# NURSES' INVOLVEMENT IN HEALTH CARE RESEARCH AND POLICY DEVELOPMENT IN THE CONTEXT OF MOTHER-TO-CHILD HIV/AIDS TRANSMISSION IN NIGERIA

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## ABSTRACT

The reduction of disease burden in the context of mother-to-child HIV transmission in Nigeria invokes a multi-sectoral and multi-disciplinary approach, which incorporates using research evidence to promote relevant policies. Nurses as health workers play a central role in health sector responses to ameliorate disease burdens such as those affiliated with HIV. Situated within critical social theory and using theoretical perspectives on power, this qualitative study examines the extent of nurses' contributions to research production and policy development in mother-to-child HIV transmission in the Cross River State, Nigeria. The study was guided by four specific objectives: 1) to assess nurses' knowledge of current global strategies; 2) to describe nurses' contributions to research and policy development; 3) to identify issues that encourage or impede the involvement of nurses in research and policy development and ;4) to identify promising models to actively engage nurses in research and policy development. A case study approach and participatory action research methodologies facilitated a comprehensive examination of the extent of Nigerian nurses' research and policy involvement and provided collective action for change. Interviews, document reviews, and focus group discussions were methods utilized for data collection and validation of collected data. Four major themes emerged: intimate knowledge of healthcare, marginal involvement in knowledge creation, limited involvement in mother-to-child transmission (MCTC) policy decision making, and going with the flow. The study findings revealed that the nurses had good knowledge of local/global HIV trends, MTCT ameliorating strategies, barriers to MTCT uptake, processes of mobilizing local strategies, and an in-depth understanding of the integral role of implementing partners and the nursing workforce in ameliorating the impact of HIV on mother and child. However, this intimate knowledge did not translate into knowledge creation through independent research productivity in this context. The study further revealed that nurses were mostly involved in data collection and validation of collected data, which was not leading to publications. Barriers to knowledge creation included individual or personal constraints, as well as institutional and systemic barriers. Solving this problem requires funding of research studies, building research capacity, mentoring, earmarking research grants for nurses, increasing budgetary allocations to research, creating research awareness, creating a stimulating research environment with computers and internet access, using research as a criterion for promotion, and providing incentives. The study also revealed the insignificant participation of nurses in policy decision making, with involvement limited to implementation of PMTCT policy. Barriers to nurses' involvement in decision-making emanated from individual and health care system constraints, and nurses' contributions to decision making can only be improved by educational upgrading, integrating policy courses into nursing curricula, mentoring, group advocacy, involvement in politics, and organizational restructuring. The study showed that nurses were generally complacent about their involvement in knowledge creation and policy development. They tended to move with the flow of events and were afraid to question the status quo. A tree animation nursing (TAN) model provided a promising model for change with four main components:1) university education, 2) strong nursing leadership, 3) the identification of barriers, 4) and envisioned solutions, all of which are necessary to enable nurses to actively engage in research productivity and policy formulation. University education is recommended as a prerequisite for all nurses, and policies that foster a culture of nursing research productivity and policy development should be promoted.

## DEDICATION

This project is dedicated to my husband, Prof. Francis Emile Asuquo and my children, Caleb, Enoch, Queen-Ann, Peace, Divine and Tarry-not, and to the Lord Jesus Christ for His Grace throughout the period of my study.

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## GLOSSARY OF TERMS

**Health Policy:** The decisions, plans, and actions that are undertaken to achieve specific health care goals. In this study, health policies are comprised of decisions pertaining to the reduction and prevention of mother-to-child transmission of HIV in Nigeria.

**Research:** The systematic investigation into measures to prevent the transmission of the HIV virus from an HIV-positive mother to her child during pregnancy, labour, delivery, or breastfeeding in order to establish facts and reach new conclusions.

**HIV/AIDS:** Human immunodeficiency virus (HIV) is a lentivirus (a member of the retrovirus family) that causes acquired immunodeficiency syndrome (AIDS). There are two variants of the HIV virus, HIV-1 and HIV-2, both of which ultimately cause AIDS.

**Mother-to-child transmission (MTCT) of HIV:** Refers to the transmission of the HIV virus from a HIV-positive mother to her child during pregnancy, labour, delivery, or breastfeeding.

**Nursing Leaders:** Those licensed by the Nursing and Midwifery Council of Nigeria as nurses who are practicing in formal leadership roles (such as senior nursing officers and above) in hospitals, primary health centres, HIV coordinating agencies, the university, the Ministry of Health, and nursing associations to achieve positive health care system outcomes in Nigeria.

## LIST OF ACRONYMS

| | | |
|---|---|---|
| CRS | - | Cross River State |
| CST | - | Critical Social Theory |
| EMTCT | - | Elimination of mother to child transmission |
| FGON | - | Federal Government of Nigeria |
| FHI | - | Family Health International |
| HIV/AIDS | - | Human Immunodeficiency Virus /Acquired Immune Deficiency Syndrome |
| IOM | - | Institute of Medicine, United States of America |
| ICN | - | International Council of Nurses |
| LACA | - | Local Agency in Control of AIDS |
| MTCT | - | Mother to Child Transmission |
| NACA | - | National Agency in Control of AIDS |
| NANNM | - | National Association of Nigerian Nurses and Midwives |
| PMTCT | - | Prevention of Mother to Child Transmission |
| PAR | - | Participatory Action Research |
| SACA | - | State Agency in Control of AIDS |
| WHO | - | World Health Organization |
| UNAIDS | - | United Nations Program on HIV and AIDS |
| UNICEF | - | United Nations International Children Emergency Fund |
| UNGASS | - | United Nations General Assembly |
| UCTH | - | University of Calabar Teaching Hospital |

## LIST OF TABLES

Table 1: Alignment of the four prongs with PMTCT national strategies…..…… 44

Table 2: Frequency distribution of demographic variables …….134

Table 3: Within-Unit analysis and supporting quotes ……..... .142

Table 4: The major and sub-themes in the embedded units …….195

## LIST OF FIGURES

Figure 1: An integrated theoretical framework of critical social and power theories. 90

Figure 2: A Single Case; Cross River State in Nigeria with embedded units…… 104

Figure 3: Map of the 18 LGAs of the Cross River State of Nigeria ……..... 107

Figure 4: Pie chart of educational qualifications of participants ……... 134

Figure 5: Bar chart showing years of working experience of participants ……... 135

