyan providers also lacked training in the particular family planning needs of HIV-positive women (FHI, 2010b:2). These findings are similar to those of the FHI study in Uganda, South Africa, Botswana, Ethiopia and Tanzania (FHI, 2010a). It was reported that up to two-thirds of providers were not trained about integration, were unaware of key guidelines for integration and had misconceptions about family planning methods and recommendations for HIV-positive clients. These study findings support the need for the current study.

An intervention trial conducted in South Africa that was designed to train and coach providers in contraception counselling for postpartum women, including HIV positive women, reported that providers could still not provide complete information about family planning methods to HIV- positive clients despite being trained (Holt, Lince, & Hargey, et al., 2011).

Another study in Kenya suggest that one of the factors contributing to a 123% increase in enrolment of family planning clients in four facilities in Kibera, Kenya, was increased staff capacity after receiving training to provide integrated services (Kinagwi & Kibet, 2011). These study findings also supporting the need for the current study on nurses' practice of integration of family planning and HIV prevention services in Ntcheu district, Malawi.

Integration is thought to increase access to and uptake of health services, and improves their efficiency and cost-effectiveness through better use of available resources (FHI, 2004:23). However, failure of health practitioners to integrate services has been reported. According to Leon, (2003:33) providers often do not give complete information to clients about chosen family planning methods. When a client comes for family planning, it is the provider's

responsibility to give all the necessary and complete information about all available family planning methods so that the client makes an informed choice. Not providing the complete information to the client is an act of omission which should not be entertained in nursing practice, and has great implications for a client's life.

As a case in point, a study on unintended pregnancy and contraceptive use among Mexican women found that SRH counselling in HIV care focused on male condom usage but did not routinely address reproductive desires nor provide information about access to other contraceptive methods (Kendall, 2013:15). This is in line with what Leonel, (2003:33) found: providers often do not give complete information to clients. Provision of complete information to clients is very important; if providers do not give adequate and complete information about family planning and HIV prevention to clients, for instance, then unplanned pregnancies and exposure of infants to HIV infection will continue to rise, and reduction of child morbidity and halting the spread of HIV as stipulated in the Sustainable Development Goals will not be achieved. This also supports the need for the current study, since not much is known about integration of family planning and HIV prevention practice and it may lead to improved and better quality care.

Another study in Zambia (Banda, Bradley & Hardee, 2004:14) found that nurses were not providing counselling on dual protection methods and that HIV-positive women were frustrated with nurses who did not inform them about suitable contraceptives. The literature states that HIV treatment and HIV-related health status have implications for contraceptive choice; some ARVs used to treat HIV interact with hormonal contraceptives, reducing the efficacy of the contraceptive and/or the ARVs (WHO, 2009), thereby leading to unwanted pregnancies among HIV-positive clients. This implies that healthcare professionals' knowledge about HIV and family planning have an important role to play in supporting women with HIV to make informed contraceptive choices. Again, this supports the need for the current study.

A study by Kawale, Mindry, & Phoya, et al. ((2015:8) reported limited knowledge of reproductive health, PMTCT of HIV, and safer conception among providers. He further states

that this lack of knowledge may contribute to the complex attitudes expressed towards HIV-infected clients having children. Another study by Newmann, Grossman, & Blat, et al. (2013:3) found that the providers interviewed had extremely limited knowledge on provision of family planning methods to HIV-positive clients, and were uncertain about the safety of contraceptive methods (hormonal and non- hormonal), and whether or not to recommend contraception to people living with HIV. Finding out how nurses are practising integration of family planning and HIV prevention services in Ntcheu district, Malawi, is supported by this study finding.

In a study on family planning counselling to women living with HIV in Tanzania, at least 5.6% of health providers were found to advise use of the intra-uterine contraceptive device as the most appropriate contraceptive method to HIV-positive women, with 16.9% recommending bilateral tubal ligation. However, it was reported that none of the healthcare providers talked about dual protection (The Acquire Project, 2006:44).

The need to conduct the current study on how nurses are practising integration of family planning and HIV prevention services in Ntcheu district, Malawi, is greatly supported by these study findings on HIV and family planning integration.

2.5 Attitudes of health providers towards integration of family planning and HIV prevention services

The literature shows that the integration of family planning and HIV prevention services is influenced by the productivity and performance of health providers. In Tanzania it has been reported that despite constraints to integration, some interviews with health providers indicate job satisfaction with integration of family planning and HIV prevention of services (Nielsen-Bobbit, Kikumbi, & Motta, et al., 2011). Health workers in Kenya and Swaziland reported that due to the increased efficiency of services client satisfaction improved, which in turn had a positive effect on health workers' own satisfaction (Kuria, 2011; Scholl & Cothran, 2011; Mengistu, Mengistu & Nougá, 2011). Another study in Kenya by Mutemwa, Mayhew, & Colombin, et al. (2013) reported that integration enhanced job satisfaction among the providers; since clients received a better quality of service, they gave more positive feedback to

the health service providers. In Tanzania Awadhi et al. (2012) found that 97% of health providers surveyed supported family planning and VCT integration. Askew and Maggwa (2002:83) highlighted that efforts to integrate STI prevention activities improved providers' attitudes, counselling skills and performance with regard to family planning services, despite initial concerns that an integrated approach would overload staff. A review by Dehne (2000:632) highlighted improved family planning providers' attitudes towards counselling, as well as counselling skills and performance. All of these study findings supporting the need to conduct the current study on how nurses are practicing integration of family planning and HIV prevention services in Ntcheu district, Malawi.

The literature has also shown that health providers' attitude towards clients' influences integration of family planning and HIV prevention services in one way or another. For instance, Kennedy et al. (2011) highlighted that those providers who are unwilling to engage clients in sexuality discussions can inhibit integration of services. A study conducted in Mozambique reported that nurses held pessimistic attitudes toward HIV-positive women in respect of adherence to contraception, and initially advised HIV-positive women to stop having children (Hayford & Agadjanian, 2010:291).

A study on integration of SRH services in Kwazulu-Natal, South Africa by Maharaj and Cleland (2005:313) reported that most providers expressed favourable attitudes to integration. Integrated services were acknowledged as serving the needs of clients more efficiently than vertical programmes, and as a result are likely to contribute to greater client satisfaction. They further reported that clients have all their reproductive needs met at one service delivery site, which helps to prevent duplication and ensure greater continuity of services.

Family planning providers play a crucial and important role in helping clients to identify their risk of HIV and other STIs and to adopt preventive measures. Providers' attitude towards HIV-positive clients can have negative implications, as seen in the Mexican study by Kendall (2013:15). Health providers' attitudes towards clients can constitute serious challenges to

integration of services, as mentioned in the discussion above; therefore finding out how nurses are practising integration of family planning and prevention of HIV services is very important.

In a study on provider attitudes about childbearing and knowledge of safer conception at two HIV clinics in Malawi, providers reported ambivalence about supporting childbearing among their clients with HIV. They raised concerns about HIV-infected individuals having children, and in certain cases expressed the judgement that people with HIV should not have children (Kawale, Mindry, & Phoya, et al., 2015). However, the literature states that women and couples living with HIV have specific fertility-related needs, including family planning and assisted conception (Delvaux & Nostlinger, 2007; Massad, Springer, & Jacobson, et al., 2004; Mitchell & Stephens, 2004; Van Benthem, de Vincenz, & Delmas, et al., 2000).

These study findings highlight providers' responsibility to provide complete information to family planning clients despite their HIV status, so that the clients make informed choices about their sexual and reproductive life. Providers also need to know their clients' fertility desires, so that they can provide the necessary preconception information to them. All of these studies support the need for the current study on how nurses are practising integration of family planning and HIV prevention services in the Ntcheu district of Malawi.

2.6 Barriers to practising integration of family planning and HIV prevention services

The literature reviewed suggests that there are a number of barriers to integration of family planning and HIV prevention services. For instance, a study by Church, Simelane and Mayhew (2010) found that shortage of staff was one of the barriers to successful integration of family planning and HIV prevention in Swaziland. However, a study by FHI found that up to two-thirds of providers had some 'non-busy' time during the day, indicating that workloads do not preclude offering additional services (FHI, 2010a:2). In the context of the current study shortage of staff is also a challenge, because only one provider is available per day, where he/she is supposed to provide all of the services, namely antenatal care, family planning, postnatal care and HIV counselling and testing. Shortage of staff might indeed be a barrier to integration of

family planning and HIV prevention, since there is too much work for the one provider on duty to be able to provide all of the services on his or her own.

It was also revealed that providers often complain about high workload as a disadvantage of integration of family planning and HIV services. In an interview with providers and programme managers in Ethiopia and Kenya by Scholl and Cothran (2011:11), too many patients and few providers was the major complaint among family planning and HIV service providers and programme managers. Similarly, in six studies that focused on providers' experiences with integration, conducted by Dudley and Garner (2011) in low- and middle-income countries, it was reported that managers were concerned about high workload and the effect that this may have on service quality. Another study by Abera and Mengistu (2006:28) on integration of family planning into VCT reported that integrated services increased provider's workload, and it was further reported that when family planning is added to VCT, it takes a very long time, which is very tiresome for counsellors. It was later concluded that reductions in the personnel available to VCT units, pre-existing excessive workloads, and the resultant burden on counsellors weakened the provision of integrated counselling in a number of health facilities in Ethiopia (Abera & Mengistu, 2006:28). This supports the view of the United States Government (2012:8) that adding services to already high workloads can risk crowding out other existing health services.

Studies from around the world have also identified poor or insufficient training and motivation (linked to poor supervision and management), heavy workloads, staff burnout, lack of incentives and medical hierarchies as major barriers to the provision of integrated services (Mayhew, 2000; Mayhew, 2000; Maharaj, 2004; Marchal, De Brouwere & Kegels, 2005; Abera & Mengistu, 2006; Kaba & Alem, 2006; PATH, 2007; Liambila, Askew, & Gathitu, et al., 2008). Church and Mayhew (2009:177) suggests that these problems may be a result of increased client demand after service integration, or the provision of a more complex package of services for which providers may be poorly trained and equipped.

A similar study by Awadhi et al. (2012:4) reported low staff motivation and lack of training on family planning and VCT as the main constraints which might hinder implementation of integrated family planning and VCT services by health workers. Abera and Mengistu (2006:28) reported lack of follow-up and supervision of the integrated programme by health facility management, and Pathfinder in Ethiopia was repeatedly mentioned by healthcare providers as a factor behind failure to maintain continuity and full integration of the family planning and VCT programme in Ethiopia. These study findings therefore support the need to conduct the current study on how nurses are practising integration of family planning and HIV prevention services in Ntcheu district, Malawi.

2.7 Conclusion

The literature reviewed gave an outline of approaches or models of integration, benefits of integration, and knowledge of health providers on integration of family planning and HIV prevention services, attitudes of providers to integration of family planning and HIV prevention services, and barriers to such integration.

Only summaries of the main findings of previous research reports were discussed to demonstrate how the current research links to the existing body of knowledge. The literature discussed in this chapter was mostly conducted prior to the current study and during the early phases of data collection and analysis.

Chapter Three

Methodology

3.1 Introduction

This chapter discusses the study design and methods that were used to collect data for this study, including the study setting, study population, sampling method and sample size determination, inclusion and exclusion criteria, recruitment of participants, pilot study and data collection process. It concludes with ethical considerations and limitations of the study.

The purpose of the study was to explore and describe the practice of integration of family planning and HIV prevention services among nurses in Ntcheu district, Malawi. This study answered the research question ‘How do nurses practice the integration of family planning and HIV prevention services in Ntcheu district, Malawi?’

3.2 Study design

A descriptive qualitative case study design was used to explore and describe the practice of integration of family planning and HIV prevention services among nurses in Ntcheu district of Malawi. This design was selected as most suited for this study because the research problem existed within the confines of a bounded setting, which was the selected secondary district hospital of Ntcheu district in Malawi. Case study designs are believed to be the most appropriate for organisational studies, as stated by Yin (2009:17). The design allowed the researcher to gain an in-depth understanding of the practice of integration of family planning and HIV prevention among nurses in Ntcheu district of Malawi.

A case study is an in-depth investigation of an entity or a single unit, which could be an individual, family, group, institution, community, subculture, or other social unit which is bounded by time and location (LoBiondo-Wood & Haber, 2006:91; Yin, 2009:3-4). A case study

allows for generation of an in-depth understanding of an entity or exploration of an event or phenomenon within the entity (Creswell, 2013:97).

Yin (2009:17-18) states that the case study methodology is characterised by boundaries such as a contemporary phenomenon, context, time and location. A case study is also referred to as an exploration of a “bounded system” or case for a period of time through detailed, in-depth data collection involving multiple sources of information, each with its own sampling, data collection, and analysis strategies (Yin, 2009:17-18). The focus of the case study is on a “contemporary phenomenon” within a “real life context” (Yin, 2009:18); in other words the case study has the strength to examine in-depth a case within its real-life context (Yin, 2009:18).

In this research the case under study was the selected secondary hospital in Ntcheu district in Malawi, the single unit of study was the nurses’ provision of integrated family planning and HIV prevention services, and the context was the practice of family planning and HIV prevention care. The family planning clinic within the secondary hospital and timeframe of four weeks for data collection formed the boundaries of this case study.

The case setting was the district hospital, which is a secondary hospital, and features of the case that were examined in this research were knowledge of and attitudes and perceived barriers to practising integration of family planning and HIV prevention services. These features were selected based on the modified conceptual framework of Cabana et al. (1999:1458-1465) for assessing facilitators of and barriers to knowledge use, which guided the study. The modified conceptual framework has three domains, namely: (i) knowledge, which has one dimension, familiarity and awareness; (ii) attitude, which has four dimensions, namely agreement, self-efficacy, motivation and outcome expectancy; and (iii) behaviour, which has two dimensions, namely external factors (patient, model) and environmental factors.

3.3 Study setting

The setting of this study is a family planning clinic within the secondary hospital which operates in the district health office of Ntcheu. This district is located at the southern end of the central region of Malawi. It borders the Balaka district to the southeast, Mangochi district to the northeast, Neno district to the south, Dedza district to the north, and the Republic of Mozambique to the west (Ministry of Health, 2008:1-20). The district has a total population of 588 038, of whom 135 249 are women of child-bearing age (MOH, 2016:12, unpublished).

Ntcheu district hospital is responsible for provision of secondary care in Ntcheu district. All maternal and child health care in Ntcheu is provided by Maternal and Child Health Clinics, which offer their services for free. These clinics provide family planning services, antenatal care, postnatal care, HIV counselling and testing and PMTCT services. HIV testing and treatment, including ARVs, are also provided for free. The family planning clinic offers a number of services apart from family planning, such as syndromic management of STIs, HIV counselling, and cervical cancer screening using vaginal inspection with acetic acid. This clinic sees about 6890 patients per month and has the lowest prevalence of contraceptive use (42%) of the four districts in the zone. These services are offered by specialised and general qualified and licensed nurses (MOH, 2016: 38, unpublished).

3.4 Study population

Study population refers to a total collection of circumstances that meet a selected set of criteria; people or elements that could be under study (Polit & Beck, 2004:289). In this study the population size was 45 which comprised of all nurses providing family planning and HIV services at Ntcheu district hospital. This population was targeted because they had experience of and knowledge on provision of family planning and HIV services, and could therefore provide the information required to answer the research question.

3.5 Sampling method

Sampling method is the process through which a group of people, an event, place, institution or any other element is selected to allow for the conducting of research (Grove, Burns & Gray, 2013:708).

Purposive sampling was used in this study to choose participants who not only had experience but were also knowledgeable about the integration of family planning and HIV prevention services as the phenomenon. Purposive sampling is a technique where the researcher uses predetermined criteria to select participants who have the knowledge or experience that is needed for the research purpose (Neuman, 2012:399).

The hospital selected for the study was selected because it is the only hospital in the district.

3.5.1 Inclusion criteria

Inclusion criteria are the list of requirements outlined by a researcher which an individual must meet in order to be eligible to participate in a research study (Grove et al., 2013:696). Inclusion criteria for participation in this study were as follows:

- Nurses working at the family planning clinic in the secondary hospital who have received in-service training in HIV prevention and family planning services;
- Nurses who have worked in the family planning clinic for more than 12 months and received in-service training in family planning and HIV prevention.

The above nurses were included in this study because they had experience of and knowledge on provision of family planning and HIV prevention services which was rich and could therefore provide the information required to answer the research question.

3.5.2 Exclusion criteria

Exclusion criteria refer to the characteristics that the researcher outlines that would prevent someone from being eligible to participate in a research study (Grove et al., 2013:694).

Exclusion criteria were as follows:

- Nurses who worked at the family planning clinic in the secondary hospital who had not received in-service training in family planning and HIV prevention.
- Nurses who worked at the family planning clinic in the secondary hospital who had received in-service training both in family planning and HIV prevention but had worked in the family planning clinic for less than 12 months.
- Nurses who worked at the family planning clinic in the secondary hospital who had received in-service training in both family planning and HIV prevention, but were away on study leave.

The above nurses were excluded in this study because they had little experience of and knowledge on provision of family planning and HIV prevention services and therefore could not provide the required rich information to answer the research question.

3.6 Sample size determination

Sample size is the number of participants who have consented to be recruited for a study (Grove et al., 2013:708). The predicted sample size of 12 to 14 participants was regarded as adequate for this study. This is in line with Holloway and Wheeler (2002:128), who recommended a sample size of between 4 and 40 participants to be used in qualitative research. The most important things to note when determining the sample size in qualitative research are the research question, time frame and resources available for conducting the research, quantity of data to be collected, scope of the study, amount of useful information to be obtained from the participant, number of interviews per participant, and the study design to be used (Morse, 2000; Patton, 2001). Mackenzie and Crouch (2006:484) state that small sample

sizes of less than 20 facilitate close association between the researcher and the respondents and enhance the validity of the findings.

The actual sample size for this study was 10 participants, which was reached through attaining data saturation. Data saturation is reported by Guest, Bounce and Johnson (2006:59) as “the point at which no new information or theme is observed in the data”.

3.7 Recruitment

The recruitment of participants started in February 2016. The researcher arranged to meet with the District Nursing Officer for request permission to conduct the study in the district. Once permission to conduct the study in the district was granted, the researcher arranged to meet with the coordinators of the family planning and HIV programmes separately, to ask and obtain permission to conduct the study in their clinic. Both the District Nursing Officer and coordinators of family planning and HIV services were provided with the study information sheets (Appendix A). The researcher then approached each and every nurse in the clinic during their free time to enquire if they had been trained in family planning and HIV prevention services, as well as to ascertain their years of practice at the family planning clinic for purposive sampling purposes. Those potential participants who met the inclusion criteria were later given an information sheet and consent forms to read and sign to signify their willingness to participate in the study (see Appendices A and B).