Figure 6: The Tree Animation Nursing (TAN) Model ……..... 267

## TABLE OF CONTENTS

Abstract ..... ii
Dedication..... iii
Acknowledgements ..... iv
Glossary of Terms ..... vi
List of Acronyms ..... vii
List of Tables ..... viii
List of Figures ..... ix
Table of Contents ..... x

**Chapter 1: Introduction** ..... 1
1.1 Background ..... 1
1.2 Research Purpose ..... 11
1.3 Research Objectives ..... 11
1.4 Significance of Study ..... 12
1.5 Locating the Researcher ..... 12

**Chapter 2: Literature Review** ..... 15
2.1 MTCT of HIV: Global Prevalence ..... 15
2.2 MTCT of HIV: Global Elimination Strategy ..... 18
2.3 UNAIDS Principles to Address HIV/AIDS ..... 25
2.4 HIV Prevalence in Nigeria ..... 27
2.5 Policies on HIV ..... 29
2.6 Nigerian Policy on HIV/AIDS ..... 30
2.6.1 NACA: One Coordinating Agency ..... 30
2.6.2 The National Strategic Framework..... 31
2.6.3 Monitoring and Evaluation Systems ..... 33
2.7 Nigerian Policy Statement on PMTCT ..... 33
2.8 Current Strategies to Address MTCT in Nigeria ..... 41
2.9 Nurses' Role in PMTCT ..... 47

2.10 Nursing Leadership in the Health Care System ..... 51
2.11 Involvement of Nurses in Research ..... 59
2.12 Involvement of Nurses in Policy Development ..... 64
2.13 Summary ..... 69

**Chapter 3: Theoretical Perspectives** ..... 70
3.1 Adopted Theoretical Perspectives ..... 70
3.2 Critical Social Theory ..... 71
3.2.1 Philosophical Assumptions ..... 71
3.2.2 Jurgen Habermas' Critical Social Theory ..... 74
3.3 Theories of Power ..... 77
3.3.1 Weber's Theory of Power ..... 77
3.3.2 Gaventa's Theory of Power ..... 82
3.4 Critical Social Theory, Power, and Nursing Work ..... 85
3.5 An Integrated Theoretical Framework ..... 87
3.6 Summary ..... 90

**Chapter 4: Methodology** ..... 91
4.1 Research Design ..... 91
4.2 Participatory Action Research (PAR) ..... 92
4.2.1 Advantages and Disadvantages of Participatory Action Research ..... 94
4.2.2 Relevance of PAR in Nursing ..... 96
4.2.3 Advisory Committee ..... 100
4.3 A Case Study Research Approach ..... 101
4.4 Study Setting ..... 106
4.5 Boundary of Study and Inclusion Criteria ..... 107
4.6 Data Collection Methods ..... 108
4.6.1 Interviews ..... 109
4.6.2 Document Review ..... 111
4.6.3 Focus Group Discussion ..... 113
4.6.4 Sampling and Participant Recruitment ..... 115

4.6.5 Data Analysis ..... 118
4.6.6 Thematic Analysis ..... 120
4.7 The Case: Cross River State ..... 123
4.7.1 Embedded Unit One: Cross River Health Establishments ..... 123
4.7.2 Embedded Unit Two: Nursing Associations ..... 125
4.7.3 Embedded Unit Three: HIV Support Organizations ..... 127
4.7.4 Embedded Unit Four: Health Care Institutions ..... 129
4.8 Demographic Characteristics of Participants ..... 133
4.9 Ensuring Rigor in a Qualitative Study ..... 135
4.9.1 Credibility ..... 136
4.9.2 Transferability ..... 137
4.9.3 Dependability ..... 138
4.9.4 Confirmability ..... 139
4.10 Ethical Considerations ..... 139

**Chapter 5: Findings Part 1: Within-Unit Analysis** ..... 141
5.1 Embedded Unit 1: Cross River Health Establishments ..... 147
5.1.1 Theme 1: Intimate Knowledge of Health Care ..... 148
5.1.2 Theme 2: Marginal Involvement of Nurses in Knowledge Creation ..... 153
5.1.3 Theme 3: Limited Nurses' Involvement in MTCT Policy Decision Making ..... 155
5.1.4 Theme 4: Going with the Flow ..... 160
5.2 Embedded Unit Two: Nursing Associations ..... 162
5.2.1 Theme 1: Intimate Knowledge of Health Care ..... 162
5.2.2 Theme 2: Marginal Involvement of Nurses in Knowledge Creation ..... 163
5.2.3 Theme 3: Limited Nurses' Involvement in MTCT Policy Decision Making ..... 165
5.3 Embedded Unit 3: HIV Support Organizations ..... 167
5.3.1 Theme 1: Intimate Knowledge of Health Care ..... 167
5.3.2 Theme 2: Marginal Involvement of Nurses in Knowledge Creation ..... 171
5.3.3 Theme 3: Limited Nurses' Involvement in MTCT Policy Decision Making ..... 172
5.4 Embedded Unit Four: Health Care Institutions ..... 174
5.4.1 Theme 1: Intimate Knowledge of Health Care ..... 175

5.4.2 Theme 2: Marginal Involvement of Nurses in Knowledge Creation.....180
5.4.3 Theme 3: Limited Involvement of Nurses in MTCT Policy Decision Making.....187
5.4.4 Theme 4: Going with the Flow.....190
5.5 Summary.....192

**Chapter 6: Findings Part 2: Across-Unit Analysis**.....194
6.1 Across-Unit Analysis.....196
6.1.1 Theme 1: Intimate Knowledge of Health Care.....196
6.1.2 Theme 2: Marginal Involvement of Nurses in Knowledge Creation.....207
6.1.3 Theme 3: Limited Nurses' Involvement in MTCT Policy Decision Making.....213
6.1.4 Theme 4: Going with the Flow.....218
6.2 Summary.....219

**Chapter 7: Discussion and Implications**.....221
7.1 Overview of Study Findings.....221
7.2 Situating Findings within Existing Literature.....223
7.2.1 Awareness of PMTCT Strategies.....223
7.2.2 Nurses' involvement in knowledge creation.....236
7.2.3 Nurses and PMTCT Policy Fora.....246
7.2.4 Nurses Diffidence.....263
7.3 The Promising Model.....266
7.3.1 Components of the Promising Model.....266
7.4 The action component of PAR in changing participants into researchers.....276
7.4 Implications of the Study.....282
7.5 Limitations of the Study.....285
7.6 Conclusion.....286
**References**.....288
**Appendices**.....356
Appendix A. Demographic Questionnaire.....356
Appendix B. Interview Guide.....357
Appendix C. Information Letter.....359