The dates, times and venue that suited each consenting participant for the interview were then determined with each of the nurses.

3.8 Pilot study

The pilot study refers to a ‘mini’ version of a full-scale study, and the specific pre-testing of a particular research instrument. It increases the likelihood of the success of the research because it gives advance warning about where the main research could fail, so that such issues may be addressed (Van Teijlingen & Hundley, 2001). The pilot study was conducted in the last

week of February and first week of March with two participants who were purposively selected and met the inclusion criteria.

The pilot study was conducted in order to determine whether the proposed interview guide could collect data that would answer the research question and identify problems that may affect the research process in the main study. This was done to allow for any refinement of the interview guide or data collection process if necessary. The pilot study was further conducted to refine the researcher's interviewing skills as a novice qualitative researcher (Van Teijlingen & Hundley, 2001).

Raw and transcribed data from the pilot study were shared with the research supervisor to determine whether the collected data were adequate to answer the research question, and to assess the researcher's skills in conducting interviews for collecting qualitative data. Although the data collection was found to be adequate in collecting the required data, the researcher was advised to add relevant probing questions in order to enhance data collection and improve her interviewing skills. The analysed data from the pilot study were later used in the main study because the process of data collection and analysis was the same as in the main study. Using data collected from the pilot study is supported in qualitative research. For instance, Duma (2006:105) reports that data from the pilot study can be included in the main study without any alteration of the data, provided similar data collection and analysis methods are used. Lancaster, Dodd and Williamson. (2002:307-312) add that pilot study data can only be incorporated into the main study if this will not lead to major modification of the interview tool.

The research supervisor and the researcher confirmed that the pilot study data could be used as there were no major modifications of the interview guide, except the addition of probing questions where and when necessary.

3.9 Data collection

Data collection and preliminary data analysis began in the last week of February and ended in the last week of April 2016. The interviews with the primary participants took place in an

unused office at the clinic. This venue was chosen because the participants were familiar with the environment, which made it a natural setting in which to have the interview. The venue also provided privacy because it was away from the nurses' station. It was also free from noise and interruptions that could otherwise disturb the recording of the interviews (Hansen, 2006:105).

The main data collection technique for the study was semi-structured individual interviews as proposed by Yin (2009:18). The semi-structured interview creates equality between the researcher and participant and allows the researcher to obtain real data from participants (Yin, 2009:102-103). The semi-structured interview guide (see Appendix D) was designed by the researcher, guided by the theoretical framework and identified research objectives.

The objectives that were covered in the interview guide were as follows:

- To explore and describe nurses' familiarity and awareness of integration of family planning and HIV prevention services in Ntcheu District, Malawi (knowledge – questions 1 -2).
- To explore and define nurses' attitudes towards integration of family planning and HIV prevention services in Ntcheu district, Malawi (attitude – question 3).
- To explore and describe nurses' perceived barriers to the integration of family planning and HIV prevention services in Ntcheu district, Malawi (barriers – question 4).

Prior to the interviews each participant was asked for permission to audio record the interview. The nurses' unused office was found to be relatively quiet for recording the interviews. Each interview took approximately one hour. English was used during data collection because this is the official language used in the healthcare system in Malawi. All participants and the researcher are familiar with the language. They all use English for formal communication. English was therefore the most appropriate language for conducting the interviews (Hansen, 2006:103). Field notes were taken to record the observations made during the interviews. Polit

and Beck (2012:728) define field notes as “notes taken by researchers to record observations made in the field and the interpretation of those observations”. The researcher employed two trained, qualified and experienced research assistants.

Transcription was done within 24 hours of conducting interviews in order to ensure accuracy of the data.

3.10 Ethical considerations

This study complied with the terms laid down by the World Medical Association on research involving human subjects, as specified in the Declaration of Helsinki (2013:2). This included:

- Submission of the research proposal and obtaining ethical clearance for the research from the University of Cape Town, Faculty of Health Sciences Human Research Ethics Committee for ethical clearance (see Appendix F).
- An application for and obtaining permission from the National Health Sciences Research Committee in Malawi for ethical clearance. This was granted (see Appendix G).
- An application for and obtaining permission from the District Health Officer of Ntcheu district to conduct research in the selected facility (see Appendix H).

The ethical principles outlined below were observed throughout the study.

3.10.1 Autonomy

Autonomy is the individual’s right to self-rule and authority to make moral decisions on what they want to do (Brink 2006; Brink, Van der Walt & Van Rensburg, 2012). To observe autonomy the following were observed in this study:

- Each participant was given the information sheet to read at home, and informed consent was sought.

- Each participant was given the opportunity to ask questions or to seek clarification after reading the information sheet.
- Each participant was informed of the right to withdraw from the study at any time and to share only information that they were comfortable with sharing.
- Each participant was asked to choose the time and venue for the interview session.
- Each participant was asked for permission to use an audio-recorder.

The researcher made a follow-up visit to all potential participants who had been given information sheets and consent forms if they agreed to take part, in order to set a date and time.

3.10.2 Confidentiality and anonymity

Confidentiality and anonymity provide protection to study participants by ensuring that information that can be traced to the participant is managed in such a way that it cannot be linked to them by the public (Grove et al., 2013:690).

These were ensured in the study as follows:

- Each participant's information was stored under a pseudonym.
- Each participant's data were transferred to the researcher's personal passworded computer.
- Each participant's interview was listened to with the aid of headphones to prevent it from being heard by a third party.
- Each participant's consent form was kept under lock and key.
- No data could be traced back to an individual participant as pseudonyms were used.

3.10.3 Beneficence and non-maleficence

Beneficence and non-maleficence imply weighing the good that will be derived from the research against the potential harm. The benefits must outweigh risks for the individual (Holloway & Wheeler, 2002:52).

To observe beneficence and non-maleficence, the following principles were observed in the study:

- Each participant was informed that there were no direct benefits to them from taking part in the study. They were informed that indirect benefits of the study included understanding own practice in order to improve practice in integration of family planning and HIV prevention, which may influence future plans for in-service trainings, refresher courses and mentorship programmes.
- Each participant was informed of the right to withhold any information they did not feel comfortable in sharing, and that they were not obligated to provide such information. Each participant was given a debriefing by the researcher after every interview to aid in expression of tensions and to recuperate from any uneasiness that may have resulted from the interview.
- Each participant was given assurance that the information that they shared was never to be used to harm their job.

3.10.4 Justice

Justice implies applying strategies and procedures in a fair and just manner when carrying out research (Holloway & Wheeler, 2002:52).

Justice was observed in the study as follows:

- Selection of participants was based on inclusion and exclusion criteria and was explained to participants during the recruitment meeting.

- Participants were treated fairly and equally and with respect, regardless of age, culture, rank and beliefs.
- Participants' concerns were discussed and agreements were made with them prior to the beginning of the interview. These were treated with utmost respect.
- Times for scheduled appointments for interviews were kept to.
- Participants' culture and belief system were respected. Participants were not interviewed further on issues where they did not want to disclose information.

3.10.5 Risks and benefits

Risks refer to the potential of an outcome occurring following an exposure to something (Porta, 2008:218), while benefit refers to advantage that is gained after exposure to an intervention (Porta, 2008:16).

There were no more than minimal risks in this study. But in case of any distress or discomfort, debriefing was provided by the researcher. Participants were informed that they were free to withdraw from participation and that there would be no penalties, and that the researcher would appreciate if the reason for withdrawal could be indicated for data analysis purposes.

There were no direct benefits to the participants as individuals. They were informed that indirect benefits of the study included understanding own practice in order to improve practice in integration of family planning and HIV prevention, which may influence future plans for possible in-service trainings, refresher courses and mentorship programmes.

3.11 Conclusion

The chapter discussed the study design and methods that were used to collect data for this study. Data management and analysis are discussed in Chapter Four.

Chapter Four

Data analysis

4.1 Introduction

This chapter discusses the data management and data analysis procedures employed in order to analyse and interpret the data generated from the participants. An outline of the methods applied to ensure academic rigour and trustworthiness is provided throughout the study.

4.2 Data management

Data management is the starting point in data analysis, and involves a complete and accurate recording of all data. It is believed that the quality of data management affects the quality of data analysis (Speziale & Carpenter, 2007:43; Duma, 2006:113). The quality of output is ensured in part by the processing of that data, so easy analysis of the data depends on the way the data is managed.

In qualitative research, data management centres on handling large amounts of data throughout the research process. It is therefore imperative that the researcher must properly plan how such volumes of data will be handled. Miles and Huberman (1994:45) recommend that plans for how data will be handled must be put in place before the actual analysis commences. The researcher must keep track of all the data and how they can be accessed throughout the research period.

In the current study the recorded interviews were transcribed verbatim by the researcher within 24 hours after the interview (data collection), so as to capture the details of information provided by the participants and to allow for easier, faster and detailed verbatim transcription and ensure accuracy of the data collected. Each individual interview file was given an alphabetical pseudonym for storage and easy retrieval during analysis; as well as to eliminate bias. All typed interview files were stored in Microsoft Word on the computer for manual data

analysis later. As suggested by Hansen (2006:112) and Polit and Beck (2004:574), copies of all typed documents were memory storage device (memory stick), external hard drives and in cloud storage for safety and backup purposes in case of theft or loss of the computer.

4.3 Data analysis

Data analysis is the process of systematically organising raw data in order to give it structure, and to allow the researcher to detect patterns, describe them and develop explanations about the phenomenon under study (Polit & Beck, 2008:507; Levin, 1997:1). According to Holloway and Wheeler (2002:236) data analysis is referred to as the process of organising, reducing and transforming data by exploring meanings of research participants and researchers, searching the data for concepts and categories. Bernard and Ryan (2010:1282) define data analysis as the process through which patterns are sought in data and ideas that help to explain why the patterns exist in the first place. According to Polit and Beck (2012:451) the main goal of data analysis is to organise data, put them into a structure and bring out meaning from them.

Preliminary data analysis was conducted prior to formal data analysis in order to help with saturation of data, the point at which no new information or theme is observed in the data (Guest, Bounce and Johnson, 2006:59).

In this study content analysis was employed to analyse the data and the data were analysed manually. This involved the use of multiple colours to code the content of narrative materials (Polit & Hungler, 1993:382). Polit and Beck (2012:564) refer to content analysis as the process of “analysing the content of a narrative data to identify prominent themes and patterns among the themes”. This involves breaking down data into smaller units, coding and naming these units according to the content they represent, and grouping the coded units into themes based on shared concepts (Polit & Beck, 2012:554).

The five steps for carrying out interpretative content analysis outlined by Blanche et al. (2006:322-325) were used. These include familiarisation and immersion, coding, induction of themes, elaboration and interpretation, and checking.

- **Familiarisation and immersion:** The process of reading through research texts or data many times over to gain immersion into the text or data (Blanche et al., 2006:322).
- **Coding:** The process of marking different sections of data that have meaning in relation to the research question/s (Blanche et al., 2006:324).
- **Deducing themes:** Labelling categories from data or text in order to generate themes (Blanche et al., 2006:323).
- **Elaboration:** Induced themes are explored more closely in order to capture what might have been missed during coding (Blanche et al., 2006:326).
- **Interpretation and checking:** Putting together the interpretation of data, which involves, writing an account of the phenomenon that was studied, most probably but not necessarily using the themes as headings (Blanche et al., 2006:326).

Formal data analysis commenced soon after completion of data collection and was carried out manually except for the use of Microsoft Word to store and retrieve coded data.

4.3.1 Familiarisation and immersion

At the commencement of data analysis the researcher read through the transcribed interviews and observation field notes many times in order to gain in-depth familiarity with the collected data. Notes on identified meanings were made reflectively where appropriate in the margins of the sheet containing the data.

4.3.2 Coding

The first coding was done by the researcher as follows: phrases and sentences that were found to be relevant to the research question and objectives were underlined one after the other in all the transcripts, starting from the first to the last transcript. Different colours were used to represent each identified statement. Each colour was given a label to ensure identification of which colour belonged to which statement within each participant's transcript.

Numbering of the individual codes was done for purposes of storage and retrieval for within-case and across-case analysis. A within-case and across-case analysis approach implies analysing data from the individual cases first and then proceeding to analyse the data for commonalities across the cases (Duma, 2006:125-126). At this stage 42 codes were identified by the researcher.

A second qualitative researcher was employed to conduct coding on two transcripts from the pilot study. She is a trained, qualified and experienced research assistant at the University of Malawi and is competent with qualitative research. She came up with 43 codes, and since the difference with the researcher's identified codes (42) number was minimal, we agreed to use 43 as the number of identified codes. The codes' applicability was tested on the two transcripts from the pilot study. The researcher sought the opinion of the second qualitative researcher for inter-coder agreement purposes. The codes from both the researcher and the second qualitative researcher were verified by the research supervisor, who is a qualified qualitative researcher. The research supervisor verified the codes by checking them against raw data; some discrepancies were found with the codes identified by the researcher, and she helped the researcher until the right interpretation was agreed upon and later verified as accurate on both transcripts. This verification procedure of inter-coder agreement was proposed by Miles and Huberman (1994:64).

The coding process was carried out as follows: phrases and sentences that were relevant to the research were underlined using colours, and similar codes were synthesised. Examples are shown in Table 1.

Table 1: Identification of codes

Transcript	Data from transcript	Code
Participant A	... should have access to family planning and HIV prevention services ...	Access to and provision of family planning and HIV prevention services (2)
Participant B	... we check the results and provide the family planning method of choice depending on the HIV status outcome ...	Provide family planning method depending on HIV test outcome (20)
Participant C	... those who are HIV positive and on ARVs, the ARVs are counteracting implants ...	Drug counteraction between ARVs and implants (5)
Participant D	... shortage of staff is another problem because usually there is only one nurse on duty who is to provide all the services ...	Shortage of staff (27)

4.3.3 Deducing themes

The bottom one-quarter of each page was used for deducing themes from the codes generated. The codes in the individual transcripts, which were numbered, were grouped to generate categories based on their similarity in meaning. The categories were then grouped to form themes, based on similarity. The whole process was submitted to the supervisor for review. The supervisor (an experienced and qualified qualitative researcher) noted that the identified themes were few, and assisted the researcher in regrouping the data until eight themes were agreed upon by both. Table 2 shows how two themes were generated.

4.3.4 Elaboration

The researcher described and explored the meanings of individual themes in order to construct an exhaustive, in-depth understanding of the nurses' practice in the integration of family planning and HIV prevention services in the case study and the meanings attached to integration as a phenomenon within the case study.

4.3.5 Interpretation and checking

The researcher embarked on the process of putting together the interpretation of data, which involved writing an account of the nurses' practice of integration of family planning and HIV prevention services using each objective of the study and the research questions in order to construct an inferred meaning of the phenomenon studied within the context of Ntcheu district, Malawi. Eight themes emerged from the data: facilitation of access and acceptability of comprehensive HIV and family planning service; educating and counselling clients; early detection of HIV among women of child-bearing age; personal and professional benefits of integrating family planning and HIV prevention services (positive attitude); resentment of integration of family planning and HIV prevention services (negative attitude); policy-related barriers; human resource-related barriers; and competence-related barriers. The identified themes were reviewed by the researcher's supervisor and there was agreement between the researcher and her supervisor.

At the end of data analysis member checking was conducted by taking the results back to the participants for them to check and verify whether the researcher's interpretations were an accurate reflection of their views and to ask for corrections if any were necessary. Member checking refers to checking and verification of the data or interpretations by participants (Holloway & Wheeler, 2002:287). Member checking was conducted with seven out of ten participants from 6 to 10 June 2016. Three participants had left on study leave. All of these

seven participants agreed that the interpreted data reflected what they believe is the practice of integrating family planning and HIV services in Ntcheu district, Malawi.

4.4 Scientific rigour of the study

The scientific rigour of the study is defined in terms of its trustworthiness, which provides a standard for judging the quality and truthfulness of the findings (Brink et al., 2012:171; Miles & Huberman, 1994:277). Holloway and Wheeler (2002:288) defined rigour/trustworthiness as the means by which researchers show their ability to conduct research according to laid out processes that are verifiable. To ensure the scientific rigour of this research the researcher adopted the four basic frameworks for ensuring rigour which have been in existence for many years: transferability, credibility, confirmability and dependability (Shenton, 2004:73).

4.4.1 Credibility

This refers to the extent to which interpretation of data collected from participants is a true reflection of the participants' views and not the researchers' assumptions (Whittermore, Chase & Mandle, 2001:530). The following was done to achieve credibility:

- Prolonged credibility was ensured as the researcher spent eight weeks in the field collecting data to ensure that these data were a true reflection of the participants' views.
- The audit trail was provided to the supervisor, an expert in qualitative research, to review. An audit trail refers to a detailed description of the decision-making processes of the researcher to demonstrate the logic and development of the research path (Holloway & Wheeler, 2002:284).
- Member checking was done by going back to participants with the findings to check and verify the interpretation of the researcher (Holloway & Wheeler, 2002:287). It was found that the interpreted data reflected what the participants believe is the practice of integrating family planning and HIV services in Ntcheu district, Malawi.

4.4.2 Confirmability

This implies that the findings of the research are the result of the experiences and ideas of the informants and documents reviewed, rather than the characteristics and preferences of the researcher (Shenton, 2004:73).

To ensure confirmability, the following was done:

- Bracketing was carried out to prevent the researcher's predetermined assumptions from influencing her interpretation of data during analysis. Bracketing refers to the process of putting aside all assumptions of a researcher before going into the field (Holloway & Wheeler, 2002:285). This was achieved by asking only questions that are related to the study objectives and guided by the framework. Probing was only done for clarity and not to pander to my own assumptions.
- The researcher also utilised inter-coding agreement to ensure that the codes that were identified were a true reflection of the existing codes within the data. The researcher also used the skills of an experienced qualitative researcher in checking and confirming the authenticity of the themes identified.
- Raw data and coded data were shared with the supervisor for review.
- An audit trail was kept from the start of the research proposal development, and during the data collection and analysis process to reporting of the findings of the analysed data. Audit trail refers to a detailed description of the decision-making processes of the researcher to demonstrate the logic and development of the research path (Holloway & Wheeler, 2002:284).
- Findings of the analysed data were kept in the researcher's computer and password-protected in case there should be a need for re-analysis. These data will be destroyed after the researcher has submitted and passed her dissertation and the results are accepted by the university Ethics Committee.