Appendix D. Interview Consent Form ..... 363
Appendix E. Focus Group Consent Form ..... 365
Appendix F. Focus Group Guide ..... 367
Appendix G. Focus Group Information Letter ..... 368
Appendix H. University of Ottawa Ethics Approval ..... 372
Appendix I. UCTH Ethics Approval ..... 373

# CHAPTER 1: INTRODUCTION

## 1.1 Background

Africa disproportionately bears the burden of the human immunodeficiency virus/ acquired immunodeficiency syndrome (HIV/AIDS) pandemic, even though only 11% of the world's population lives in Africa. Presently, it is estimated that 69% of those living with HIV/AIDS are in Africa (AVERT, 2014; World Health Organization (WHO), 2009; United Nations Program on HIV/AIDS (UNAIDS), 2012). In Nigeria, about 3.4 million people are living with HIV and AIDS (AVERT, 2014) and approximately 217,000 people die from AIDS annually (Leo, 2013). Until 2007, UNAIDS reports, more men than women contracted the disease. However, UNAIDS's 2008 report, which showed a global decrease in the number of people living with HIV, also highlighted the increasing prevalence among women – the changing face of the epidemic. The report indicated that among 33 million people with HIV in 2007, 31 million were adults, and 15.5 million of those adults were women, thus demonstrating an equal man to woman ratio (UNAIDS, 2008). From 2007 onward then, men and women equally bore the burden of this devastating disease (Bashorun et al.,2014; WHO/UNICEF/UNFPA /World Bank, 2010).

The United Nations International Children's Emergency Fund (UNICEF), 2015) also reported that 16.7 million adults living with AIDS were women and that this constituted half of the total of 34.0 million people affected globally. In Nigeria, out of the 3.4 million living with HIV, 1.7 million are women, which has in turn increased the mother-to-child transmission (MTCT) of HIV now to 56,681 HIV-positive births annually (AVERT, 2014; Federal Republic of Nigeria, 2014; Nkwo, 2012). According to Anoje et al. (2012), in 2009 more than 90% of HIV infections among young children were through MTCT.

With the increased prevalence of HIV and the ensuing mortality among women and children, the United Nations member states in 2001 made a global commitment to the prevention of mother-to-child transmission of HIV (PMTCT), pledging that it wanted by 2015

> to reduce the proportion of infants infected with HIV by 20 percent, and 50 percent by 2010, and to ensure that 80 percent of pregnant women accessing antenatal care [would] have information, counselling and other HIV prevention services available to them (United Nations, 2001, p.1).

With these targets, progress was made in scaling up PMTCT programs, which led to a drop of 43% between 2003 and 2011 in new child HIV infections globally (UNAIDS, 2012; AVERT, 2012). Elimination of mother-to-child transmission of HIV (EMTCT) had thus been prioritized on a global health agenda as a competent tool to fight HIV and break the vicious cycle of HIV transmission to newborns. Commitment was accelerated in 2011 when the United Nations General Assembly and UNAIDS launched the Global Plan, setting a new goal of eliminating all new infections among children by 2015 and keeping their mothers alive (AVERT, 2012; UNAIDS, 2011; Reeves, 2011).This Global Plan integrated the WHO's and the United Nations' (UN) four-pronged strategic framework that included the prevention of primary infections of HIV, unintended pregnancies among HIV positive women, MTCT, and the provision of care for HIV-positive mothers and their infants and family (WHO, 2010 a; USAIDS, 2010).This plan aimed to reduce paediatric infection by 90% and to bring the MTCT rate to a global scale of below 5% by 2015. The plan mostly targeted the 22 countries in sub-Saharan Africa that carry 69% percent of the global HIV burden (UNAIDS, 2012).

WHO (2010a) developed seven principal strategic directions to enhance implementation: 1) committing to strong leadership to increase PMTCT services; 2) providing support for countries to adopt, adapt, and implement new recommendations; 3) integrating PMTCT programs into existing maternal and child care services; 4) ensuring reliable and equitable access

to all; 5) strengthening the health systems through building human resource capacity, information systems, program management, and health financing, 6) monitoring and evaluating national program performance and health outcomes, and 7) collaborating between global and national stakeholders (WHO, 2010a). These principles are used by countries to enhance effective strategies in order to attain the global target.

Although these principles have been used in sub-Saharan countries, many countries are yet to meet the target. A number of strategies in Nigeria such as the Midwifery scheme, the Subsidy Re-Investment Empowerment Program, and other Maternal/Child Health programs are based on these principles (Federal Republic of Nigeria, 2013). However, the country is still far from meeting the global target for maternal-newborn and child health outcomes. Sturke et al. (2014) asserted that interventions to eliminate MTCT in HIV can only be accomplished through recognizing key implementation barriers and adapting scientifically proven interventions to the local environment.

With the global plan implemented, the number of children newly infected with HIV in sub-Saharan Africa decreased by 24% between 2009 and 2011 (UNAIDS, 2012) and the UNAIDS progress report on the elimination of mother-to-child transmission coverage revealed progress of 59% (53–66%) in 2011among the 22 sub-Saharan countries (UNAIDS, 2012). Six countries, namely Botswana, Ghana, Namibia, South Africa, Swaziland and Zambia, had achieved more than 75% coverage in PMTCT while Nigeria with six other African countries, including Angola, Chad, Congo, Eritrea, Ethiopia and South Sudan had reported PMTCT coverage of less than 25% (UNAIDS, 2012).

Major barriers to achieving the global goals include: attitudes of health care providers who stigmatize or discriminate against people living with HIV/AIDS, misconceptions about the

programs' values, such as the perception that child health is valued more than that of the mother (ICW/GNP, 2011), forced abortions or sterilizations due to a lack of respect for the reproductive rights and fertility desires of people living with HIV/AIDS, lack of quality counselling services coupled with failure to offer counselling services in a non-judgmental and non-discriminatory manner, and lack of information on family planning options and failure to respect clients' decisions regarding disclosure (IATT, 2012). WHO (2012b) asserted that the health sector is central to the response to HIV, with nurses being seen as the major implementers of health policies. In the same vein, Ogbolu et al. (2013) maintained that nurses play an integral role in healthcare and are vital to attaining the PMTCT global goals. Due to their close contact with individuals and community members from the antenatal period to delivery through adulthood to old age, they provide continual support with treatment, counselling, and family planning.

According to Sturke et al. (2014, p.163) "implementation science holds promise as a scientific strategy to address current barriers to effective implementation of evidence-based interventions in PMTCT programs." The implementation science approach aims to explore and address constraints that hinder effective implementation of scientifically proven interventions to achieve the desired effect as well as provides new methods to identify and overcome barriers to the implementation of PMTCT interventions (Sturke et al.,2014). The authors further argue that effective application of implementation science in preventing MTCT in HIV transmission will require deliberate efforts to expedite research collaboration and communication among researchers, programs implementers, and policymakers. For example, in South Africa, Barron, et al. (2013); Coovadia (2009), Department of Health (S.A), 2008), Frizelle and Solomon (2009), Phaswana-Mafuya, Peltzer and Davids (2009) and Pathfinder International (2013) reported that high PMTCT coverage stems from using research evidence which facilitates the promulgation of

policies, government commitment to PMTCT strategies, integration of PMTCT programs into existing primary health care services and task shifting. Task shifting infers a rational redistribution of tasks among health workforce teams (WHO, 2007b). In South Africa, nurses and midwives at primary health care facilities were trained to provide antiretroviral drugs for eligible pregnant women, which led to significant changes in PMTCT coverage in that country (Barron et al.,2013; PEPFAR, 2012; Peltzer et al.,2011). Apart from initiating and managing antiretroviral drugs, nurses and other health care workers were also trained to monitor and evaluate the PMTCT activities (Barron et al.,2013). Similarly, Israel et al. (2003) noted that it is the responsibility of health stakeholders to ensure that program monitoring and evaluation occurs continually and they should be involved in deciding the kind and scope of monitoring and evaluation to be carried out for such results to be useful. Evaluation can take many forms, including evaluating the research, the process, the outcome/impact, and the cost effectiveness.

The Department of Health (2013) in South Africa attributed the high success in PMTCT coverage to the integral role nurses played in implementing prevention strategies, but Sturke et al. (2014) asserted that multi-disciplinary collaborative research with different stakeholders (researchers, program implementers, and policy makers) is the best solution to overcome implementation constraints. Findings from Sturke et al. (2014) stipulated the need for nurses and midwives, who are major implementers in PMTCT policies, to be actively involved in research and policy formulation. Therefore, constraints to EMTCT coverage could be overcome if the nursing and midwifery workforce were actively involved in health care research and policy development. Richter et al. (2012, p. 53), in support of this view, suggested that nurses should be involved in "innovative policy responses," which is what is needed to challenge the scourge of HIV.

Nigeria, as one of the 22 countries seriously affected by the AIDS pandemic, is answerable for 30% of the global MTCT of HIV and adopted the global plan of eliminating mother to child transmission (2010-2015) in compliance with WHO (2010a) Guidelines Options A and B regimens for prophylaxis (Federal Government of Nigeria, 2012; UNAIDS, 2013). In 2001, the PMTCT program was initiated in 6 tertiary health facilities in Nigeria, and it was gradually increased to involve 5,622 sites across the 36 states of the country and its capital, Abuja. Although the uptake of PMTCT interventions at these sites increased from 11% in 2010 to 25.9% in 2012, and 30.1% in 2014, the country is still behind the global target, which aimed at 80% coverage by 2010 (National Agency for the Control of AIDS, (NACA), 2014; John, 2014). According to NACA (2012), Nigeria focused mostly on integrating PMTCT strategies with reproductive health services, counselling programs on infant feeding for HIV-positive mothers, and access to early infant diagnosis for children of HIV-positive mothers.

In Nigeria, HIV is still prevalent in 4.1% of the population, a rate that is the second highest HIV burden in the world after South Africa (AVERT, 2014; Federal Government of Nigeria, 2010; UNAIDS, 2010). According to a report from the Federal Government of Nigeria in 2008, the country recorded 56,681HIV-positive births, which constituted 15.3% of the 370,000 new paediatric HIV infections globally (UNAIDS, 2010), making it the country with the largest number of untreated childhood HIV infections in 2009. PMTCT coverage in Nigeria remained at 25.9% in 2012 (John, 2014) far below the expected target of 90% by 2015.

Major barriers to PMTCT coverage in Nigeria include: limited access to PMTCT services, low rates of antenatal care and institutional delivery, low rates of HIV-positive mothers receiving antiretroviral prophylaxis, little testing of infants for HIV within two months of birth, low rates of HIV-positive children receiving antiretroviral antibiotics, and lack of data on some

key PMTCT indicators, hindering progress towards attaining global targets of eliminating new HIV infections in children (Federal Government of Nigeria, 2010). Reeves (2011) also asserted that political instability and an extremely low functioning health care system are responsible for poor coverage in Nigeria.

To strengthen the Nigerian health care system, WHO (2007a) identified six major components, two of which identified the need for an optimally performing workforce and a functional information system to promote research activities, dissemination of research, and the use of reliable evidence in decision making to improve the health system's performance, health outcomes, and quality of life of the populace. The Federal Government of Nigeria (2012) asserted that measures to overcome these challenges include government commitment and interventions directed towards strengthening and improving the quality of maternal, newborn, and child health services (such as antenatal care coverage and delivery by skilled birth attendants), and expanding the provision of antiretroviral prophylaxis to newborns and children living with HIV, along with routine monitoring of the programmes. But in line with UNAIDS (2009) and WHO (2007a), government commitment should be directed towards using research evidence to establish strategic policies, programs, and activities in order to achieve health system objectives such as the elimination of mother-to-child transmission of HIV by 2015. Leeder (2013, p.1) warned against burying the benefits of research to improve the health system and stated: “research must be routinely performed as a part of health-care delivery and there must be greater linkage between health-care providers and research organizations.”

Havlir and Beyrer (2012) argued that an AIDS-free generation could be achieved by increased access to preventive measures and treatment services directed towards the affected population (mothers and children). Court (2006) suggested that all health care system actors,

namely service users, health service providers, and state actors (policymakers and government officials) must have appropriate representation when making major decisions (UNAIDS, 2009). The authors further asserted that policies are best implemented by those who form them, which make nurses' presence in the health care policy arena mandatory. Preventive and treatment measures could be achieved by optimizing the use of the nursing and midwifery workforce in planning health services. Contributions from nurses and midwives in developing policy are possible by virtue of their education, experience, and number (ICN, 2014; WHO, 2010b). The American Institute of Medicine (2010) envisioned a transformative reformation of the health sector with nurses leading the change. This transformation would involve their leadership in research and decision making, and would provide avenues to identify and overcome major implementation barriers, thereby increasing service uptake and coverage in health programs such as PMTCT. Davis (2012) asserted that health care reform is not possible unless nurses are involved in major decision making and such representation should reflect their numbers to enhance their power in doing so.