- Construction of themes and interpretation of data was conducted under the supervision of a research supervisor who is an experienced qualitative researcher.

4.4.3 Dependability

This implies the extent to which similar findings will be generated should the research be repeated with the same or similar participants, in the same context and using the same methods (Shenton, 2004:73). The following were done to ensure dependability:

- A pilot study was conducted with two participants who met the inclusion criteria to check the clarity of the interview questions. Before conducting the main study the researcher performed a pre-test of the study tool, which showed that the participants' responses were able to answer the research question of the study. This was verified by the research supervisor. This enabled the researcher to conclude that the data collection tool and methods were practical and the research question was clear. This agrees with what Miles and Huberman (1994:278) state, that dependability of a study can be achieved if the study questions are clear and correspond with the study design.
- Member checking was carried out to rule out the possibility of bias that can influence data interpretation. Participants were provided with the interpreted data and gave feedback confirming that the findings were a reflection of the information that they provided (Miles & Huberman, 1994:278).
- All steps documented by Blanche, Durrheim, Painter, et al. (2006) to authenticate the process of data analysis were applied. These include familiarisation and immersion, coding, induction of themes, elaboration, and interpretation and checking.

4.4.4 Transferability

This implies the extent to which the findings of a research study can be applied to other situations and other populations (Shenton, 2004:69).

To ensure transferability, the following were done:

- Provision for a thick description of the nurses' practice in the integration of family planning and HIV prevention services as a case. This was achieved by the researcher providing a detailed report of the whole research process, so that readers can decide whether the results can be applied to their own situation if they consider it similar to that of the study (Shenton, 2004:69). The researcher carried out data collection using semi- structured interviews, and data analysis using the five steps for carrying out interpretative content analysis, as outlined by Blanche, Durrheim, Painter, et al. (2006:322-325).
- The researcher provided a detailed description of the sample and setting of the study to allow for generativity to other similar populations by the reader.
- The following were carried out to provide clarity on the sequence of data collection: organisation and analysis of data to allow for comparison with other settings and populations, and a description of the participants as well as the setting of the case, the way the questions were asked, the promptings used, and how the data were processed in terms of organisation and analysis as part of the research report.

4.5 Conclusion

This chapter discussed the processes of data management and analysis that the researcher employed to conduct the study. The findings are discussed in Chapter Five.

Chapter Five

Findings

5.1 Introduction

This chapter presents the findings of the study, which includes a description of the sample. The findings are discussed according to the themes which emerged. Extracts from the participants' raw data are used to illustrate the themes. The research question that guided the study was: 'How do nurses practice the integration of family planning and HIV prevention services in Ntcheu district of Malawi?'

5.2 Description of the sample

The sample consisted of a total of 10 participants; two were male nurses and eight were female nurses who worked at the family planning clinic which was used as a research setting during the time of the study. It is common to have fewer male than female nurses in Malawi, due to the popular notion that nursing is not a career for men. Although male nurses often face the challenge of gender discrimination, especially in specialties like obstetrics and gynaecology where women often prefer to have female nurses, male nurses often end up in leadership roles (Stanley, Beament, Falconer, et al. 2016:2).

All participants reported having received in-service training in family planning and HIV services respectively. This was confirmed with Mr Bhima Mkutumula, the District Nursing Officer (phone conversation, 09/02/2017; 09:35am), that every newly recruited nurse undergoes HIV and family planning in-service training in order to improve service provider performance and thereby ensuring high quality of family planning and HIV services.

The age of the participants ranged between 25 and 49 years. Their work experience in family planning service provision ranged between 2 and 8 years as qualified and licensed nurse practitioners.

5.3 Findings

Eight themes were identified from the data. These were further arranged or organised according to Cabana et al.'s (1999) modified model of assessing facilitators and barriers to knowledge which was used as the theoretical framework that guided the study and its objectives. This resulted in three themes falling under Familiarity and awareness of integration of family planning and HIV prevention (knowledge); two themes under Nurses' attitudes towards integration of family planning and HIV prevention services; and three themes under Barriers to integration of family planning and HIV prevention services.

The three themes under Familiarity and awareness of integration of family planning and HIV prevention services (knowledge) were the following:

1. Facilitation of access and acceptability of comprehensive HIV and family planning services;
2. Educating and counselling clients; and
3. Early detection of HIV among women of child-bearing age.

The two themes under Nurses' attitudes towards integration of family planning and HIV prevention services were the following:

1. Personal and professional benefits of integrating family planning and HIV prevention services (positive attitude); and
2. Resentment of integration of family planning and HIV prevention services (negative attitude).

The three themes under Barriers to integration of family planning and HIV prevention services were the following:

1. Policy-related barriers;
2. Human resource-related barriers; and

3. Competence-related barriers.

Table 3 indicates all eight themes which emerged from the data, together with supporting extracts from the data that was obtained from the nurses.

Table 3. Summary of themes and examples of extracts from the data	
Theme	Example
<p>1. Facilitation of access and acceptability of comprehensive HIV and family planning services</p>	<p>Participant B: <i>“We ensure that every woman of child-bearing age who comes to our clinic has access to family planning services as well as HIV prevention services at any time and should have access to the family planning method she wants at any time”</i>.</p> <p>Participant D: <i>“There are some family planning methods which not every woman now is supposed to use unless she has been tested HIV negative. So we do family planning and HIV counselling daily to ensure that the HIV-negative clients are given the right choice of family planning method.</i></p> <p>Participant F: <i>“With the coming of integration of family planning and HIV prevention services, nowadays we ensure that all women who come for family planning services have access of both family planning and HIV counselling and testing services on a daily basis”</i></p>

Table 3. Summary of themes and examples of extracts from the data

2. Educating and counselling clients	<p><i>Participant A: "When all women come for different services like family planning, antenatal care, postnatal care, we group them together where we give a general health talk and later a motivation talk on importance of getting tested for HIV"</i></p> <p><i>Participant C: "We help them to understand the prevention of HIV by telling them that most of the methods of family planning do not prevent them from contracting the HIV virus or any sexually transmitted infection for that matter. We stress that only condoms can prevent both pregnancy and STIs."</i></p> <p><i>Participant E: "We were told that each and everyone who comes for family planning should be counseled and tested for HIV and that we should start by giving a motivation talk on the importance of getting tested for HIV, so we do that all the time."</i></p> <p><i>Participant F: "When these women come for the family planning clinic we give them a health talk on all the available family planning methods with their advantages and disadvantages and then later a motivational talk on the importance of getting tested for HIV, and this is our routine"</i></p>
--------------------------------------	---

Table 3. Summary of themes and examples of extracts from the data

	<p><i>Participant G: “Yes at times we come across other women who insist on using implants despite explaining to them about the outcome, but we still teach them on the advantages and disadvantages again and again so that they can choose a method appropriate for them.”</i></p> <p><i>Participant I: “As providers we explain to the client on the available methods so that the client makes an informed choice. When a client comes we give health education on all methods and then explain on the method of choice and give a date for the next visit ...we ensure that we explain thoroughly on the consequences of not following the instructions.”</i></p>
<p>3. Early detection of HIV among women of child- bearing age</p>	<p><i>Participant A: “When someone tests negative for HIV, we congratulate them, but we tell them that even if they have been found negative it does not mean they cannot get infected, but to continue preventing the virus and also getting retested after every three months. We insist on this because it may help with early detection of HIV among women of child-bearing age.”</i></p>

Table 3. Summary of themes and examples of extracts from the data

	<p><i>Participant B: “Nowadays all clients who come for family planning undergo HIV counselling and testing before they receive a method of their choice. This helps with early detection of HIV for early treatment.”</i></p> <p><i>Participant D: “With the coming of integration of family planning and HIV prevention services we are able to detect HIV among our clients at an early stage through screening when they are not yet sick, and this makes work easier.”</i></p> <p><i>Participant E: “When a family planning client comes in, we weigh her, check blood pressure and test for HIV. She also gets counselled and tested for HIV before she receives her method of choice for family planning. In many instances, from doing this, we are able to detect other illnesses early.”</i></p>
<p>4. Personal and professional benefits of integration of family planning and HIV prevention services (positive attitude)</p>	<p><i>Participant A: “For HIV-positive infants, for example, if a woman is practising family planning and as a provider you find out that she is breastfeeding and was missed for HIV counseling and testing during antenatal care and is found HIV positive, it means they will all be assisted accordingly”</i></p>

Table 3. Summary of themes and examples of extracts from the data

	<p><i>Participant B: “Women who are missed during antenatal care or were on window period, we are able to capture them during family planning clinics .This protects their babies as well as the whole family because they will have a healthy life now”</i></p> <p><i>Participant C: “With integration the maternal morbidity and mortality rates are being reduced ... even child morbidity and mortality rate is being reduced because those who were missed during antenatal care clinic are being captured at family planning clinic in terms of HIV/AIDS, so integration of family planning and HIV preventive services is a good thing.”</i></p> <p><i>Participant D: “Those mothers missed during antenatal care or were on window period are now being captured during family planning clinic”</i></p> <p><i>Participant E: “Those mothers missed during antenatal are being captured now with this integration thereby preventing mother to child transmission”</i></p> <p><i>Participant A: “Again with integration of family planning and HIV prevention we are preventing or reducing HIV-related deaths because clients are being identified at an</i></p>
--	--

Table 3. Summary of themes and examples of extracts from the data

	<p><i>early stage. That makes me happy knowing that through my practice, lives have been saved. ”</i></p> <p><i>Participant C: “Integration of family planning and HIV services is a good thing because we are able to identify HIV-positive clients at an early stage when they are not sick, and this will reduce HIV-related deaths in our community.”</i></p> <p><i>Participant F: “Integration of these services is helping a lot for us. Knowing the HIV status of your client is very vital to me as a health provider... for example, let’s say a mother was missed on HIV counselling and testing during antenatal care and comes to the family planning clinic with her breastfeeding baby, gets tested and is found HIV positive. Now with integration it means this mother will be put on ART and baby on Bactrim ... this encourages and motivates me a lot because this will lead to reduction of transmission rate of HIV from mother to child.”</i></p> <p><i>Participant G: “If these women are accessing both family planning and HIV prevention services, it means pregnancy and HIV</i></p>
--	---

Table 3. Summary of themes and examples of extracts from the data

	<p><i>transmission rate will decrease ... so this motivates me to do more for my people.”</i></p> <p><i>The following quote from another participant supported both the professional and personal benefits of the practice of integration of HIV and family planning services:</i></p> <p><i>Participant H: “Integration of these services is helping a lot for us. Knowing the HIV status of your client is very vital to me as a health provider... for example, let’s say a mother was missed on HIV counselling and testing during antenatal care and comes to the family planning clinic with her breastfeeding baby, gets tested and is found HIV positive. Now with integration it means this mother will be put on ART and baby on Bactrim ... this encourages and motivates me a lot because this will lead to reduction of transmission rate of HIV from mother to child.”</i></p> <p><i>Participant B: “But there is also reduced workload. Previously without integration of family planning and HIV prevention of services we were having family planning only three times a week, and during these family planning days you could provide services to</i></p>
--	---

Table 3. Summary of themes and examples of extracts from the data

	<p><i>50 clients. But now with integration the services are being provided on daily basis; we only see about 15 clients or less than that a day, so to me this is motivating. That is good for all of us.”</i></p> <p><i>Participant J: “Integration of family planning and HIV prevention of services seems to reduce workload at times because we are providing all the services on a daily basis ... clients come in small groups than before integration, where you could have a big group of clients on a day since family planning clinics were being conducted twice a week.”</i></p> <p><i>Participant D: “With integration the number of maternal morbidity and mortality rates is being reduced ... even child morbidity and mortality rate is being reduced because those who were missed during antenatal care clinic are being captured at family planning clinic in terms of HIV/AIDS, so integration of family planning and HIV preventive services is a good thing.”</i></p> <p><i>Participant D: “I also feel good realising that I am helping the Ministry of Health Malawi in providing the services to the people of Malawi.”</i></p>
--	---

Table 3. Summary of themes and examples of extracts from the data

	<p><i>Participant J: “If these women are accessing both family planning and HIV prevention services, it means pregnancy and HIV transmission rate will decrease ... so this motivates me to do more for my people.”</i></p>
<p>5. Resentment of integration of family planning and HIV prevention services (negative attitude)</p>	<p><i>Participant C: “As for me, I see integration as a very good thing even though it seems like it’s too involving and needs more time to be spent with one patient. In that regard I think it is not as good as it was made to be when introduced to us.”</i></p> <p><i>Participant E: “Integration of family planning and HIV prevention is a good thing because our clients are receiving more than one service at one visit, only that it requires more time and it’s too involving at times. You end up having spent all your time and energy with one client.”</i></p> <p><i>Participant F: “Integration of family planning and HIV prevention services makes work tough. Yes integration of family planning and HIV prevention is a good thing as it is improving the programme indicators, but to</i></p>

Table 3. Summary of themes and examples of extracts from the data

	<p><i>say the truth it leaves us the providers very exhausted with increased work”</i></p> <p><i>Participant H: “As much as our clients are killing two birds with one stone, integration is exhausting to me as a provider as it drains all my energy due to increased workload... this makes integration of family planning and HIV prevention services a pain to me, I don’t know about others.”</i></p>
<p>6. Policy-related barriers</p>	<p><i>Participant A: “We don’t have a specific policy or guidelines to refer to when practising. We only use the information we learned during a training some time back. So mistakes can happen. ”</i></p> <p><i>Participant B: “I practice integration of family planning and HIV prevention services based on what I learned from a training sometime back ... so working without a policy or guideline is a challenge; sometimes you can forget.”</i></p> <p><i>Participant D: “I have never seen a specific policy to support our practice in the integration of these services. I only use what I heard from the HIV training that I attended. What about those who forget what they</i></p>

Table 3. Summary of themes and examples of extracts from the data

	<p><i>learnt? We should have at least some guidelines in the clinic.”</i></p> <p><i>Participant E: “Guidelines reminds us providers on how to provide care to particular clients... in short guidelines assist providers in providing quality care ... they make a provider confident with the provision of care, but ever since this family planning and HIV prevention integration thing started, we don’t have the guidelines or policy with us... this can make us forget important information we are supposed to give to clients.”</i></p> <p><i>Participant G: “I practice integration of family planning and HIV prevention services based on what I learned from a training sometime back ... so working without guidelines and a policy is a challenge, because sometimes you can forget.”</i></p>
<p>7. Human resource-related barriers</p>	<p><i>Participant A: “The major hindrance or barrier is shortage of staff ... at times it is found that there is only one person on duty who is to provide all the services (HIV counselling and testing, family planning, antenatal care, postnatal care, labour and delivery), so it becomes a challenge.”</i></p>

Table 3. Summary of themes and examples of extracts from the data

	<p><i>Participant A: "Integration means giving all the services at once ... so with shortage of staff to provide all the services like family planning, antenatal care clinic, postnatal care, HIV counselling and testing and labour and delivery on a daily basis by one person is not easy. So unless the number of providers increases, integration is a good thing, but it will fail. We need more nurses and counsellors to do this effectively."</i></p> <p><i>Participant B: "We have an HSA [Health Surveillance Officer] who does counseling but because he also has got a catchment area where he provides other services, we mostly don't see him here except on Mondays. So we [the nurses] have to do his job as well. We need more HASs and volunteers if this integration continues."</i></p> <p><i>Participant C: "Integration of family planning and HIV prevention services is a very good thing but with shortage of staff it is becoming difficult for us to integrate the two services completely unless they increase the number of providers"</i></p> <p><i>Participant D: "Integration of family planning and HIV prevention services requires that providers spend more time with each client."</i></p>
--	---

Table 3. Summary of themes and examples of extracts from the data

	<p><i>Our family planning clinic have got a shortage of staff'</i></p> <p><i>Participant A: "The problem is that even if they trained HSAs to be counseling and testing clients for HIV, these HSAs are hardly found at the clinic because they have got other obligations to meet in their designated catchment areas, maybe if they can train volunteers to be conducting counseling and testing for HIV..."</i></p> <p><i>Participant C: "We understand that ministry of health stopped training nurses in both HIV counseling and testing due to the increased workload nurses already have, but training HSAs who already have got their own obligations to meet in their catchment areas of work is also failing integration of family planning and HIV services respectively because it seem the roles of HSAs are somehow conflicting....the time we need them at the clinic for HIV testing, they are in their various designated catchment areas to meet their obligation so unless ministry thinks of training volunteers then integration of these two services will go on smoothly"</i></p> <p><i>Participant E: "Even though integration of family planning and HIV prevention services</i></p>
--	---

Table 3. Summary of themes and examples of extracts from the data

	<p><i>is a good thing, on the other hand it has added more work on the already increased workload; maybe if Ministry of Health should consider increasing number of providers as well”</i></p> <p><i>Participant G: “We already experience increased workload so with the addition of counseling and testing for HIV... Mmmm ... the workload has become too much unless they also increase staff, but otherwise.....it’s not easy”</i></p> <p><i>Participant J: “Previously in the days of non-integration of family planning and HIV prevention services, we already have been experiencing increased workload, and now with integration of these two services, it has added more workload on us so unless ministry of health decides to increase number of providers, but otherwise it is a challenge”</i></p> <p><i>Participant B: “I wish Ministry of Health could see the implication of training HSAs only in both HIV counseling and testing.....these HSAs are hardly found at the clinic due to obligations they are required to meet in their different designated catchment areas; this is making integration of family</i></p>
--	---

Table 3. Summary of themes and examples of extracts from the data

	<p><i>planning and HIV prevention a challenge unless ministry of health decides to train a special cadre to be conducting both HIV counseling and testing on a daily basis...especially volunteers”</i></p> <p><i>Participant E: “Even though integration of family planning and HIV prevention services is a good thing, on the other hand it has added more work on the already increased workload; maybe if Ministry of Health should consider increasing number of providers as well”</i></p> <p><i>Participant F: “We already experience increased workload so with the addition of counseling and testing for HIV... Mmmm ... the workload has become too much unless they also increase staff, but otherwise.....it’s not easy”</i></p> <p><i>Participant H: “Previously in the days of non-integration of family planning and HIV prevention services, we already have been experiencing increased workload, and now with integration of these two services, it has added more workload on us so unless ministry of health decides to increase number of providers, but otherwise it is a challenge”</i></p>
--	--

Table 3. Summary of themes and examples of extracts from the data

8. Competence-related barriers	<p><i>Participant A: “The way we providers explain to our client’s matters a lot as it affects how the client will make a decision. It demands that you become competent; not only in knowing different methods, but in how you talk to people. Other women choose not to disclose that they are already on antiretroviral therapy as they use two different books because of the way they are handled by incompetent providers. This puts them at risk of complications. If we were all competent in counselling, everything will be fine.”</i></p> <p><i>Participant B: “The other challenge is that some of us are only trained in HIV counseling but not HIV testing. So when the counselor is absent, clients are sent back home without being tested for HIV. Or a client is counseled but not tested because there is no one to do the test and give results. So where is integration there? You cannot practice integration of HIV and family planning right if you do not have competent staff.”</i></p> <p><i>Participant C: “The big problem is that a lot of people are afraid when it comes to counselling and testing for HIV so it depends</i></p>

Table 3. Summary of themes and examples of extracts from the data

	<p><i>on how you as a provider, if you are not properly skilled and competent, you can cause more harm while you think you are helping a client. Soon clients don't come to the clinic because of incompetent staff that cannot do appropriate counselling.</i></p> <p><i>Participant A: "The other challenge is that some of us are only trained in HIV counseling but not HIV testing. So when the counselor is absent, clients are sent back home without being tested for HIV. Or a client is counseled but not tested because there is no one to do the test and give results. So where is integration there? You cannot practice integration of HIV and family planning right if you do not have competent staff."</i></p> <p><i>Participant D: "If we were all trained in both counselling and testing for HIV, integration of family planning and HIV prevention services would move on well. But with very few providers trained in both counselling and testing how do you expect integration of family planning and HIV prevention services to go on well?"</i></p> <p><i>Participant F: "Integration of family planning and HIV prevention services is a challenge because some of us are only trained in HIV</i></p>
--	---

Table 3. Summary of themes and examples of extracts from the data

	<p><i>counselling ... if only they could train us all in both counselling and testing for HIV, I tell you this integration thing will not be a great challenge.”</i></p> <p><i>Participant G: “integration of family planning and HIV prevention services is a good thing but most of us are only trained in HIV counselling and testing.....HSAs are the ones being trained in both HIV counselling and testing and they are usually not around....so how do they expect integration of family planning and HIV go on well”</i></p> <p><i>Participant H: “I feel we nurses should be the first priority in training for both HIV counselling and testing since we are the ones who are always present providing care to clients than HSAs who are only found once or twice a week to provide HIV counselling and testing services....this is making integration of family planning and HIV prevention services a challenge because once the HAS who is trained in both counselling and testing is not around we nurses just counsel the clients without having them tested for HIV even if the client is willing to”</i></p>
--	---

5.3.1 Familiarity and awareness of integration of family planning and HIV prevention services (knowledge)

According to Cabana et al.'s (1999) modified model of assessing facilitators and barriers to knowledge, used as the theoretical framework that guided the study and its objectives, familiarity and awareness is a domain under knowledge. The three themes organised under familiarity are discussed below.

5.3.1.1 Facilitation of access and acceptability of comprehensive integration of family planning and HIV prevention services

This theme was derived from data related to nurses' practice of facilitating the access and acceptability of comprehensive integration of family planning and HIV prevention services among clients or service users.

The nurses' practice on facilitating access and accessibility of comprehensive integration of family planning and HIV prevention services was captured in one participant's statement as follows:

Participant B: "We ensure that every woman of child-bearing age who comes to our family planning clinic has access to family planning services as well as HIV prevention services at any time and any day ... we also ensure that these women have access to the family planning method they want at any time."

The following statement from one participant demonstrates nurses' familiarity with facilitating access and accessibility of comprehensive integration of family planning and HIV prevention services through helping women to select the most appropriate family planning method:

Participant D: "... but there are some family planning methods which not every woman now is supposed to use unless she has been tested HIV negative. So we do family

planning and HIV counselling daily to ensure that the HIV-negative clients are given the right choice of family planning method.”

As another participant put it:

Participant F: “With the coming of integration of family planning and HIV prevention services, nowadays we ensure that all women who come for family planning services have access of both family planning and HIV counselling and testing services on a daily basis”

The above extracts under the theme ‘facilitating access and accessibility of comprehensive integration of family planning and HIV prevention services’ show how this theme fitted under the ‘knowledge’ concept of Cabana et al.’s (1999) modified model of assessing facilitators and barriers to knowledge use.

5.3.1.2 Educating and counseling clients

This theme emerged from data that related to nurses' practice of educating and counseling clients during integration of family planning services with HIV services. The nurses' practice activities under this theme included, among other things, giving motivational talks on the importance of getting tested for HIV, teaching clients about the advantages and disadvantages of all family planning methods, helping patients to choose the best family planning methods according to their HIV status, and continuous counseling on positive living.

The following statement from one participant highlighted the theme educating and counseling clients during integration of family planning services with HIV services:

Participant A: "When all women come for different services like family planning, antenatal care, postnatal care we group them together where we give a general health talk and later a motivation talk on the importance of getting tested for HIV"

Another participant stated as follows:

Participant C: "Before we start providing the services all clients, including those who have come for postnatal care, antenatal care and family planning clinic, are grouped together and given a general health talk then after that a motivation talk on the importance of getting counseling and tested for HIV is provided"

Educating and counseling clients about integration of family planning and HIV prevention services was captured through various comments from different participants:

Participant E: "We were told that each and everyone who comes for family planning should be counseled and tested for HIV and that we should start by giving a motivation talk on the importance of getting tested for HIV, so we do that all the time."

Participant F: "When these women come for the family planning clinic we give them a health talk on all the available family planning methods with their advantages and

disadvantages and then later a motivational talk on the importance of getting tested for HIV, and this is our routine”

The following quotes from two other participants highlights educating and counselling clients about integration of family planning and HIV prevention services as below;

Participant G: “Yes at times we come across other women who insist on using implants despite explaining to them about the outcome, but we still teach them on the advantages and disadvantages again and again so that they can choose a method appropriate for them.”

Participant I: “As providers we explain to the client on the available methods so that the client makes an informed choice. When a client comes we give health education on all methods and then explain on the method of choice and give a date for the next visit ...we ensure that we explain thoroughly on the consequences of not following the instructions.”

The following extract from another participant supported the theme by specifying the practice of continuous counselling for HIV-positive clients, as follows:

Participant I: “The clients who are HIV positive receive continuous counselling on positive living including use of condoms. We stress the need for the involvement of their partners and the care of children exposed to HIV. If someone is found to be HIV positive we initiate on ARVs there and then and counsel them on positive living.”

Another participant stressed education for prevention of HIV, STIs and unwanted pregnancy:

Participant J: “We help them to understand the prevention of HIV by telling them that most of the methods of family planning do not prevent them from contracting the HIV virus or any sexually transmitted infections for that matter. We stress that only condoms can prevent both pregnancy and sexually transmitted infections.”

The above theme and the related extracts show how the theme educating and counselling clients fitted under the 'knowledge' concept of Cabana et al.'s (1999) modified model of assessing facilitators of and barriers to knowledge use.

5.3.1.3 Early detection of HIV among women of child-bearing age

The last theme under 'Familiarity and awareness of integration of family planning and HIV prevention services (knowledge)' was early detection of HIV among women of child-bearing age. This theme emerged from data that related to nurses' practice related to early detection of HIV among women of child-bearing age. Nurses' activities making up this theme included retesting for HIV after every three months, screening for chronic conditions including HIV, and knowing HIV status of all family planning clients.

Participants highlighted the practice of early detection of HIV among women of child-bearing age as follows:

Participant A: "When someone tests negative for HIV, we congratulate them, but we tell them that even if they have been found negative does not mean they cannot get infected, but to continue preventing the virus but also getting retested after every three months. We insist on this because it may help with early detection of HIV among women of child-bearing age."

Participant B: "When a family planning client comes in, we weigh her, check blood pressure and test for HIV. She also gets counselled and tested for HIV before she receives her method of choice for family planning. In many instances, from doing this, we are able to detect other illnesses early."

Another participant further highlighted on the early detection of HIV among women of child bearing age as follows;

Participant D: “Nowadays all clients who come for family planning undergo HIV counselling and testing before they receive a method of their choice. This helps with early detection of HIV for early treatment.”

Early detection of HIV among women of child-bearing age women was captured from one participant as follows:

Participant E: “With the coming of integration of family planning and HIV prevention services we are able to detect HIV among our clients at an early stage through screening when they are not yet sick, and this makes work easier.”

The above extracts under the theme early detection of HIV among women of child-bearing age fitted in well under the knowledge domain of cabana et al.’s (1999) modified model of assessing facilitators and barriers to knowledge use within the category familiarity and awareness of integration of family planning and HIV prevention services.

5.3.2 Nurses' attitudes to integration of family planning and HIV prevention services

The themes under 'nurses' attitudes to integration of family planning and HIV prevention services' emerged from data that related to opposing attitudes of participants towards the practice of integration of family planning and HIV prevention services. These two themes are personal and professional benefits of integrating family planning and HIV prevention services (positive attitude) and resentment of integration of family planning and HIV prevention services (negative attitude).

5.3.2.1 Personal and professional benefits of integration of family planning and HIV prevention services (positive attitude)

This theme was derived from data that related to a positive attitude and resulted in personal and professional benefits of nurses' practice of the integration of family planning and HIV prevention services, as captured in the following extract:

Participant A: "For HIV-positive infants, for example, if a woman is practising family planning and as a provider you find out that she is breastfeeding and was missed for HIV counselling and testing during antenatal care and is found HIV positive, it means they will all be assisted accordingly."

Another participant highlighted the benefit of picking up on missed clients as a benefit of family planning and HIV service integration, as shown in the extracts below:

Participant B: "For example let's say a mother was missed on HIV counselling and testing during antenatal care and comes to family planning clinic with her breastfeeding baby, gets tested and is found HIV positive ... now with integration it means this mother will be put on ART and baby on Bactrim."

The following quotes were extracted from participants as benefits of family planning and HIV service integration as follows:

Participant C: "Women who are missed during antenatal care or were on window period, we are able to capture them during family planning clinics... this protects their babies as well as the whole family because they will have a healthy life now"

Participant D: "Those mothers missed during antenatal care or were on window period are now being captured during family planning clinic"

Participant E: "Those mothers missed during antenatal are being captured now with this integration thereby preventing mother to child transmission"

Reduction of HIV-related deaths was highlighted as a benefit of integration of family planning and HIV services by providers as follows:

Participant A: "Again with integration of family planning and HIV prevention we are preventing or reducing HIV-related deaths because clients are being identified at an early stage. That makes me happy knowing that through my practice, lives have been saved."

Participant C: "Integration of family planning and HIV services is a good thing because we are able to identify HIV-positive clients at an early stage when they are not sick, and this will reduce HIV-related deaths in our community."

Another extract from a participant supported the development of this theme in the following manner:

Participant F: "When I see these family planning women come in big numbers it gives me courage because it means they have got trust in me as a provider, so this motivates me. As a provider I become happy as I provide all these services at once to my clients."

The following extracts from the data supported the professional benefits of the practice of integrating HIV and family planning services:

Participant G: "I also feel good realising that I am helping the Ministry of Health Malawi in providing the services to the people of Malawi."

Participant H: "If these women are accessing both family planning and HIV prevention services, it means pregnancy and HIV transmission rate will decrease ... so this motivates me to do more for my people."

The following quote from another participant supported both the professional and personal benefits of the practice of integration of HIV and family planning services:

Participant I: "Integration of these services is helping a lot for us. Knowing the HIV status of your client is very vital to me as a health provider... for example, let's say a mother was missed on HIV counselling and testing during antenatal care and comes to the family planning clinic with her breastfeeding baby, gets tested and is found HIV positive. Now with integration it means this mother will be put on ART and baby on Bactrim ... this encourages and motivates me a lot because this will lead to reduction of transmission rate of HIV from mother to child."

Another professional benefit of integration – that of reduction of workload, was captured in the following extracts from participants:

Participant B: "But there is also reduced workload. Previously without integration of family planning and HIV prevention of services we were having family planning only three times a week, and during these family planning days you could provide services to 50 clients. But now with integration the services are being provided on daily basis; we only see about 15 clients or less than that a day, so to me this is motivating. That is good for all of us."

Participant J: "Integration of family planning and HIV prevention of services seems to reduce workload at times because we are providing all the services on a daily basis ... clients come in small groups than before integration, where you could have a big group of clients on a day since family planning clinics were being conducted twice a week."

The benefit of practising integration of family planning and HIV prevention of services was further highlighted in the following extract:

Participant D: “With integration the number of maternal morbidity and mortality rates is being reduced ... even child morbidity and mortality rate is being reduced because those who were missed during antenatal care clinic are being captured at family planning clinic in terms of HIV/AIDS, so integration of family planning and HIV preventive services is a good thing.”

The above extracts of the theme ‘personal and professional benefits of integrating family planning and HIV prevention services’ show how this theme fitted under the knowledge concept of Cabana et al.’s (1999) modified model of assessing facilitators of and barriers to knowledge use.

5.3.2.2 Resentment of integration of family planning and HIV prevention services (negative attitude)

This theme was derived from data that related to the participants’ resentment of integration of family planning and HIV prevention services, which are captured in the following extracts from the data:

Participant C: “As for me, I see integration as a very good thing even though it seems like it’s too involving and needs more time to be spent with one patient. In that regard I think it is not as good as it was made to be when introduced to us.”

Resentment of integration of family planning and HIV prevention services was captured from another participant as follows:

Participant E: “Integration of family planning and HIV prevention is a good thing because our clients are receiving more than one service at one visit – only that it requires more time and it’s too involving at times. You end up having spent all your time and energy with one client.”

The following extracts captures resentment of integration of family planning and HIV prevention services as below:

Participant F; *“As much as our clients are killing two birds with one stone, integration is exhausting to me as a provider as it drains all my energy due to increased workload... this makes integration of family planning and HIV prevention services a pain to me, I don’t know about others.”*

Participant H: *“Integration of family planning and HIV prevention services makes work tough. Yes integration of family planning and HIV prevention is a good thing as it is improving the programme indicators, but to say the truth it leaves us the providers very exhausted with increased work.”*

The above extracts relating to the theme ‘resentment of integrating family planning and HIV prevention services’ show how the theme fitted under the knowledge concept of Cabana et al.’s (1999) modified model of assessing facilitators of and barriers to knowledge use within the nurses’ attitudes towards integration of family planning and HIV prevention services.

5.3.3 Barriers to integration of family planning and HIV prevention services

Three themes under barriers to integration of family planning and HIV prevention services emerged from the data: policy-related barriers, human resource-related barriers, and competence-related barriers.

5.3.3.1 Policy-related barriers

This theme was derived from data that related to the unavailability of policy and guidelines as a barrier to integration of family planning and HIV prevention services, as captured in the following extracts:

Participant A: “We don’t have a specific policy or guidelines to refer to when practising. We only use the information we learned during a training some time back. So mistakes can happen.”

Participant B: “I have never seen a specific policy to support our practice in the integration of these services. I only use what I heard from the HIV training that I attended. What about those who forget what they learnt? We should have at least some guidelines in the clinic.”

The following extracts were further highlighted by the participants as policy-related barriers as follows:

Participant D: “I practice integration of family planning and HIV prevention services based on what I learned from a training sometime back ... so working without guidelines and a policy is a challenge, because sometimes you can forget.”

Participant E: “We don’t have a policy or guideline on integration of family planning and HIV prevention services at this clinic ... we usually practice this integration by recalling what we learnt at a training sometime back which some of us forgot already ... risk of making mistakes is very high here.”

Policy-related barrier was highlighted by the following extracts from data as follows:

Participant G: *“Guidelines reminds us providers on how to provide care to particular clients... in short guidelines assist providers in providing quality care ... they make a provider confident with the provision of care, but ever since this family planning and HIV prevention integration thing started, we don’t have the guidelines or policy with us... this can make us forget important information we are supposed to give to clients.”*

The above extracts from the theme ‘policy-related barriers to integration of family planning and HIV prevention services’ show how the theme fitted under the knowledge concept of Cabana et al.’s (1999) modified model of assessing facilitators of and barriers to knowledge use.

5.3.3.2 Human resource-related barriers

This theme was derived from data that related to human resource barriers to integration of family planning and HIV prevention services. Shortage of staff, additional workload, and role conflict were listed by the participants as among these barriers, as seen in the following extracts:

Participant A: “The major hindrance or barrier is shortage of staff... at times it is found that there is only one person on duty who is to provide all the services (HIV counselling and testing, family planning, antenatal care, postnatal care, labour and delivery), so it becomes a challenge.”

The following extract captures the issue of shortage of staff as a major barrier towards practising integration of family planning and HIV prevention services:

Participant A: “Integration means giving all the services at once ... so with shortage of staff to provide all the services like family planning, antenatal care clinic, postnatal care, HIV counselling and testing and labour and delivery on a daily basis by one person is not easy. So unless the number of providers increases, integration is a good thing but it will fail. We need more nurses and counsellors to do this effectively.”

Shortage of staff was further highlighted by the following extracts from data:

Participant C: "Integration of family planning and HIV prevention services is a very good thing but with shortage of staff it is becoming difficult for us to integrate the two services completely unless they increase the number of providers"

Participant D: "Integration of family planning and HIV prevention services requires that providers spend more time with each client. Our family planning clinic have got a shortage of staff"

Role conflict as a barrier to practising integration of family planning and HIV prevention services was highlighted by the following extracts from the data:

Participant A: "We have an HSA [Health Surveillance Officer] who does counseling, but because he also has got a catchment area where he provides other services, we mostly don't see him here except on Mondays. So we [the nurses] have to do his job as well. We need more HASs and volunteers if this integration continues."

Participant C: "The problem is that even if they trained HSAs to be counselling and testing clients for HIV, these HSAs are hardly found at the clinic because they have got other obligations to meet in their designated catchment areas, maybe if they can train volunteers to be conducting counselling and testing for HIV..."

Another participant highlighted role conflict as a barrier to practicing integration of family planning and HIV prevention services as follows:

Participant E: "We understand that ministry of health stopped training nurses in both HIV counseling and testing due to the increased workload nurses already have, but training HSAs who already have got their own obligations to meet in their catchment areas of work is also failing integration of family planning and HIV services respectively because it seem the roles of HSAs are somehow conflicting....the time we need them at the clinic for HIV testing, they are in their various designated catchment areas to meet their obligation so unless ministry thinks of training volunteers then integration of these two services will go on smoothly"

Participant G: "The HSAs who have been trained in both counselling and testing for HIV are always busy with other things in their catchment areas... maybe they should train volunteers so that this integration thing should move on well."