With about 3,229,757 people living with HIV in Nigeria and an estimated 220,394 new HIV infections in 2013, there is no room for complacency (National Agency for the Control of AIDS, 2014). In 2012, the Nigerian President's emergency plan for AIDS Relief advocated for task shifting as a solution to overcome health systems barriers and resource limitations in HIV high prevalence regions (President's emergency Plan for AIDS Relief, 2012). Hence, in Nigeria as in other nations, task shifting has been incorporated, and scaled up to include nurses in the provision of a number of HIV/AIDS-related services. These services consist of the administration of antiretroviral drugs, patient education on the prevention of unintended pregnancy among those afflicted by HIV/AIDS, HIV screening services in antenatal clinics, and

the provision of care to HIV-positive mothers and their infants **(**Mobisson and Neale, 2006; Ndikom and Onibokun, 2007). Though task shifting had enhanced coverage in South Africa and Rwanda with a reduction in the rate of new infections in children (EI-Sadr et al.,2012; WHO, 2013b; Shumbusho et al.,2009), Nigeria, along with six other countries, made little improvement.

This raises the question that if nurses are used to implement policies in PMTCT to achieve a certain degree of coverage, why are they not fully utilized in policy decision making so that constraints during implementation can be overcome? WHO (2015b) asserted that front line health care professionals (including nurses), in alliance with their national and international affiliates, have a significant role to play in the advancement of maternal, newborn, and child health. Their unique position provides opportunity for preparing the environment for change as well as for influencing health policy (ICN, 2014). Similarly, WHO (2012a, p.3) called for a change in the mindset of health care system stakeholders (from national policy-makers to front line providers of health services) towards research and advocated for the various disciplines to generate research knowledge in order to inform decision making as well as to strengthen the health systems. WHO (2012a, p.3) contended that research/policy should be "demand-driven and responsive to the needs of 21st century health systems." But nurses' contributions in research, especially in sub-Saharan countries like Nigeria with a high disease burden, remains minimal (Asuquo et al.,2013; Edward et al.,2007; Ofi et al.,2008) and their engagement in policy formulation is even lower (Abood, 2007; Asuquo et al.,2013; Ditlopo et al.,2014; Edward et al.,2007). By virtue of nurses' numbers, knowledge, experience, and the central role that they play in healthcare, they have a duty to use research evidence to inform health policy and practice. This will enhance the quality of healthcare as a whole as well as coverage for the PMTCT and the attainment of the global target of eradication, in particular.

Nurses remain the missing link in attaining health system goals until they are able to reach beyond their comfort zones (i.e. patients' bedsides) to take on a greater leadership role in research and policy (Abood, 2007; Etowa, 2014). With the increase in infant and child mortality related to preventable causes, WHO (2010b) acknowledged the importance of the nursing and midwifery workforce as an essential tool in achieving the Millennium Development Goals (MDG):

> Preliminary data on the health-related targets show progress in some areas to be well short of the annual rates needed to meet the deadline for MDG (4, 5, 6). Countless lives could be saved, and many life-threatening conditions prevented or managed, through inexpensive, low-technology interventions by skilled health-care providers. Yet by far the largest group of those providers, the nursing and midwifery workforce, remains understaffed, undertrained and poorly deployed (WHO, 2010b, p.2)

In addition, the need for research has been acknowledged by a number of studies, which have reported that attainment of MDG will not be possible without new research addressing health system constraints to the delivery of effective interventions (Raisler and Cohn, 2005; Nkwo, 2012; WHO, 2005).

As depicted in the background section of this research, African nurses are minimally involved in research productivity and policy development (Ditlopo et al.,2014; Munjanja, Kibuka and Dovlo, 2005; Richter et al.,2012). Yet, a number of international organizations like the WHO, the International Council of Nurses (ICN), the American Institute of Medicine (IOM), and the Global Forum on Health Research continue to suggest that a greater nursing involvement in policy decision making is a necessary strategy for the attainment of MDGs 4, 5 and 6 (Edward et al.,2007; IOM, 2010; ICN, 2014; PAHO, 2004; Richter et al.,2012; WHO, 2007b).

To meet the challenges of the HIV/AIDS pandemic, and to reduce MTCT and infant mortality associated with HIV, every potential opportunity should be explored and developed. Clearly, a weak link in the current Nigerian healthcare system are nurses and midwives, who are

absent from the arenas of research and policy development on MTCT. Personnel development and trans-national partnerships have been identified as effective strategies for building nursing research capacity, especially if nurses take the lead in such collaborative research and decision-making initiatives (Healy 2004; IOM, 2010). This study will make a significant contribution to this gap.

### 1.2 Research Purpose

The purpose of this research study is to examined nurses' active involvement in research production and policy development within the context of global strategies to reduce MTCT of HIV in Cross River State, Nigeria. While research purpose may be framed as a research question, in keeping with the tradition of qualitative research use in this study, this purpose statement is used in place of the overall research question of this study. In this research, active involvement refers to the presence of nurses in leadership roles (leading PMTCT committees and programs) and their involvement in key decision-making arenas as well as their contribution at various levels of the health care system.

### 1.3 Research Objectives

With respect to global strategies to address early mother-to-child transmission of HIV/AIDS, this study will:

1. Assess nurses' knowledge of current global strategies.
2. Describe nurses' contributions to research and policies.
3. Identify issues that encourage or impede nurses' research and policy development involvement.
4. Identify promising models to actively engage nurses in research and policy development.

## 1.4 Significance of Study

Information on nurses' involvement in research and policy to reduce MTCT of HIV is presently scarce in Nigeria. The IOM (2010) identified the need for nurses, as the largest members of the health care workforce, to take the lead in bringing about the much needed change in the system through productive research, but this kind of research activity is presently lacking in Nigeria (Etowa, 2014). It is rare to find Nigerian nurses who have received funding for their program of research. For example, in the author's current institution of employment, where 60% of its 25 nursing faculty members have PhDs and the department is currently in the process of developing a graduate program, no faculty member has had a strongly funded research program in the past ten years. This study has examined and generated relevant information on the extent of nurses' involvement in research and policy in the context of MTCT in Cross River State, Nigeria.