Participant J: "I wish Ministry of Health could see the implication of training HSAs only in both HIV counseling and testing.....these HSAs are hardly found at the clinic due to obligations they are required to meet in their different designated catchment areas; this is making integration of family planning and HIV prevention a challenge unless ministry of health decides to train a special cadre to be conducting both HIV counseling and testing on a daily basis...especially volunteers"

Additional workload was also cited as a barrier to the integration of family planning and HIV prevention services:

Participant B: "We already have an increased workload so with addition of counselling and testing for HIV it's becoming too much for us....maybe if we can have special HIV counselling and testing counselors"

Another participant cited additional workload as a barrier to the integration of family planning and HIV prevention services as follows;

Participant E: "Even though integration of family planning and HIV prevention services is a good thing, on the other hand it has added more work on the already increased workload; maybe if Ministry of Health should consider increasing number of providers as well"

The following quotes from two participants highlighted additional workload as a barrier to practicing of integration of family planning and HIV prevention services as follows;

Participant F: "We already experience increased workload so with the addition of counselling and testing for HIV... Mmmm ... the workload has become too much unless they also increase staff, but otherwise.....it's not easy"

Participant H: "Previously in the days of non-integration of family planning and HIV prevention services, we already have been experiencing increased workload, and now with integration of these two services, it has added more workload on us so unless ministry of health decides to increase number of providers, but otherwise it is a challenge"

The above extracts for the theme 'human resource barriers to integration of family planning and HIV prevention services' shows how it fitted under the knowledge concept of Cabana et al.'s (1999) modified model of assessing facilitators of and barriers to knowledge use.

5.3.3.3 Competence-related barriers

This theme was derived from data that related to participants' perceived lack of competence to practice the integration of family planning and HIV prevention services. Identified incompetence of some participants included inadequate counselling skills and lack of skill in HIV testing:

Participant A: "The big problem is that a lot of people are afraid when it comes to counselling and testing for HIV, so it depends on how you as a provider, if you are not properly skilled and competent, you can cause more harm while you think you are helping a client. Soon clients don't come to the clinic because of incompetent staff that cannot do appropriate counselling."

Participant B: "The way we providers explain to our clients' matters a lot as it depends on how the client will make a decision. It demands that you become competent; not only in knowing different methods, but in how you talk to people. Other women choose not to disclose that they are already on antiretroviral therapy as they use two different books because of the way they are handled by incompetent providers. This puts them at risks of complications. If we were all competent in counselling, everything will be fine."

Another participant highlighted on competence-related barrier to practicing integration of family planning and HIV prevention services as follows:

Participant C: "Some of us are not good counsellors, because a provider's counselling skills are manifested by a great number of clients voluntarily wanting to get tested for HIV. At times we have a good number of mothers voluntarily wanting to get tested and at times very few clients willing to get tested ... all this is because of how competent we providers are with counselling clients for HIV, hence the need for refresher courses for most of us."

The following extracts show that some providers were only trained for HIV counselling but not for HIV testing:

Participant A: "The other challenge is that some of us are only trained in HIV counseling but not HIV testing. So when the counselor is absent, clients are sent back home without being tested for HIV. Or a client is counseled but not tested because there is no one to do the test and give results. So where is integration there? You cannot practice integration of HIV and family planning right if you do not have competent staff."

Participant D: "If we were all trained in both counselling and testing for HIV, integration of family planning and HIV prevention services would move on well. But with very few providers trained in both counselling and testing how do you expect integration of family planning and HIV prevention services to go on well?"

Competence-related barrier was highlighted as a barrier to practicing of integration of family planning and HIV prevention services by the following extracts from data as follows;

Participant F: "Integration of family planning and HIV prevention services is a challenge because some of us are only trained in HIV counselling ... if only they could train us all in both counselling and testing for HIV, I tell you this integration thing will not be a great challenge."

Participant G: "integration of family planning and HIV prevention services is a good thing but most of us are only trained in HIV counselling and testing.....HSAs are the ones being

trained in both HIV counselling and testing and they are usually not around....so how do they expect integration of family planning and HIV go on well"

The following quote from another participant highlighted competence-related barrier towards the practicing of integration of family planning and HIV prevention services as follows;

Participant H: "I feel we nurses should be the first priority in training for both HIV counselling and testing since we are the ones who are always present providing care to clients than HSAs who are only found once or twice a week to provide HIV counselling and testing services....this is making integration of family planning and HIV prevention services a challenge because once the HAS who is trained in both counselling and testing is not around we nurses just counsel the clients without having them tested for HIV even if the client is willing to"

The above extracts of the theme 'competence-related barrier to integration of family planning and HIV prevention services' show how the theme fitted under the knowledge concept of Cabana et al.'s (1999) modified model of assessing facilitators of and barriers to knowledge use.

5.4 Conclusion

This chapter described the sample of the study and the findings. The eight themes and related extracts from data collected through the individual interviews were organised under Cabana et al.'s (1999) modified model of assessing facilitators of and barriers to knowledge use model which guided this study and its objectives. These included three themes under familiarity and awareness of integration of family planning and HIV prevention (knowledge), two themes under nurses' attitudes towards integration of family planning and HIV prevention services, and three themes under barriers to integration of family planning and HIV prevention services.

The findings of the current study show that the nurses' practice of integration of HIV and family planning is implemented successfully in the Ntcheu family planning clinic, despite certain barriers and some resentment towards such integration. The success of nurses' practice of integration of family planning and HIV prevention services is largely attributed to the

investment made through providing training to nurses, although continuing professional development (CPD) to maintain competency in integration of family planning and HIV prevention services was also identified as important.

Chapter Six

Discussion of findings, limitations, recommendations and conclusion

6.1 Introduction

This chapter discusses the findings of the study and its limitations. The recommendations and the conclusion are also presented. The purpose of the study was to explore and describe the nurses' practice in the integration of family planning and HIV prevention services in Ntcheu district of Malawi. Eight themes were revealed as the findings of the study in response to the research question 'How do nurses practice the integration of family planning and HIV prevention services in Ntcheu district, Malawi?'

Cabana et al.'s (1999) modified conceptual framework for assessing barriers and knowledge use is used to organise the discussion of the findings. The discussion is divided into three parts: Part 1 discusses the three themes under familiarity and awareness (knowledge); part two discusses the two themes under nurses' attitudes towards integration of family planning and HIV prevention services; and part three discusses the three themes under barriers to integration of family planning and HIV prevention services.

6.2 Part 1: Familiarity and awareness (knowledge)

According to Cabana et al.'s (1999) model of assessing facilitators of and barriers to knowledge use that was used as the theoretical framework that guided the study and its objectives, familiarity and awareness is the domain under knowledge. The findings of the current study that fall under familiarity and awareness (knowledge) included the following three themes: facilitation of access and accessibility of comprehensive integration of family planning and HIV prevention services; educating and counselling clients on family planning and HIV; and early detection of HIV among women of child-bearing age. These are discussed below.

6.2.1 Facilitation of access to and acceptability of comprehensive integration of family planning and HIV prevention services

The findings of the current study revealed that participants' knowledge of integration of family planning and HIV prevention services enabled them to facilitate access to and acceptability of family planning and HIV prevention services among clients. The findings also revealed that this knowledge was enhanced by the fact that all of the participants had received both family planning training and HIV training. Training of nurses in integration of family planning and HIV prevention services has been reported to increase clients' access to and acceptability of comprehensive integration of family planning and HIV prevention services. For instance, in Kibera, Kenya, an increase of 123% in client enrolment for family planning and HIV services was reported in four facilities. Kinagwi and Kibet (2011:58) attributed this increase to increased staff capacity to provide integrated services after receiving training. A review by Dehne (2000:632) highlighted a positive impact on the quality of family planning counselling among integrated service providers due to the interpersonal and sexual counselling skills they had acquired after receiving training.

Similar findings that attest to increasing staff's knowledge through training have been reported in other studies on integration of services, including training on integrated care for STIs and HIV, where Fullerton, Fort, & Johal, et al. (2003:148) reported that nurse practitioners were trained to improve their skills. Fullerton, Fort, Johal, et al. (2003:148) further reported that the improved providers' skills resulted in facilitation of access to and accessibility of the utilisation of family planning services among clients in Ghana. In two experimental studies conducted in family planning clinics in Thailand and Vietnam in Asia on integration of family planning and STI services, it was reported that twice as many women were satisfied with services because family planning providers had been trained in STI prevention and care management, compared with control services where no staff had been trained (Hieu, 1994; Thonkrajai, 1994).

However, other studies on integration of HIV and family planning in Tanzania, Ethiopia, Kenya, Rwanda and South Africa found that where providers had not received any training in family

planning (Neilsen-Bobbit, Kikumbih, & Motta, et al., 2011; FHI, 2010b) or had limited or out-of-date family planning or HIV knowledge and skills (Farrell, Nagendi & Efam, 2011; Holt, Lince, & Hargey, 2011; Kennedy, Spaulding, & Brickley, et al., 2011), their practice of integration and access to services was affected negatively, and the practice did not improve. This supports the findings of the current study which shows that training of nurses support facilitation of access to and accessibility of comprehensive integrated family planning and HIV prevention services among clients.

In Tanzania FHI found low access to and acceptability of services, and that was linked to there being no training of providers (FHI, 2010b). It is clear that where providers received no training on family planning and HIV integration, the practice of integration was negatively affected and providers were not able to facilitate access to and accessibility of family planning and HIV services.

The findings of the current study on nurses' practice of facilitation of access to and acceptability of comprehensive integration of family planning and HIV prevention in Ntcheu district is in line with the WHO's recommendations which state that health providers should facilitate access to HIV counselling and testing to all women of child-bearing age (WHO, 2007), because this maximises the health and well-being of individuals through the timely detection of HIV, prevention of HIV transmission and subsequent access to appropriate HIV prevention and treatment.

The above findings of the theme 'facilitation of access to and acceptability of integration of family planning and HIV prevention services' show that nurses in Ntcheu district practice facilitation of access to and accessibility of comprehensive integration of family planning and HIV prevention among clients. This is attributed to the training they received in both family planning and HIV services.

6.2.2 Educating and counselling clients

The findings of the current study revealed nurses' practice of educating and counselling clients of family planning and HIV prevention services as another aspect of familiarity and awareness of their practice (knowledge). This was demonstrated in activities such as providing all family planning clients with information on the advantages and disadvantages of all the family planning methods, so that the client could make an informed choice. These findings are supported by the recommendations of the UNPF which states that practitioners should ensure that they share complete information regarding contraceptive method effectiveness as well as the advantages and disadvantages of each method with clients (UNPF, 2013:4).

The findings on nurses' practice of educating and counselling clients on HIV prevention and family planning is further supported by Beerthuisen and Michielsen (2010:124-149), who emphasise a need for practitioners to counsel both women and men about procedures that are not reversible for clients who have completed child-bearing or do not plan to have children. Similarly, Stein (1996:783-784) has highlighted educating and counselling clients on HIV prevention and family planning as an effective means of early detection of HIV infection among clients.

The above findings of the nurses' practice of 'educating and counselling clients of family planning and HIV prevention services' are encouraging. The findings show that the practice of nurses is effective in the integration of family planning and HIV prevention services among clients.

6.2.3 Early detection of HIV among women of child-bearing age

The findings of the current study revealed nurses' practice on early detection of HIV among women of child-bearing age as part of the integration of family planning and HIV prevention services. Activities involved in the nurses' practice of early detection included helping clients in making good decisions about care, treatment and management. Similarly, in this study it was reported that nurses also help clients with choice of family planning method, as demonstrated

by early detection practices such as screening for chronic conditions including HIV. These findings are supported by Duerr, Hurst, & Kourtis, et al. (2005:110), who reported that providers' knowledge of clients' HIV status allows providers to respond better to clients' family planning needs especially, in the context of PMCT and the needs of child-bearing HIV-positive women.

The importance of the findings on nurses' practice of early detection of HIV is further highlighted by other authors. For instance, Ramfolo, Chidarikire, & Farirai, et al. (2011:3) suggest that knowing the clients' HIV status has benefits for both the client concerned and the provider. For HIV-negative people knowing their status empowers them to protect themselves from becoming infected and to remain negative. For HIV-positive people knowing their status ensures that they can be provided with appropriate treatment, care and support services and be assisted in living positively (Ramfolo, Chidarikire, & Farirai, et al., 2011: 3). Known HIV status enables providers to treat clients by identifying those who need treatment early. This helps healthcare providers to improve the quality of medical care rendered to their clients and to reduce morbidity and mortality (Ramfolo, Chidarikire, & Farirai, et al., 2011:3). Those who are HIV negative are advised to retest after three months, because there is still the possibility of being infected, since it takes up to three months for the immune system to produce enough antibodies to show infection on blood testing.

The above findings show that nurses' practice in implementation of the integration of family planning and HIV prevention services in Ntcheu district is effective. This is evidenced by nurses' practice of facilitating access to and accessibility of comprehensive integration of family planning and HIV prevention services; educating and counselling clients of family planning and HIV services, and early detection of HIV among women of child-bearing age.

6.3 Part 2: Nurses' positive attitude towards integration of family planning and HIV prevention services

According to Cabana et al.'s (1999) model of assessing facilitators of and barriers to knowledge use that was the theoretical framework that guided the study and its objectives, attitude has

four dimensions, namely agreement, self-efficacy, motivation and outcome expectancy. For the purposes of this study, the modified conceptual framework considered only motivation under attitude; agreement and self-efficacy were left out. The findings of the current study revealed both positive and negative attitudes of nurses towards practising integration of family planning and HIV prevention services, as discussed below.

6.3.1 Personal and professional benefits of integrating family planning and HIV prevention services (positive attitude)

The findings on the nurses' positive attitudes towards the integration of family planning and HIV prevention services revealed personal and professional benefits to the nurses. The reported personal and professional benefits include clients coming in small manageable numbers, which in turn helps nurses to feel good about helping their clients and increases trust between nurses and their clients. The nurses' positive attitude was reported to enable nurses to encourage their clients and to reduce the HIV transmission rate through early identification of HIV among their clients, as demonstrated through screening all clients for chronic conditions including HIV. Similar benefits of a reduced number of multiple return visits or referrals were also reported by Nielsen-Bobbit, Kikumbih, & Motta, et al. (2011), who found that in Tanzania providers noted that integration of family planning and HIV services resulted in an increase in client uptake of services and reduced need for multiple return visits or referrals.

Similar findings on benefits of integrating family planning and HIV prevention services were reported in a longitudinal study in Haiti, where Peck, Fitzgerald, & Liataud, (2003:89) found that integrating additional services including family planning within HIV prevention programmes increased the uptake of HIV testing by 62 times over a 15-year period. In Zimbabwe it was reported that offering integrated services through community health workers contributed to increases in contraceptive use and referrals to VCT centres and led to improvements in client attitudes and knowledge about both family planning and HIV (USAID Extending Service Delivery Project, 2011). In Kenya and Swaziland it was found that client satisfaction improved due to the

increased efficiency of services, which in turn had a positive effect on health workers' own satisfaction (Kuria, 2011; Scholl & Cothran, 2011; Mengistu, Mengistu, & Nouga, et al., 2011).

All of these studies support the findings of the current study on the personal and professional benefits of nurses' practice of integrating family planning and HIV prevention services for both nurses and their clients.

The above findings of the current study on the personal and professional benefits of nurses' practice of integration of family planning and HIV prevention services show that nurses have been positive about practising integration of family planning and HIV prevention services in Ntcheu district.

6.3.2 Resentment of integration of family planning and HIV prevention services (negative attitude)

The current study also revealed negative attitudes or resentment of integration of family planning and HIV prevention services among some nurses. For instance, it was reported that the practice of integration of family planning and HIV prevention is too involving and takes more time, thus increasing the workload and resulting in exhaustion.

A study in Ethiopia by Abera and Mengistu, (2006:28), reported some resentment of integration of family planning into VCT for HIV. Counsellors reported that integration of family planning and VCT is burdensome as well as tiresome due to increased workload. Resentment of integration of family planning and HIV prevention services has also been highlighted by Neilsen-Bobbitt, Kikumbih, & Motta, et al. (2011), who emphasised that providers who have negative attitudes towards integration of HIV and family planning always cite that providing integrated services is too time-consuming.

The above findings of the current study on the nurse's resentment of integration of family planning and HIV prevention services show that there may still be challenges in the nurses practice of integration of family planning and HIV prevention services in Ntcheu district.

6.4 Part 3: Barriers to the integration of family planning and HIV prevention services

According to Cabana et al.'s (1999) model of assessing and facilitating barriers to knowledge used as the theoretical framework that guided the study and its objectives, barriers have two dimensions – namely external factors (patient, model) and environment factors. In the current study the modified conceptual framework considered policy-related, human resource-related, and competence-related barriers, as discussed below.

6.4.1 Policy-related barriers to nurses' practice of integration of family planning and HIV prevention services

The findings of the current study identified the lack of availability of specific policies or guidelines for integration of family planning and HIV prevention as a barrier to the practice of such integration. This was reported to be a challenge that negatively affected nurses' practice of integration of HIV prevention and family planning services, leading to mistakes in providing certain services. A five-country study (Rwanda, Tanzania, South Africa, Ethiopia, and Kenya) by FHI reported that up to two-thirds of providers were unaware of key guidelines, and there were misconceptions about methods and recommendations (FHI, 2010a).

A similar study by Awadhi, Mboya, & Temu, et al. (2012:2) found that the majority of health providers interviewed (71.4%) said that they are no guidelines or protocols for family planning and HIV/AIDS integrated services. Policy makers and service providers reported that there are no current strategies addressing integration of family planning and HIV services. The government through the Ministry of Health is currently developing a strategy for advocating integration of family planning and HIV/AIDS services.

A study by Maharaj (2004:25) reported lack of clear guidelines at the policy level which created difficulties at the services provision level which affected the implementation of reproductive health services. In the absence of clear guidelines, many providers have had to rely on their own instincts for delivering integrated services. As a result, the implementation of integrated services was unstructured and unplanned.