## 1.5 Locating the Researcher

Having worked as a clinical nurse in private and government health facilities between 1990 and 2003, I have witnessed the high prevalence of HIV infection in the study setting, Cross River State of Nigeria. My MNSc thesis examined the burden of HIV/AIDS on both formal and informal caregivers, revealing that the workload was enormous for both parties, and as the burden increased, the quality of care reduced (Asuquo et al.,2013). Although both types of caregivers experienced the impact of caregiving, none of them had the ability to alleviate the associated burden. I learned more about the health care system during this study and discovered with dismay many complex factors that influenced service delivery. Even the nurse leaders held in high esteem and assumed to possess immense influence to move the system forward during

my own education as a nursing student were subservient to higher authorities, and nurses were underrated in comparison to other health care professionals.

During the research for my MNSc thesis and in my clinical practice, I witnessed many maternal deaths, stillbirths, neonatal deaths and later infant deaths secondary to HIV infection. This was often due to late arrival at the hospital and with obstetric complications, in spite of government sensitization to the importance of early antenatal care. Also noted were the numbers of HIV-positive mothers who were not screened until they went into labour and who could have benefited from antiretroviral drugs to prevent MTCT. These life experiences have motivated me to investigate the potential roles and contributions of Nigerian nurses to address health care challenges such as the high prevalence of MTCT of HIV.

The limited number of nurses with PhDs may be one reason, among others, why nurses have limited involvement in research at the institutional level and in policy development despite their large numbers, clinical expertise, and consistent presence in frontline patient care in Nigeria. Acquisition of a higher degree (i.e. the PhD) by nurses (including myself) would enhance nurses' ability to effectively contribute to productive research and policy development. It is known that nurses' higher education creates opportunities for enlightenment and provides avenues for emancipation from subservient positions to where nurses can effectively lead innovations in the health care system and use research evidence to improve quality of care.

In summary, HIV has increased demands on an already weak Nigerian health care system, making urgent the need to explore ways of addressing this demand. I believe that one way of addressing this increased demand is to examine and optimize nurses' contribution to quality HIV/AIDS health care services. This study focuses specifically on the PMTCT programs to mitigate the impact of HIV. The knowledge generated in this study is meant to inform the

development of these programs and to actively engage nurses in the redesign of the health care system, including more involvement in funded research and policy development. Findings of this study may also address the gap in the nursing literature on the design of programs and strategies to prevent MTCT of HIV in order to protect future generations.

# CHAPTER 2: LITERATURE REVIEW

This chapter presents the extensive literature reviewed to explain the various dimensions of HIV, mother-to-child transmission (MTCT), and nurses' involvement in productive research and policy development. I used a number of search strategies to examine existing work in these different fields of interest, including databases such as Citations for Nursing and Allied Health Literature (CINAHL) and PUBMED, as well as Google search engines. This generated a comprehensive review of various works which will be presented in this chapter in the following order. First, I will present the global prevalence of HIV/AIDS along with global strategies to eliminate the disease, followed by global policy on MTCT of HIV/AIDS. Second, I will discuss the Nigerian Policy statement on prevention of mother to child transmission (PMTCT) and current strategies in Nigeria to address MTCT. Third, I will describe nurses' roles and their involvement in the PMTCT of HIV research and policy development followed by an examination of their roles in the health care system. The chapter will conclude with a summary of the knowledge gap in the literature, which was the impetus for this study.

## 2.1 MTCT of HIV: Global Prevalence

The health and well-being of mothers, infants, and children are of utmost importance, as these factors reflect the current health status of individuals, local communities, and the nation as a whole, and also serve as predictors of the health of future generations (Pincus et al.,2005**).** It is common knowledge that women disproportionately bear the burden of HIV, as affirmed by Michel Sidibe, Executive Director of UNAIDS, "This (HIV) epidemic unfortunately remains an epidemic of women" (UN New Centre, 2010, p.1). Among the 34 million people living with HIV/AIDS, 50% of the adults living are women (AVERT, 2012). Each year about 1.4 million women with HIV become pregnant (UNAIDS, 2010) and transfer HIV to their children during

pregnancy, labour and delivery, or breastfeeding (Cournil et al.,2013). With about one in three children born to HIV-positive mothers being infected in the absence of appropriate intervention (UNAIDS, 2011a), MTCT has become the leading cause of HIV infection in children and a major public health issue worldwide (AIDS info, 2014; WHO, 2014b).

The prevalence of MTCT is generally higher in developing countries, just like HIV infection, which may be closely associated with economic, social, and cultural factors coupled with gender disparity and poverty. The rate of transmission of 25-45% is higher in developing countries than in industrialized countries, which has a rate of 15-25%. As of 2012, about 52% of people living with HIV and AIDS in low- and middle-income countries were women (AVERT, 2014). Presently, in sub-Saharan Africa, women constitute 60% of people living with HIV and the proportion of these women has been increasing in the last 10 years (WHO, 2014a). The high prevalence of HIV also has a synergistic effect on the infant mortality rate of 60 per 1000 live births in developing countries, about five times higher than the 11 per 1000 live births in developed countries (WHO, 2014b). About 1000 newborns are infected with HIV every day in Sub-Saharan countries in spite of medical interventions (Hampanda, 2013). One third of these infants are likely to die before their first birthday and more than one half will die by their second birthday (Lucas, 2012). Annually there are approximately 260,000 paediatric deaths due to AIDS-related illnesses globally (Shapiro et al.,2010; WHO, 2010a). Nigeria presently has an infant mortality rate of 74.09 per 1,000 live births (Central Intelligence Agency, 2014) and this high prevalence is attributed to HIV (Nkwo, 2012).

There has been a steady decline in the global trend of new HIV rates among children over the past decade. In 2003 alone 700,000 new infections were recorded among children below 15years of age, with 500,000 HIV-related deaths (FHI/UNAIDS, 2004). In 2004, that number

had dropped to about 640,000 children worldwide who were infected with HIV through MTCT of HIV (UNAIDS/WHO, 2004). By 2008, 430,000 children below 15 years of age had been infected (WHO), United Nations Program on HIV/AIDS (UNAIDS) and UNICEF, 2009) although 2.1 million children were living with the disease (Interagency Coalition on AIDS and Development, 2010). As of 2013, however, AVERT (2014) asserted that 3.2 million children were living with HIV around the world with 240,000 children became newly infected in that year alone. About 91% of the children infected with HIV lived in sub-Saharan Africa in 2013 (AVERT, 2014).