The literature attests to the unavailability of policies or guidelines as a barrier to integration of family planning and HIV prevention services. For instance, Irving (2014) stated that availability of policy or guidelines reduces reliance on memory, which when overtaxed have been shown to be a major source of human error or oversights. Literature also suggests that the availability of policy and guidelines has potential benefits for both the client and the provider. According to Woolf, Grol, & Hutchnson, et al. (1999:527) for patients, the greatest benefit of having guidelines is that they improve health outcomes. Woolf, Grol, & Hutchnson, et al. (1999:527) further state that guidelines that improve health outcome have the potential to reduce morbidity and mortality and improve quality of life. For healthcare providers clinical guidelines improve the quality of clinical decisions. They offer explicit recommendations for providers who are uncertain about how to proceed, improve consistency of care and provide authoritative recommendations that reassure practitioners about the appropriateness of their treatment policy (Woolf, Grol, & Hutchnson, et al., 1999:528).

Findings of the current study show that the unavailability of policies and guidelines is a barrier that negatively affects nurses' practice of integration of family planning and HIV prevention in Ntcheu district, Malawi.

6.4.2 Human resource-related barriers

In the current study inadequate human resources was reported as a barrier to the integration of family planning and HIV prevention services, and this negatively affect nurses' practice of integration of family planning and HIV prevention services. Additional workload and shortage of staff were highlighted as barriers to the integration of family planning and HIV prevention services. It was reported that the reduction in the number of nurses who are responsible for integration of family planning and HIV prevention services in the clinic caused increased staff workload, which in turn resulted in staff exhaustion and other related challenges.

Similar findings have been reported in other African countries, where inadequate human resources were reported to result in resentment of the integration of family planning and HIV services by staff. For instance, in South Africa, Kenya and Ethiopia the increase in workload was

found to be driven mostly by increased service uptake in the context of inadequate human resources, which led to exhaustion and staff burnout (Maharaj & Cleland, 2005; Scholl & Cothran, 2010). In Ghana family planning providers reported already experiencing heavy workloads and staff shortages. The providers were concerned that integration of services would worsen these existing challenges (Wilcher & Martin, 2004:8). Another study in Ethiopia found that increase in workload during integration was associated with expanded client-provider protocol that increases session times per contact with each client, which led to the need to work overtime (Yoder & Amare, 2008:4-39).

Contrary to the findings of the current study and those mentioned above, FHI (2010a) found that for up to two-thirds of providers in Kenya, Rwanda, South Africa, Uganda and Ethiopia some 'non-busy' time was experienced during the day. They thus concluded that increased workloads should not be used as an excuse to preclude offering additional services such as the integration of HIV prevention and family planning services (FHI, 2010a:2).

In the current study, in response to inadequate human resources in the practice of nurses, the participants suggested a few solutions to increased workload such as the adoption of task shifting of other nursing services to other cadres of the health sector such as health surveillance assistants and volunteers. This is supported by the WHO (2008), which suggests that where additional human resources are needed, some tasks may also be delegated to newly created cadres of health workers who receive specific competency-based training. In Tanzania Pathfinder International worked with district health management teams and health facility staff to recruit and train a volunteer cadre that initially provided only home-based HIV care and testing services (Banzi, Kudrati, & Laki, 2011). With an increase in the proportion of married women using modern methods of contraception from 2004 to 2010, Pathfinder upgraded the skills of the cadre to include contraceptive and fertility counseling and distribution of pills and condoms. It was reported that adding family planning services to the cadre's workload did not result in a loss of quality or a reduction in the number of clients. In Ethiopia a strategy was recently adopted to combat the shortage of staff in VCT for HIV units by involving community counselors in the VCT units. Community counselors are volunteers who receive minimal training

in HIV services (Abera & Mengistu, 2006: 28). This further supports the recommendations suggested by the participants in the current study, i.e. the need for task shifting and appointment of health surveillance assistants and volunteers in Ntcheu district in Malawi.

The findings of the current study on the human resource-related barriers show that inadequate resources are a barrier to the nurses' practice in the implementation of integration of family planning and HIV prevention services in Ntcheu district, Malawi.

6.4.3 Competence-related barriers

The findings of the current study revealed incompetency and inadequate counselling skills among some providers as another barrier towards integration of family planning and HIV prevention services. A similar study in Uganda found that healthcare providers who lacked necessary skills to counsel young girls and women that they encountered were a barrier to the practice of successful implementation of integrated family planning and HIV prevention services (Paul, Nassatrom, & Kingberg-Allvin, et al., 2016). To support this, Mizwa and Storer (2007:207) stress that to successfully implement the integration of family planning and HIV prevention services it is the providers' responsibility to understand the basic principles involved in HIV prevention counselling. Similarly, the WHO recommends training on the core competencies required for counselling and testing clients for all health providers responsible for the integration of family planning and HIV prevention services (WHO/HIV, 2009).

In this current study a lack of refresher courses on family planning and HIV was highlighted by the providers as a barrier to the nurses' effective practice of integration of family planning and HIV prevention services. This resulted in some nurses' incompetency and inadequate counselling skills. Competency implies the ability to apply knowledge, skills, and abilities successfully to new situations as well as to familiar tasks for which prescribed standards exist (Lane & Ross, 1998:229-236). Health workers acquire competence over time (Benner, 1984). Typically, pre-service education or an initial training opportunity creates a novice who, after additional training and hands-on experience, reaches a level that can be certified as competent to perform a specific task (Benner, 1984).

The findings of the current study identified competency-related barriers that negatively affect nurses' practice of integration of family planning and HIV prevention services in Ntcheu district, Malawi.

6.5 Limitations of the study

Although the study was executed successfully, certain limitations were experienced. For instance, participants were not always available due to on-going in-service training programmes that occurred during the period of data collection. The researcher had to reschedule and extend the data collection period. This posed a threat of possible contamination of data as participants were able to share and discuss the interview questions with each other. As a result, towards the end of data collection participants were giving answers that were similar to previous ones, even without probing. Although this was considered as saturation of data, it occurred to the researcher that there could have been a possibility of sharing of interview questions. Data saturation is reported by Guest, Bounce and Johnson (2006:59) as "the point at which no new information or theme is observed in the data".

6.6 Recommendations

The findings of the current study have implications for different stakeholders regarding the nurses' practice in the implementation of integration of family planning and HIV prevention services in Ntcheu district, Malawi, and districts of other countries with financial and human resource constraints.

6.6.1 Recommendations for policy makers

The findings of the study demonstrated that the unavailability of policies or guidelines on integration of family planning and HIV prevention services is a barrier to the nurses' practice of such integration. It is therefore recommended that the policy makers, including the Directorate of Reproductive Health unit and HIV unit, should fast-track the development and dissemination of already drafted policies and guidelines for integration of family planning and HIV prevention services in Malawi. Availability of policy and guidelines will improve the health outcomes of

clients by reducing the mortality and morbidity rate, as the policy/guidelines improve the quality of clinical decisions made by providers. Policy and guidelines offer explicit recommendations for providers who are uncertain about how to proceed, improve the consistency of care, and provide authoritative recommendations that reassure practitioners about the appropriateness of their treatment (Woolf, Grol, & Hutchnson, et al., 1999:528).

6.6.2 Recommendations for nursing education

Competency-related barriers include inadequate family planning and HIV testing skills, which are barriers to nurses' practice of integration of family planning and HIV prevention services in Ntcheu district, Malawi. It is therefore recommended that refresher courses and mentorship programmes be developed and implemented in order to improve nurses' competencies in the integration of family planning and HIV prevention services in Ntcheu district, Malawi.

6.6.3 Recommendation for National Organisation for Nurses and Midwives of Malawi (NONM)

That implementation of a Continuous Professional Development (CPD) programme for nurses in order to maintain their competency is intensified throughout Malawi is also recommended. The purpose of CPD is to continue development of knowledge, understanding, problem solving, performance and technical skills in one's profession. CPD ensures that the quality of customer care and the depth of one's knowledge continue to grow over time.

6.6.4 Recommendations for district management team

The findings of this study revealed inadequate human resources as a barrier to integration of family planning and HIV prevention services. Task shifting of other services like HIV counselling and testing to volunteers is suggested as a solution to the inadequate human resources. It is therefore recommended that the Ntcheu hospital management team adopts and implements task shifting of certain nursing duties to volunteers in order to promote integration of family planning and HIV prevention services. This recommendation is based on examples from Tanzania where Pathfinder International worked with district health management teams and

health facility staff to recruit and train a volunteer cadre that initially provided only home-based HIV care and testing services (Banzi, Kudrati, & Laki, 2011).

6.6.5 Recommendations for future research

This study was a single case study; therefore a large-scale quantitative study is recommended which will generate data that will be a representative of all family planning clinics in Malawi.

The researcher recommends that further research should be done using appreciative inquiry to determine the motivators to or enablers of the practice of integration of family planning and HIV prevention services, so as to provide baseline data for organising mentorship programmes and refresher courses on skills and competences.

6.6.6 Recommendation for practitioners

The findings of this study revealed inadequate HIV testing skills among nurses. It is therefore recommended that all staff be trained in both HIV counselling and testing for HIV in order to improve integration of family planning and HIV prevention services in Ntcheu district, Malawi.

6.7 Conclusion

The findings of the current study show that the nurses' practice of integration of HIV and family planning is implemented successfully in the Ntcheu family planning clinic, despite certain barriers and some resentment towards the practice of such integration. The success of nurses' practice of integration of family planning and HIV prevention services is largely attributed to the investment made through providing training to nurses, although the need for CPD to maintain competency in integration of family planning and HIV prevention services was also identified as important.

The findings of the current study show that in-service training of nurses for CPD purposes is critical to improving nurses' competency in the practice of successful integration of family planning and HIV services.

References

- Abera, Y. & Mengistu, A. 2006. *Integrating family planning in VCT and PMTCT sites: The experience of Pathfinder International- Ethiopia in Amhara National Regional State*. Paper presented at conference on Linking Reproductive Health, Family Planning and HIV/AIDS in Africa, Addis Ababa, 9–10 October. Final report to USAID, draft. Washington, DC: Family Health International.
- Adamchak, S.E., Janowitz, B., Grey, T., & Otteness, C. 2007. *Introducing family planning services into an ART treatment program in Ghana: Results of a pilot intervention*. Research Triangle Park, North Carolina, USA: Family Health International
- Askew, I., & Maggwa, N. 1998. *Integrating STI and HIV/AIDS services in East and Southern Africa*. Paper presented at: Annual Meeting of the Population Association of America. 2-4th April, 1998. Chicago, IL.USA.
- Askew, I., & Maggwa, N. 2002. *Integration of STI prevention and management with family planning and Antenatal care in Sub-Saharan Africa- what more do we need to know?* Int Fam Plann Perspect 2002; 28:77-86
- Askew, I. & Berer, M. 2003. *The contribution of sexual and reproductive health services to the fight against HIV/AIDS: A review*. *Reproductive Health Matters*. 11(22): 51-73.
- Awadhi, B., Mboya, B., Temu, F. & Ngware, S. 2012. *Assessing the need and capacity for integration of Family Planning and HIV counselling and testing in Tanzania*. *Pan African Medical Journal*. 13(Suppl 1):6.
- Banda, H.N., Bradley, S. & Hardee, K. 2004. *Provision and Use of Family Planning in the Context of HIV/AIDS in Zambia: Perspectives of Providers, Family Planning and Antenatal Care Clients, and HIV-Positive Women*. Washington, DC: USAID Policy Project.

- Banzi, J., Kudrati, M., Laki, D. 2011. *Does integration of multiple services lead to a reduction in client load?* Paper presented at the 2011 International Conference on Family Planning, Dakar, Senegal.
- Baumgartner, N.J., Green, M., Weaver, A.M., Mpangile, G., Kohi, W.T., Mujaya, N.S. & Lasway, C. 2013. *Integrating Family planning into HIV care and treatment clinics in Tanzania: Evaluation of facilitated referral model. Health Policy and Planning.* 29:570-579.
- Becker, J., Leitman, E. & Fathalla, F. 1997. *Introducing sexuality within family planning: experience of three HIV/STD projects from Latin America and the Caribbean.* New York: Population Council. 1-27.
- Beerthuizen, R. & Michielsen, D. 2010. *State-of-the art of non-hormonal methods of contraception: VI. Male sterilization. European Journal of Contraception and Reproductive Health Care.* 15(2):136-49. Doi: 10.3109/13625181003682714.
- Benner, P. 1984. *From Novice to Expert: Excellence and power in clinical Nursing Practice.* California: Addison-Westery.
- Berer, M. 2003. *Integration of sexual and reproductive health services: a health priority.* Reproduction Health Matters 2003; 11:6-15.
- Bernard, H. R. & Ryan, G. W. Eds. 2010. *Analysing qualitative data: Systematic approaches.* Thousand Oaks, CA: Sage.
- Best, K. 2004. *Family Planning and the Prevention of Mother-to-Child Transmission of HIV: A Review of the Literature.* Research Triangle Park, NC: Family Health International.
- Blanche, M.T., Durrheim, K. & Painter, D. 2006. *Research in practice: Applied methods for the social sciences.* 2nd ed. Cape Town, South Africa: University of Cape Town Press Ltd.
- Boonstra, H. 2004. *The role of reproductive health providers in preventing HIV. Guttmacher Report on Public Policy.* 7(4).

- Bradley, H., Gillespie, D., Kidanu, A., Yung-Ting, B., Karklins, S. 2009. *Providing family planning in Ethiopian voluntary HIV counseling and testing facilities: client, counselor and facility-level considerations*. *AIDS*. 23(Suppl 1) S105-S114.
- Brink, H. 2006. *Fundamentals of research methodology for health care professionals*. 3rd ed. Cape Town: Juta & Company.
- Brink, H., Van der Walt, C. & Van Rensburg, G. 2012. *Fundamentals of research methodology for healthcare professionals*. 3rd ed. Cape Town: Juta & Company.
- Burns, N. & Grove, S.K. 2005. *The practice of nursing research: Conduct, Critique, and Utilization*. 5th ed. St Louis: Elsevier/Saunders.
- Cabana, M.D., Rand, C.S., Powe, N.R., Wu, A., Wilson, M., Abboud, P. 1999. *Why do physicians follow clinical practice guidelines? : A framework for improvement*. *Journal of the American Medical Association*. 282:1458-1465.
- Campbell, L. & Lambey, M. 2002. *How a family planning association turned its approach to sexual health on its head: Collaborating with communities in Belize*. In *Responding to Cairo: Case Studies of Changing Practice in Reproductive Health and Family Planning*. N.Haberland & D. Measham, Eds. New York: Population Council. 321-338.
- Chege, J. 2001. *Ghana integration: Community workers can communicate STI and HIV/AIDS messages effectively*. Washington, DC: Population Council.

- Church, K. & Mayhew, S.H. 2009. *Integration of STI and HIV prevention, care, and treatment into FP services: A review of literature. Studies in Family Planning.* 40(3):171-186.
- Church, K., Simelane, D. & Mayhew, S. 2010. *Should ART clinics be offering sexual & reproductive health services? Provider perspectives on the integration of sexual & reproductive health with HIV care in Swaziland.* Poster presented at the 2010 International AIDS Conference, Vienna, Austria. Integra Project. Available: <http://integra.wp.tincan.co.uk/wp-content/uploads/2011/01/Poster-Integrating-SRH-services-into-ART-clinics-in-Swaziland.pdf> [April 16, 2012]
- Creswell, J.W. 2013. *Qualitative inquiry and research design: Choosing among five approaches.* 3rd ed. Thousand Oaks, CA: Sage.
- Crystal Ng., Pacque-Margolis, S., Kotellos, K. & Brantley, S. 2012. *Integrating Family Planning and HIV/AIDS Services: Health Workforce Considerations Technical Brief.* Washington, DC: intraHealth International.
- Daniel, D., Banzi, J., Lyons, J., Mkini, F., Mwakibete, A., Rwakyendela, J., Swai, L., Nougla, A. & Kudrati, M. 2012. *Leveraging community-based HIV services to introduce family planning counselling and contraceptive services.* Paper presented at the International AIDS Conference, Washington DC, July 22-27, 2012.
- Dehne, K.L., Snow, R., O'Reilly, K.R. 2000. *Integration of prevention and care of sexually transmitted infection with family planning services: what is the evidence for public health benefits? Bulletin of the World Health Organization.* 78(5):628-639.

- Delvaux, T. & Nostlinger, C. 2007. *Reproductive choices for women and men living with HIV: Contraception, abortion and fertility*. *Reproductive Health Matters*. 15(29 Suppl):46-66.
- District Health Survey. 2016. *Ntcheu District Hospital Survey (NUDHS) Report, 2016-2017*.
Unpublished
- Dudley, L. & Garner, P. 2011. *Strategies for integrating primary health services in low- and middle-income countries at the point of delivery*. *Cochrane Database of Systematic Reviews*. 7: CD003318. DOI: 10.1002/14651858.CD003318.pub3. .
- Duerr, A., Hurst, S., Kourtis, A.P., Rutenberg, N. & Jamieson, D.J. 2005. *Integrating family planning and prevention of mother-to-child HIV transmission in resource-limited settings*. *Lancet*. 366(9481): 261-263.
- Duma, S.E. 2006. *Women's journey of recovery from sexual assault trauma: A grounded theory*.
Cape Town, South Africa: University of Cape Town.
- Family Health International. 2004. *Integrating Services. Network*. 23(3):4-31.
- Family Health International. 2010a. *Ten essential steps: how to strengthen family planning and HIV service integration*. Available:
<http://www.fhi.org/sites/default/files/media/documents/TenStepsFPHIV.pdf> [April 1, 2017]
- Family Health International. 2010b. *Preventing mother-to-child HIV transmission through family planning in maternal and child health services: Kenya, Rwanda, and South Africa*.

Research Triangle Park, NC: Family Health International. Available: <http://www.fhi.org/NR/rdonlyres/exvr5hkveirr3gbnmng73f3rm7o7ymhdcwwmngo5vjgsmfsaic2xq7bv7yw6fb7m4rcftxbapa7nyo/FPHIVPMTCT.pdf> [April 16, 2012]

Family Health International. 2012. *Study of family planning in a large scale*. Available: from:<http://www.fhi360.org/sites/default/files/media/documents/FPHIV5countryreport.pdf> [April 16, 2012]

Farrell, B.L. 2007. *Family planning - Integrated HIV services: A framework for integrating family planning and antiretroviral therapy services*. New York: EngenderHealth/THE ACQUIRE Project.