Maternal HIV-positive status predisposes infants to higher mortality, particularly in the first four months of life (Kurewa et al.,2010). This situation becomes worse if the mother dies during childbirth (Lucas, 2012). Cormier (2010) asserted that children whose mothers die during childbirth are 10 times more likely to die prematurely than those with surviving mothers. Alcorn (2014) reported that they had 3.8-fold risk of death before the age of six years with infant mortality highest during the first year of maternal death. Mnyani (2014) added that prevention of HIV transmission from mother to infant is of little value for the child if the child's mother dies in the early years of life. In the words of Mnyani (2014), "we've put an emphasis on PMTCT but we haven't really put an emphasis on saving the mothers" (p.1). This conviction reveals the need for interventions that not only prevent children from contacting HIV but that will also save the lives of their mothers.

A quick review of maternal mortality by HIV revealed its devastating effect on mothers. According to Moran and Moodley (2012), the maternal mortality rate was about 10 times higher in infected women than in uninfected women in 2012. The National Committee on Confidential Enquiries into Maternal Deaths (2009) revealed that HIV increased maternal mortality directly

from the progression of the disease itself, and indirectly through higher rates of sepsis, anaemia, and other pregnancy-related conditions (Gathigah, 2014; Moran and Moodley, 2012). Nigeria's maternal mortality rate of 840 per 100,000 live births is one of the highest in Africa (WHO, 2014c).

Protecting mothers and children is critical and seems to be an obvious first step towards the eradication of AIDS. Therefore, global efforts to reduce MTCT in developing countries have gained impetus in the past decade as the health of mothers and their newborns has become a key priority (UNICEF, 2014; One Living Proof, 2011; WHO, 2010a). With700 new paediatric HIV infections occurring daily and with low PMTCT coverage rates in countries mostly affected by HIV/AIDS (AVERT, 2014), the need to implement innovative interventions to reduce the incidence /rate of the disease is imperative.

### 2.2 MTCT of HIV: Global Elimination Strategy

The global community has committed itself to eliminating MTCT of HIV by 2015. The strategy for reaching this goal is laid out in a plan, adopted by the WHO and UNICEF in 2011, that would work towards the elimination of new HIV infections among children by 2015 and would provide help to keep their mothers alive (WHO/UNICEF, 2012). This plan focuses more on low- and middle-income countries with an emphasis on programs for PMTCT of HIV in order to improve health outcomes for mothers and children. The plan for the elimination of mother-to-child transmission services is integrated into maternal, newborn, and child health programs coupled with sexual and reproductive health programs (WHO, 2010a). This integration of programs provides an opportunity for women and children to be reached through existing health facilities (Tudor Car et al.,2011). WHO (2006a) argued that integration of PMTCT into existing maternal health facilities provides greater access to quality antenatal, labour, delivery, and

postpartum care, and enhances early access to PMTCT services. The President's Emergency Plan for AIDS Relief (2011) asserted that integration of PMTCT programs into maternal and child health services either at levels of policy, program administration, or service delivery, provides an opportunity to use limited resources to empower other programs as well as improve maternal and child health overall outcomes. Integration also provides opportunities for countries to own their own programs, to increase coverage of PMTCT services, and to sustain programs. Tudor Car et al. (2011) contended that PMTCT strategies will be of benefit to all women regardless of their HIV status and whether pregnant or not. Duncombe, Ball, Passarelli and Hirnschall (2013) further noted that integration reduces stigma, the burden of frequent visits, and promotes the utilization of available human resources. But Chi, Bolton-Moore and Holmes (2013) asserted that though integration of services is generally accepted, little attention is paid to the quality of services provided. The authors added that research studies are needed to assess the supposed benefits of the policy of integrating PMTCT services for their site appropriateness and individual performance.

The Elimination of Mother-to-Child Transmission strategic framework has a vision, a goal, objectives, and 10 targets (2 global, 2 child health and 6 related to the four prongs of EMTCT). The vision is to keep women and children alive and free of HIV, while the goal is to eliminate paediatric HIV infections and improve maternal, newborn, and child health. The objectives are to: 1) Accelerate the global and national efforts toward effective and comprehensive PMTCT services; 2) Improve the quality of PMTCT services and demonstrate the public health impact of them; and 3) Strengthen linkages between maternal, newborn, and child health services, reproductive health services, and HIV-related services to reduce overall maternal and child mortality (WHO, 2010a).

Although this global plan has been successful in some countries in some sub-Saharan African countries such as Botswana, Ghana, Namibia, South Africa, and Zambia, with more than 75% coverage, other countries such as Nigeria have not seen the same level of success (AVERT 2015). Barriers to success in PMTCT coverage is country specific (Reeves, 2011), but when good knowledge is provided to the populace, it enhances coverage since people are then motivated to find out their status (Olugbenga-Bello et al.,2013; Tatagan, et al.,2011). Knowing one's HIV status increases access to treatment and care for themselves and their unborn infant (Peltzer and Mlambo, 2010). Studies have also demonstrated that HIV-related stigma and discrimination among community members and health care workers hinders decisions both to obtain PMTCT services and to adhere to treatment (Adedimeji et al.,2012; Turan and Nyblade, 2013). Traditional gender roles and cultural beliefs that focus on the involvement of men over women in access to HIV testing also limits PMTCT coverage (AIDS Ark,2014) and hinders women's involvement in obtaining these services (WHO, 2012b). Researchers also identified confusion surrounding breast feeding as a barrier to PMTCT uptake (Levy et al.,2010; Vaga et al.,2014). In most resource-poor settings, limited country and clinic resources, manifested as shortages of PMTCT staff, interruptions in treatment, inadequate supplies of medical equipment, and lack of competence in counselling services, can be another obstacle (AVERT, 2015; Mutel et al.,2011). Reeves (2011) added that lack of government commitment and political instability is also accountable for poor coverage in Nigeria. The WHO (2010b) stated that "achieving universal access to prevention of mother-to-child HIV transmission services rests on the capacity of national and local health systems to deliver these services" (p.18). It further asserted that weaknesses in human resource capacity, health financing, in the supply chain, in programme management, and in information systems have also hampered the ramping up of these services.