Farrell, B.L., Nagendi, G. & Efem, I. 2011. *Integration: A systems approach for wider application*. Paper presented at the 2011 International Conference on Family Planning, Dakar, Senegal.

Farrell, B. & Rajani, N. 2007. *Integrating family planning with antiretroviral therapy services in Uganda. Acquiring Knowledge*. New York, NY: The Acquire Project for USAID. Available: [www.acquireproject.org/.leadadmin/user upload/ACQUIRE/Publications/ ACQUIRE-Knowledge-Integration-.nal_updated.pdf](http://www.acquireproject.org/.leadadmin/user%20upload/ACQUIRE/Publications/ACQUIRE-Knowledge-Integration-.nal_updated.pdf) [April 16, 2012]

Feldman, R. & Maposhere, C. 2003. *Safer sex and reproductive choice: findings from 'positive women: voices and choices' in Zimbabwe*. *Reproductive Health Matters*. 11:162-173. DOI: 10.1016/S0968-8080(03)02284-5.

- Foreit, J. 2006. *Systematic screening: A strategy for determining and meeting clients' reproductive health needs*. Washington, DC: Population Council.
- Fullerton, J., Fort, A. & Johal, K. 2003. *A case/ comparison study in the Eastern Region of Ghana on the effects of incorporating selected reproductive health services on family planning services*. *Midwifery*. 19 (1):17-26.
- Grossman, D., Onono, M., Newmann, S.J. Blat, C., Bukusi, E.A., Shade, S.B., Steinfeld, R.L., Cohen, C.R. 2013. *Integration of family planning services into HIV care and treatment in Kenya: a cluster-randomized trial*. *AIDS*. Suppl 1:S77-85. Doi: 10. 1097/QAD.0000000000000035.
- Grove, S.K., Burns, N. & Gray, J.R. 2013. *The practice of nursing research: Appraisal synthesis and generation of evidence*. 7th ed. St Louis, Missouri: Elsevier Saunders.
- Guest, G., Bounce, A., & Johnson, L. 2006. *How many interviews are enough? An experiment with data saturation and variability*. *Field methods* 18(1), 59-82. Doi: 10.1177/1525822x05279903
- Hansen, E.C. 2006. *Successful qualitative health research: a practical introduction*. Singapore: South Wind Production.
- Heyford, S.R. & Agadjanian, V. 2010. *Providers' views concerning Family Planning Service delivery to HIV positive women in Mozambique*. *Studies in Family Planning*. 41(4): 291-300. DOI: 10.1111/j.1728-2010.00254.x

- Hieu, D.T. 1994. *Feasibility of Integrating STD services and STD/HIV/AIDS prevention into the MCH/FP programme in Vietnam*. Hanoi: Ministry of Health.
- Hoke, T., Tricia, P., Jane, H., Sarah, C., & Jennifer, M. 2011. *Family planning HIV integration success hinges on strength of health system. Lessons learned from an intervention trial: Serving the family planning needs of PMTCT clients in South Africa*. Paper presented at the 2011 International conference on family planning. Dakar, Senegal.
- Holloway, I. & Wheeler, S. 2002. *Qualitative research in nursing*. 2nd ed. Osney Mead, Oxford: Blackwell.
- Holt, K., Lince, N., Hargey, A. 2011. *Assessment of service availability and health care workers' opinions about family planning for young women in Soweto, South Africa*. Paper presented at the 2011 International Conference on Family Planning, Dakar, Senegal.
- Homan, R., Reynolds, H.W., Janowitz, R., & Johnson, L. 2006. *The value of contraception to prevent perinatal HIV transmission*. *Sexually Transmitted Diseases*, 33(6):350-6.
- Interagency Working Group on Sexual and Reproductive Health and HIV Linkages (IAWG). N.d. *Connecting Sexual and Reproductive Health and HIV: Navigating the Work in Progress*. Town?: IAWG.
- International Planned Parenthood Federation. 2005. *Models of care project: Linking HIV/AIDS treatment, care and support in sexual and reproductive health care settings. Examples in Action*. London: International Planned Parenthood Federation.

International Planned Parenthood Federation. 2006. *La integración de los servicios de atención y tratamiento del VIH/SIDA en los ámbitos de salud reproductiva [The integration of HIV/AIDS care and treatment services into reproductive health services]*. New York: International Planned Parenthood Federation Western Hemisphere Region.

International Planned Parenthood Federation, United Nations Population Fund, Joint United Nations Programme on HIV/AIDS, and World Health Organization. 2011. *Malawi: Rapid Assessment of Sexual and Reproductive Health and HIV Linkages*. Blantyre, Malawi: IPPF/UNFPA/UNAIDS/WHO.

Iran, L.S., Pappa, S. & Dindi, P. 2015. *Family Planning and HIV Integration in Malawi: A Policy Analysis*. Washington DC: Futures Group, Health Policy Project.

Irving, A.V. 2014. *Policies and Procedures for healthcare organisations: A risk Management Perspective*. South Harrison Street: MCN Healthcare, 2013. Janowitz, B., Johnson, L., Thompson, A., West, C., Marangwanda, C. & Ndugga B.M. 2002. Excess capacity and the cost of adding services at family planning clinics in Zimbabwe. *International Family Planning Perspectives*. 28(2):58-66.

Janowitz, Barbara, Johnson, L., Thompson, A., West, C., Marangwanda, C., AND Maggwa, B.N. 2002. *Excess capacity and the cost of adding services at family planning clinics in Zimbabwe*. *International family planning perspective* 28(2): 58-66.

Johnston, J. 2007. *Reviewing the literature and developing research*. Available:

<http://www.docstoc.com/docs/902144/literature-review-in-qualitative-research>

[January 15, 2013]

Kaba, M. and Alem, A. 2006. *Integrating youth friendly VCT to youth reproductive health service provision: Experience from Family Guidance Association of Ethiopia (FGAE) youth centers*. Paper presented at conference on Linking Reproductive Health, Family Planning, and HIV/AIDS in Africa, Addis Ababa, 9-10 October.

Karim, A.S.S., Whyte, P.E., Karim, A., & Sankar, N. 1992. *Reasons for lack of condom use among high school students*; South African Medical Journal 82: 107-110.

Kawale, P., Mindry, D., Phoya, A., Jansen, P. & Hoffman, R.M. 2015. *Provider attitudes about childbearing and knowledge of safer conception at two HIV clinics in Malawi*. Reproductive Health. 12:17. DOI: 10.1186/s12978-015-0004-0

Kendall, T. 2013. *Falling short of universal access to reproductive health: unintended pregnancy and contraceptive use among Mexican women with HIV*. *Culture, Health & Sexuality*. 15(S2):S166-S179.

Kennedy, C.E., Spaulding, A.B., Brickley, D.B., Almers, L., Mirjahangir, J., Packel, L., Kennedy, G.E., Mbizvo, M. et al. 2010. *Linking sexual and reproductive health and HIV interventions: A systematic review*. *Journal of the International AIDS Society*. 13:26.

Kennedy, G., Kennedy, C., Lindegren, M.L. & Brickley, B. 2011. *Systematic review of integration of maternal, neonatal and child health and nutrition, family planning and HIV*. *Final*

Report. Washington, DC: Global Health Technical Assistance Project. Available:
http://resources.ghtechproject.net/sites/default/files/MNCHN-HIV%20FINAL%2012%2012%2011_0.pdf [August 7, 2012]

Khu, N.H., Vwalika, B., Karita, E., Kilembe, W., Bayingana, R.A., Sitrin, D., Roeber-Rice, H., Learner, M. et al. 2012. *Fertility goal-based counselling increases contraceptive implant and IUD use in HIV-discordant couples in Rwanda and Zambia*. *Contraception*. 2013 July; 88(1): 74-82. Doi: 10.1016/j.contraception.2012.10.004.

Kinagwi, K. & Kibet, W. 2011. *Integration of HIV and AIDS services: The AMREF Kenya experience*. Paper presented at the 2011 ICASA Conference, Addis Ababa, Ethiopia.

Kuria, S. 2011. *Public sector perspectives on FP/HIV integration in Kenya*. Paper presented at the 2011 International Conference on Family Planning, Dakar, Senegal.

Lafort, Y., Sawadogo, Y., Delvaux, T. Vuylsteke, B. & Laga, M. 2003. *Should family planning clinics provide clinical services for sexually transmitted infections? A case study from Côte d'Ivoire*. *Tropical Medicine & International Health*. 8(6):552-560.

Lancaster, G.A., Dodd, S. & Williamson, P.R. 2004. *Design and analysis of pilot studies: recommendations for good practice*. *Journal of Evaluation in Clinical Practice*. 10(2):307-312 DOI: 10.1111/j.2002.384. doc.x

Lane, D.S., & Ross, V. 1998. *Defining competence and performance indicators for physicians in medical management*. *American Journal of Preventive Medicine*. 11(1):1-8.

Levin, J. H. 1997. *What is data analysis?* Available:

[http://www.dartmouth.edu/~mss/data%20analysis/Volume%20I%20pdf%20/006%20Intro%20\(What%20is%20the%20weal.pdf](http://www.dartmouth.edu/~mss/data%20analysis/Volume%20I%20pdf%20/006%20Intro%20(What%20is%20the%20weal.pdf) [April 13, 2015]

Liambila, W., Askew, I., Ayisi, R., Gathitu, M., Mwangi, J., Homan, R. 2008. *Feasibility, Acceptability, Effect and Cost of Integrating Counselling and Testing for HIV within Family Planning Services in Kenya*. Frontiers Final Report, Washington, DC: Population Council.

LoBiondo-Wood, G. & Haber, J. 2010. *Nursing research methods and critical appraisal for evidence-based practice*, 7th ed. St Louis: Mosby.

Lopez, L.M., Hilgenberg, D., Chen, M., Denison, J. & Stuart, G. 2013. *Behavioral interventions for improving contraceptive use among women living with HIV*. Cochrane Database of Systematic Reviews. Vol 1. Published-2013.

Mackenzie, M. & Crouch H. 2006. *The logic of small samples in interview-based qualitative research*. Social Science Information. 45(4):483-499.

Maharaj, P. 2004. *Integrated reproductive health services: The perspectives of providers*. *Curationis*. 27(1):23-30.

Maharaj, P. & Cleland, J. 2005. *Integration of sexual and reproductive health services in KwaZulu- Natal, South Africa*. *Health Policy Plan*. 20(5):310-318.

- Marchal, B., De Brouwere, V. & Kegels, G. 2005. *Viewpoint: HIV/AIDS and the health workforce crisis: What are the next steps?* *Tropical Medicine & International Health*. 10(4):300-304.
- Mark, K.E., Meinen-Derr, J., Stephenson, R., Haworth, A. Ahmed, Y., Duncan, D., Westfall, A. & Allen, S. 2007. *Contraception among HIV concordant and discordant couples in Zambia: A randomized controlled trial*. *Journal of Women's Health*. 16(8):1200-1210.
- Massad, L., Springer, G., Jacobson, L., Watts, H., Anastos, K., Korn, A. (2004). *Pregnancy rates and predictors of conception, miscarriage and abortion in US women with HIV*. *AIDS*. 18(2):281-286.
- Mayhew, S. 1996. *Integrating MCH/FP and STD/HIV services: Current debates and future directions*. *Health Policy and Planning*. 11(4):339-353.
- Mayhew, S.H. 2000. *Integration of STI services into FP/MCH services: Health service and social contexts in rural Ghana*. *Reproductive Health Matters*. 8(16):112-124.
- Mayhew, S.H., Lush, L., Cleland, J. & Walt, G. 2000. *Implementing the integration of component services for reproductive health*. *Studies in Family Planning*. 31(2):151-162.
- Mengistu, A.A., Mengistu, A.K. & Nouga, A. 2011. *Addressing the missed opportunity in family planning services through FP/HIV integration: The experience of Pathfinder International in Ethiopia*. Paper presented at the 2011 International Conference on Family Planning, Dakar, Senegal.

- Miles, M.B. & Huberman, A.M. 1994. *Qualitative data analysis*. 2nd ed. Thousand Oaks: Sage Publications.
- Ministry of Health. 2007. *Malawi National Reproductive Health Service Delivery Guidelines*, Lilongwe, Malawi.
- Ministry of Health, Republic of Malawi. 2015. *National Sexual and Reproductive Health and Rights Policy, 2009-2014:11*. Lilongwe: Ministry of Health.
- Ministry of Health. 2011. *Contraceptive Methods*. Lilongwe: Ministry of Health.
- Mitchell, H.S. & Stephens, E. 2004. *Contraceptive choice for HIV positive women. Sexually Transmitted Infections*. 80(3): 167-173.
- Mizwa, B.M. & Stoner, G.N. *HIV Prevention Counselling. Journal of public health*, 92, 378-81
- Morse, J.M. Ed. 2000. *Determining sample size. Qualitative Health Research*. 10(1):3-5. DOI: 10.1177/104973200129118183.
- Mphuru, L., Barone, M., Perchal, P. & Lusida, G. 2006. *Integration of Voluntary Counselling and testing for HIV into Family Planning and Reproductive Health Services in Arusha Region, Tanzania*. Paper presented at conference on Linking Reproductive Health, Family Planning and HIV/AIDS in Africa, Addis Ababa, 9 -10 October.
- Mullick, S., Khoza, D., Askew, I., Maluka, T. & Menziwa, M. 2006. *Integrating prevention, counselling and testing for HIV into family planning services in South Africa: What*

happens to the quality of FP? Meeting presentation: Linking Reproductive Health, Family Planning and HIV/AIDS in Africa, Addis Ababa, Ethiopia, 9 -10 October.

Munhall, P. 2007. *Nursing research: A qualitative perspective*. 4th ed. Ottawa: Jones and Bartlett.

Mutemwa, R., Mayhew, S., Colombini, M., Busza, J., Kivunaga, J., Ndwiga, C. 2013. *Experiences of health care providers with integrated HIV and reproductive health services in Kenya: A qualitative study*. BMC Health Services Research. 2013 Jan 11; 13:18-27. [PMC free article] [PubMed]

Myer, L., Morroni, C. & El-Sadr, W.M. 2005. *Reproductive decisions in HIV-infected individuals*. *Lancet*. 366:698-700. DOI: 10.1016/S0140-6736(05)67155-3.

National Statistical Office & ICF Macro. 2005. *Malawi: DHS 2004-Final Report*. Calverton, MD: National Statistical Office & ICF Macro

National AIDS Commission (NAC). 2009. *Malawi HIV and AIDS Extended National Action Framework (NAF), 2010-2012*, Draft. Lilongwe: Government of Malawi.

National Statistical Office & ICF Macro, Malawi. 2015-2016. *Malawi Demographic and Health Survey 2015-2016*. Calverton, MD: ICF Macro.

Neuman, W.L. 2012. *Basics of social research: qualitative and quantitative approaches*. 3rd ed. Upper Saddle River, NJ: Pearson Education Inc.

- Nielsen-Bobbit, J., Kikumbih, N., Motta, W. 2011. *Striving toward a one stop shop: Assessing integration of family planning and HIV services in Iringa and Manyara Regions, Tanzania. Paper presented at the 2011 International Conference on Family Planning, Dakar, Senegal.*
- Ndwiga, C., Warren, C & Abuya, T. 2011. *Peer mentoring as a method of capacity building for integrating HIV into FP services: An experience of first line health workers.* Paper presented at the 2011 International Conference on Family Planning, Dakar, Senegal.
- Newmann, S.J., Grossman, D., Blat, C., Onono, M., Steinfeld, R., Bukusi, E.A., Shade, S. & Cohen C.R. 2013. *Does integrating family planning into HIV care and treatment impact intention to use contraception? Patient perspectives from HIV-infected individuals in Nyanza Province, Kenya.* International Journal of Gynaecology and Obstetrics. 2013 Aug 6; SOO207292 (13)00383-4. DOI: 10:1016/j.igo.2013.08.001.
- Ngure, K., R. Heffron, N. Mugo, E. Irungu, C. Celum, and J. M. Baeten. 2009. —*Successful Increase in Contraceptive Uptake among Kenyan HIV-1-Serodiscordant Couples Enrolled in an HIV-1 Prevention Trial.*|| AIDS 23(Suppl 1): S89–95.
- Notar, C.E. & Cole, V. 2010. *Literature review organizer.* International Journal of Education.2 (2). Available: www.inoxpneumatic.com/ [October 4, 2011]
- PATH. 2007. *Options and challenges for converging HIV and sexual and reproductive health services in India: Findings from an assessment in Andhra Pradesh, Bihar, Maharashtra, and Uttar Pradesh.* Seattle: PATH.

Patton, M.Q. 2001. *Qualitative evaluation and research methods*. 3rd ed. Newbury Park, CA: Sage.

Paul, M., Nasstrom, B.S., Klingberg-Allvin, M., Kiggundu, C., Larsson, C.E. 2016. *Healthcare providers balancing norms and practice: challenges and opportunities in providing contraceptive counselling to young people in Uganda: A qualitative study*. *Glob Health Action*. 2016; 9: 10.3402/gha.v9.30283. Published online 2016 May 11. Doi: 10.3402/gha.v9.30283 PMID: PMC4865766

Peck, R., Fitzgerald, D.W., Liautaud, B. 2003. *The feasibility, demand, and effect of integrating primary care services with HIV voluntary counseling and testing: evaluation of a 15-year experience in Haiti, 1985–2000*. *Journal of Acquired Immune Deficiency Syndrome*. 33:470-475.

Phiri, S., Feldacker, C., Chaweza, T., Mlundira, L., Speight, C., Samala, B. & Kachale, F. 2013. *Integrating Reproductive health services into HIV care: Strategies for successful implementation in a low resource HIV clinic in Lilongwe, Malawi*. *Journal of Family Planning and Reproductive Health Care*. Available: <http://fprhc.bmj.com/> DOI: 10.1136/1jfp-2013-100816 [April 2, 2015]

Polit, D.F. & Beck, C.T., 2004. *Nursing research principle and methods*, 7th ed. Philadelphia: Lippincott Williams &Wilkins.

Polit, D.F. & Beck, C.T. 2008. *Nursing research: generating and assessing evidence for nursing practice*. Philadelphia: Lippincott Williams & Wilkins.

- Polit, D.F. & Beck, C.T. 2012. *Nursing research: generating and assessing evidence for nursing practice*. Philadelphia: Library Congress.
- Porta, M. Ed. 2008. *A dictionary of epidemiology*. 5th ed. Oxford, New York: Oxford University Press.
- Ramfolo, M.N., Chidarikire, T., Farirai, T., Matji, R. 2011. *Provider-initiated counselling and testing (PITC): An overview*. Southern African Journal of HIV Medicine, 12. Available: <http://www.sajhivmed.org.za/index.php/hivmed/article/view/190/321> [February 17, 2017]
- Reynolds, H.W., Janowitz, B., Homan, R. & Johnson, L. 2006. *The value of contraception to prevent perinatal HIV transmission*. *Sexually Transmitted Diseases*. 33(6): 350-356.
- Ringheim, K., Yeakey, M., Gribble, J., Sines, E. & Stepahin, S. 2009. *Supporting the Integration of Family Planning and HIV Services*. PRB Policy Brief. Washington D.C.: Population Reference Bureau.
- Scholl, E. & Conthran, D. 2011. *Integrating family planning and HIV services: Programs in Kenya and Ethiopia lead the way*. AIDSTAR-One Case Study Series. Arlington, VA: AIDSTAR-One. Available: [http://www.aidstar-one.com/sites/default/files/AIDSTAR-One case study fp hiv integration 0.pdf](http://www.aidstar-one.com/sites/default/files/AIDSTAR-One%20case%20study%20fp%20hiv%20integration%200.pdf) [April 16, 2015]
- Shelton J. 2001. *The provider perspective: human after all*. *International Family Planning Perspectives*. 27:152-155. Doi: 10.2307/2673838.

- Shenton, A.K. 2004. *Strategies for ensuring trustworthiness in qualitative research Projects*.
Education for Information. 22(2): 63-76.
- Speziale, H.J.S & Carpenter, D.R. 2007. *Qualitative research in nursing advancing the humanistic imperative*, 4th ed. Philadelphia: Williams & Wilkins.
- Stanley, D., Beament, T., Falconer, D., Haigh, M., Saunders, R., Stanley, K., Wall, P. 2016. *Would you recommend nursing as a career to men? Working Papers in Health Sciences 1:14*
Winter 2016 ISSN 2051-6266/20160082
- Stein, Z. 1996. *Family planning, sexually transmitted diseases and the prevention of AIDS – divided we fall?* American Journal of Public Health. 86:783-784.
- Steinfeld, L.R., Newmann, J.S., Onono, M., Cohen, R.C., Bukusi, A.E. & Grossman, D. 2013. *Overcoming barriers to family planning through integration: Perspectives of HIV-positive men in Nyanza Province, Kenya*. AIDS Research and Treatment. Article ID 861983, 8 pages. Doi.org/10.1155/2013/861983
- Stephenson, R., Bartel, D. & Rubards, M. 2012. *Constructs of power and equality and their association with contraceptive use among men and women in rural Ethiopia and Kenya*.
Public Health. Global 7(6):618-634.
- Sweeney, S., Obure, C.D., Maier, C.B., Greener, R., Dehne, K. & Vassall, A. 2012. *Costs and efficiency of integrating HIV/AIDS services with other health services: A systematic review of evidence and experience*. Sexually Transmitted Infections. 88(2):85-99.

The Acquire Project. 2006. *Acquire Evaluation and Research Studies: Tanzania Baseline Survey 2004-2005*. Technical Report. Tanzania: ACQUIRE PROJECT

Thonkrajai, E. 1994. *Feasibility of integrating STD services into STI/HIV/AIDS prevention into the MCH/FP programme in Thailand*. Khon Kaen: University of Khon Kaen Faculty of Nursing.

United Nations, 2015. Sustainable Development Goals. Available:

<http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

United Nations Population Fund, International Planned Parenthood Federation, Joint United Nations Programme on HIV/AIDS & University of California, San Francisco. 2009. *Sexual Reproductive Health and HIV Linkages*: UNFPA; 2009 New York

United Nations Population Fund - India. 2013. *Family Planning: A right and a choice*. Available:

<http://www.jsk.gov.in/images/unfpa.pdf> [April 1, 2016]

United States Government. 2012. *GHI principle paper on integration in the health sector*.

Available: <http://www.ghi.gov/documents/organization/195596.pdf> [August 7, 2012]

USAID Extending Service Delivery Project. 2011. *Integrating HIV services in local family*

planning: The expanded community-based distribution model and Zimbabwe

experience. Best Practice Brief. Available:

#1. http://www.esdproj.org/site/DocServer/Summary_Brief_Expanded_CBD_Integrated_Model-edits-Final.pdf?docID=1621 [April 1, 2017]

Van Benthem, B.H., de Vincenz, I., Delmas, M.C., Larsen, C., van den Hoek, A., & Prins, M. 2000.

Pregnancies before and after HIV diagnosis in a European cohort of HIV-infected women. European Study on the Natural History of HIV Infection in Women. *AIDS*. 14: 2171-2178.

Van Teijlingen, R. & Hundley, V. 2001. *The importance of pilot studies.* *Social Research Update*.

Guildford: Department of Sociology, University of Surrey.

Warren, C. & Phafoli, C. 2008. *Extending Prevention of Mother-to-Child Transmission through*

Postpartum Family Planning in Lesotho. Washington, DC: Population Council and Family Health Department, Ministry of Health and Social Welfare, Lesotho.

Whittermore, R., Chase, S.K. & Mandle, C.L. 2001. *Validity in qualitative research.* *Qualitative*

Health Research. 11(4): 522-537. Doi: 10.1177/104973201129119299

Wilcher, R., Hoke, T., Adamchak, S. & Cates Jr., W. 2013. *Integration of family planning into HIV*

services: A synthesis of recent evidence. *AIDS*. 27(Suppl. 1):S65-75.

Wilcher, R. & Martin, E. 2004. *Integrating family planning and voluntary counselling and testing*

services in Ghana: a rapid programmatic assessment. Available:

http://pdf.usaid.gov/pdf_docs/PNADJ971.pdf [January 11, 2012]

World Health Organization. 2007. *Guidance on provider initiated HIV testing and counseling in*

health facilities. Geneva: World Health Organization.

World Health Organization, United Nations Population Fund, International Planned Parenthood Federation, Joint United Nations Programme on HIV/AIDS, University of California San Francisco. 2008. *Sexual and Reproductive Health and HIV Linkages: Evidence Review and Recommendations*. Available:
http://data.unaids.org/pub/Agenda/2009/2009_linkages_evidence_review_en.pdf
[April 13, 2011].

World Health Organization. 2008. *Task shifting: Rational redistribution of tasks among health workforce teams. Global Recommendations and Guidelines*. Available:
<http://www.who.int/healthsystems/TTR-TaskShifting.pdf> [April 16, 2012].

World Health Organization. 2009. *Medical Eligibility Criteria for Contraceptive Use*. 4th ed.
Geneva: World Health Organization.

World Health Organization/HIV. 2009. *Strategic considerations for strengthening the linkages between family planning and HIV/ AIDS policies, programs, and services*. Available:
<http://www.iasociety.org/Web/WebContent/File/FPHIVstrategicConsiderations1.pdf>
[August 7, 2012].

World Health Organization. 2016. *Family planning/Contraception Fact Sheet*. Geneva: World Health Organization.

World Medical Association. 2013. *Declaration of Helsinki 2013. Ethical Principles for Medical Research Involving Human Subjects*. Available:
<http://www.wma.net/en/30publications/10policies/b3/> [2015, July 8].

Woolf, H. S., Grol, R., Hutchinson, A., Eccles, M. & Grimshaw, J. 1999. *Potential benefits, limitations, and harms of clinical guidelines*. Education debate. British Medical Journal. 1999 Feb 20;318 (7182):527-30.

Yin, R.K. 2009. *Case study research: Design and methods*. 4th ed. Thousand Oaks, CA: Sage

Yoder, P.S. & Amare, Y. 2008. *Integrated family planning and VCT services in Ethiopia: experiences of health care providers*. *Qualitative Research Studies*. 14:4-39

Appendix A: Information Sheet for Interviews

Nurses' practice in the integration of family planning and HIV prevention services in Ntcheu district, Malawi

Researcher: Lapani Chisi Ngala

I am Lapani Chisi Ngala a postgraduate student at the University of Cape Town, South Africa. I am conducting a study as a requirement for a Master's Degree in Nursing by Dissertation. I am inviting you to participate in this study. The purpose of the study is to explore and describe the nurses' practice in the integration of family planning and prevention of HIV services in Ntcheu district, Malawi.

I have received permission from the Department of Health Science and Rehabilitation proposal review committee, University of Cape Town Faculty of Health Sciences Human Research Ethics Committee, National Health Sciences Research Committee in Malawi, and the District Health Officer of Ntcheu district.

Benefits

There are no direct benefits to you as an individual; however the indirect benefits of the study include understanding own practice to improve practice in integration of family planning and HIV prevention services and that may also influence future plans for possible in-service trainings, refresher courses and mentorship programmes.

Risks

There are no foreseeable risks with this study. Should you want to withdraw from participation, you will be free to do so with no penalties. The researcher would appreciate if you would indicate the reason for your withdrawal for data analysis purposes.

Time: The interview will take about one hour.

Costs: There will be no cost that will be incurred by you.

Ethical considerations in the study: Your participation in the study is voluntary and everything you say will be treated with utmost confidentiality and anonymity and no information will be divulged. Your indication of interest to participate in the research is very important to me and at any time you wish to withdraw from the research, you are free to do so. Should you have questions or want clarification on anything you do not understand, please feel free to ask at any point in time while the research last.

An audio tape will be used to record our conversation and notes will be taken. All information collected will be kept safe in my computer by use of a personalized password to prevent access by any unauthorized people to it.

Your name will not appear anywhere throughout the research process, rather pseudonyms will be used to identify your responses and as soon as the research is over all identifying information will be destroyed. If at any point in time you want me to delete any information you provided, feel free to inform me.

Thank you for accepting to read this letter. If you are willing to participate in this study, kindly complete the consent form.

Should you require further information regarding the study, please do not hesitate to contact us using the following numbers:

Researcher: Lapani Chisi Ngala

Cell Number: (+265) 995 881935

Email address: lapaningala@gmail.com

Research Supervisor: Ass. Prof. Sinegugu Duma

Phone number: 021 406 6321/+27 82 449 2635

Email address: Sinegugu.Duma@uct.ac.za

Ethical Chairperson: Prof. Marc. Blockman

Email address: Marc.Blockman@uct.ac.za

Phone number: 021 406 6338

Participant's Agreement

I have read the information above; therefore I voluntarily consent to participate as a participant in this study.

Name: -----

Signature: -----

Date: -----

Appendix B: Research Informed Consent Form

Nurses' practice in the integration of family planning and HIV prevention services in Ntcheu district, Malawi.

Researcher: Lapani Chisi Ngala

I..... (Name of participant), have understood what the study is about, the benefits, risks, and my level of involvement and am willing to participate. The researcher has informed me that I can withdraw from the research at any time and that everything I say will be treated with utmost confidentiality and anonymity and no information will be divulged, it will strictly be used for research purposes only.

I also understand that the findings from the study has the potential to inform nurses' of their practice and knowledge gaps in the integration of family planning and HIV prevention services in Ntcheu district, Malawi which would assist us nurses' to understand our own practice in order to improve practice in integration of family planning and HIV prevention services. The researcher has also informed me that this study has potential to inform the district management team about the nurse's knowledge and practice gaps in integration of family planning and HIV prevention thereby influencing future plans for possible in-service trainings, refresher courses and mentorship programmes.

The researcher has assured me that the information shared with her will be used for research purposes only and will not be used against me. I have been told that I can ask any question during the research process.

The researcher informed me that the research interview will be done at a time and venue convenient to me and that it will not obstruct my normal duties.

I have been informed that if I have further questions or concerns about this research I can contact Prof Marc Blockman at: marc.blockman@uct.ac.za, and **021 406 6338** respectively.

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

Date..... Signature of Researcher.....

Lapani Chisi Ngala (Researcher)

Supervisor: Prof Sinegugu Duma.

Cell: (+265) 995 88 135

Phone: (+27) 21 406 6321

Email: lapaningala@gmail.com

Email: Sinegugu.Duma@uct.ac.za

Appendix C: Semi-structured Interview Guide

- 1.** Tell me what you know about integration of family planning and HIV prevention services policy/ guidelines?
- 2.** Can you tell me how integration of HIV prevention into family planning is being done in this clinic?
- 3.** Tell me what has been a motivation for you personally to integrate family planning and HIV prevention services.
- 4.** Can you tell me what has been a major hindrance or barrier to integration of family planning and HIV prevention?
- 5.** How do you perceive integration of family planning and HIV prevention?

Probing Questions

Tell me more, explain more, what else ... on participant's response will also ask for clarification where needed.

Telephone: + 265 01 235 200

Facsimile: + 265 01 235 459

All Communications should be addressed to:
THE DISTRICT HEALTH OFFICER



In reply please quote No. NDH/PF/15/09/7(3)
MINISTRY OF HEALTH
NTCHEU DISTRICT HOSPITAL
PRIVATE BAG 5,
NTCHEU,
MALAWI.

09/09/2015

Mrs Lapani Chisi Ngala
University of Cape Town
School of Health and Rehabilitation Science,
Division of Nursing & Midwifery,
Groote Schuur Hospital,
Observatory, 7925

Dear Mrs Lapani Chisi Ngala,

PERMISSION TO CONDUCT RESEARCH IN NTCHEU DISTRICT

I write to inform you that this office has granted you permission to conduct your study entitled "Nurses Practice in the Integration of Family Planning and Prevention of HIV in Ntcheu District" in the district as part of your studies for the Master of Science in Nursing. This study is important to this office because it will reveal critical practices that nurses perform or ought to be performed by nurses for successful integration of services in the provision of both Family planning and HIV services in the district and hence assist in the development of interventions for positive health outcomes for the population in the district.

You are expected to furnish this office with results of your study. Wishing you well.

Yours sincerely,


Patrick G.M.C .Phiri.

FOR: DISTRICT HEALTH OFFICER

Telephone: + 265 789 400
Facsimile: + 265 789 431
e-mail doccentre@malawi.net
**All Communications should be addressed to:
The Secretary for Health**



In reply please quote No. MED/4/36c
MINISTRY OF HEALTH
P.O. BOX 30377
LILONGWE 3
MALAWI

14th March 2016

Lapani Chisi Ngala
University of Cape Town

Dear Sir/Madam,

RE: Protocol # 16/3/1548: Nurses' practice in the integration of family planning and HIV prevention services in Ntcheu District, Malawi

Thank you for the above titled proposal that you submitted to the National Health Sciences Research Committee (NHSRC) for review. Please be advised that the NHSRC has **reviewed** and **approved** your application to conduct the above titled study.

- **APPROVAL NUMBER** : NHSRC # 16/3/1548
The above details should be used on all correspondence, consent forms and documents as appropriate.
- **APPROVAL DATE** : 14/3/2016
- **EXPIRATION DATE** : This approval expires on 14/03/2017
After this date, this project may only continue upon renewal. For purposes of renewal, a progress report on a standard form obtainable from the NHSRC secretariat should be submitted one month before the expiration date for continuing review.
- **SERIOUS ADVERSE EVENT REPORTING** : All serious problems having to do with subject safety must be reported to the National Health Sciences Research Committee within 10 working days using standard forms obtainable from the NHSRC Secretariat.
- **MODIFICATIONS**: Prior NHSRC approval using standard forms obtainable from the NHSRC Secretariat is required before implementing any changes in the Protocol (including changes in the consent documents). You may not use any other consent documents besides those approved by the NHSRC.
- **TERMINATION OF STUDY**: On termination of a study, a report has to be submitted to the NHSRC using standard forms obtainable from the NHSRC Secretariat.
- **QUESTIONS**: Please contact the NHSRC on Telephone No. (01) 724418, 0888344443 or by e-mail on mohdoccentre@gmail.com
- **Other**:
Please be reminded to send in copies of your final research results for our records as well as for the Health Research Database.

Kind regards from the NHSRC Secretariat.

.....
FOR CHAIRMAN, NATIONAL HEALTH SCIENCES RESEARCH COMMITTEE



PROMOTING THE ETHICAL CONDUCT OF RESEARCH
Executive Committee: *Dr. B. Chilima (Chairman), Dr B. Ngwira (Vice Chairperson)*
Registered with the USA Office for Human Research Protections (OHRP) as an International IRB
(IRB Number IRB00003905 FWA00005976)



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



Room E52-24 Old Main Building
Groote Schuur Hospital
Observatory 7925
Telephone [021] 406 6338 • Facsimile [021] 406 6411
Email: sumayah.riefdien@uct.ac.za
Website: www.health.uct.ac.za/fhs/research/humanethics/forms

22 January 2016

HREC REF: 873/2015

A/Prof S Duma
Division of Nursing & Midwifery
F45
OMB

Dear A/Prof Duma

PROJECT TITLE: NURSES' PRACTICE IN THE INTEGRATION OF FAMILY PLANNING AND HIV PREVENTION IN MALAWI, NTCHEU DSTRIC-(Master's candidate-L Ngala)

Thank you for your response letter dated 17 January 2016, addressing the issues raised by the Human Research Ethics Committee (HREC).

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 January 2017.

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/fhs/research/humanethics/forms)

Please quote the HREC REF in all your correspondence.

We acknowledge that the following student, Lapani Ngala will also be involved in this study.

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

Yours sincerely

PROFESSOR M BLOCKMAN
CHAIRPERSON, FHS HUMAN RESEARCH ETHICS COMMITTEE

Federal Wide Assurance Number: FWA00001637.

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), South African Good Clinical Practice Guidelines (DoH

HREC 873/2015

Telephone: + 265 789 400
Facsimile: + 265 789 431

All Communications should be addressed to:
The Secretary for Health



In reply please quote No. MED/4/36c
MINISTRY OF HEALTH AND POPULATION

P.O. BOX 30377
LILONGWE 3
MALAWI

1st March 2016

Lapani Chisi Ngala
University of Cape Town

Dear Sir/Madam,

RE: Protocol # 16/2/1548: Nurses practice in integration of family planning and HIV prevention services in Ntcheu district, Malawi

Thank you for the above titled proposal that you submitted to the National Health Sciences Research Committee for review.

The committee reviewed the proposal and agreed to approve through **expedited process** once the researcher addresses the following concerns;

- Section 1.10 (Page 10) : Study Setting should be moved to Methods section as one of the subheadings
- Participant Information Sheet, Informed Consent form and data collection tools are referenced to.

Kind regards from the Secretariat.

.....
**FOR: CHAIRMAN, NATIONAL HEALTH SCIENCES
RESEARCH COMMITTEE**