In the same vein, Tearfund (2008) asserted that most providers were not aware of current policies and guidelines, therefore lacked up-to date knowledge about their scope.

The need for operational guidance was recommended to aid implementation of PMTCT packages. The Ministry of Health and all stakeholders must identify appropriate interventions in reference to their local context (PEPFAR, 2011). It is necessary to integrate frontline workers into designing the policies that they are expected to implement. For instance, although WHO and UNICEF are responsible for increasing the development of strategies to eradicate MTCT of HIV, 90% of the professionals are medical specialists and nursing specialist make up less than 1% (Davis, 2012). Given that nurses form 80% of the health workforce (Davis, 2012), their marginal representation in policy developing organizations like WHO and UNICEF is a major gap in the health system policy development process.

WHO (2010a) has provided a four-pronged comprehensive approach to address MTCT of HIV: 1) Primary prevention of HIV among women of reproductive age; 2) Prevention of unintended pregnancies among women living with HIV; 3) Prevention of HIV transmission from a woman living with HIV to her infant; and 4) Provision of appropriate treatment, care, and support for women living with HIV, their children and families. Each of these prongs addresses different aspects of the problem, and are all areas where nurses could make a significant impact given the right resources and training. For example, the first prong is focused on reducing HIV incidence in reproductive-age women by 50% by 2015 (WHO/UNICEF, 2012), through reproductive health care services such as antenatal care, postpartum/natal care, and other health and HIV service delivery points, including working with those in the communities. Key activities to meet this target involve health information and education, HIV testing and counselling, regular retesting for those with exposure to the virus, couple counselling and partner testing,

safer sex practices, including dual protection (condom promotion), delay of onset of sexual activity and behavioural changes through practices to avoid high-risk behaviour (WHO, 2012b). Nurses are at the forefront in providing these kinds of services, and are well-positioned to identify research questions and designs to effectively address any deficiencies in them. Registered nurses have already been at the head of the global response to the HIV epidemic, aware of the associated health needs of persons living with HIV as well as the multifaceted needs of their families and other support systems (International Center for AIDS Care and Treatment Programs (ICAP), 2013). This 2013 ICAP report cited Malata, principal of the Kamuzu School of Nursing, University of Malawi as saying that, "creating an HIV-free generation will not be possible without nurses, and without nurses, we cannot achieve any of the Millennium Development Goals" (ICAP, p.2).

The second part of the WHO's 4-pronged approach targets the area of family planning to reduce this unmet need to zero among all women (regardless of HIV status) by 2015. The provision of appropriate counselling and support for women living with HIV enables them to make an informed decision about their future reproductive life, with special attention to preventing unintended pregnancies (WHO/UNICEF, 2012). Key activities to carry out include: family planning counselling services to ensure women can make informed decisions about their reproductive health, HIV testing and counselling in reproductive health /family planning services, and all the activities in prong 1(WHO, 2012b). WHO's third prong (2010a**)** aims to: a) reduce MTCT of HIV to less than 5% by 2015, b) provide antiretroviral prophylaxis or antiretroviral therapy to 90% of women with HIV by 2015 in order to reduce MTCT during pregnancy and delivery, and c) provide antiretroviral drugs to 90% of breastfeeding infants born to HIV-positive women in order to reduce the risk of HIV transmission during the breastfeeding

period by 2015. This target will be achieved through the provision of enhanced HIV testing and access to the antiretroviral drugs for pregnant women living with HIV. This will improve mothers' own health and prevent infection from being passed on to their unborn children or babies. Key activities for prong three include: a) quality antenatal and delivery care, b) HIV testing and counselling in antenatal care, c) retesting in late pregnancy in high prevalence settings, d) clinical (staging) and immunological (Cluster of Differentiation 4) assessment of pregnant women, e) antiretroviral therapy for pregnant women eligible for treatment, f) antiretroviral prophylaxis for MTCT prevention for women not receiving antiretroviral therapy and for all exposed children, and g) safer obstetric practices and infant feeding counselling and support (WHO, 2010a). As asserted by the International Center for AIDS Care and Treatment Programs (2013), nurses have been prominent in HIV health teaching and counselling, and have an in-depth understanding of the health and psycho-social problems associated with HIV.

Finally, WHO (2010a)'s fourth prong is dedicated to providing 90% of HIV-positive pregnant women and families with antiretroviral therapy for both their immediate health situation and for the long term by 2015. Activities include: antiretroviral therapy (co-trimoxazole prophylaxis) for women eligible for treatment, continued infant feeding counselling and support, nutritional counselling and support, and sexual and reproductive health services including family planning and psychosocial support. Activities packaged for HIV-exposed children include: antiretroviral prophylaxis, routine immunization, and growth monitoring and support. Antiretroviral prophylaxis (co-trimoxazole) is to start at 6 weeks, coupled with early diagnosis testing for HIV infection at the same time, and following at 18 months, where virological tests are available. Infant feeding counselling and support is to be provided. Other activities include managing other endemic conditions such as tuberculosis and malaria, the provision of nutritional

and psychosocial care and support, and symptom management and palliative care if needed (WHO, 2012b). All of these activities fall within core nursing functions and this study has explored nurses' research and policy involvement using this framework as a guide.

In July 2010, WHO issued new HIV and AIDS guidelines on PMTCT that require all HIV-positive mothers to be identified during pregnancy and to receive a course of antiretroviral drugs in order to prevent MTCT of HIV. All infants born to HIV-positive mothers should also receive a course of antiretroviral drugs and should be exclusively breastfed for 6 months, with complementary feedings for up to a year. Mothers who are identified in pregnancy as being HIV-positive should have a Cluster of Differentiation 4 test to determine whether they need to take antiretroviral drugs for their own health or for that of their unborn infant. If their Cluster of Differentiation 4 count is below or equal to 350 cells/$mm^3$ they should be placed on antiretroviral drugs for their own health. However, these new guidelines recommend that all such mothers should take medication to prevent HIV transmission to their infant(s) (AVERT, 2012). This course of medication should be permanent and taken every day in order to prevent the development of ill health. Breastfeed infants should have Nevirapine daily for 6 weeks. A two-drug combination should be used for a mother taking antiretroviral medication for her infant's health**.** Furthermore, all infants born to HIV-positive mothers should be given a course of medication associated with the drug regimen that the mother is taking. (AVERT, 2012; WHO, 2010a).

PMTCT packages have many advantages apart from preventing HIV transmission from mother to baby and targeting complete elimination of new HIV infections in children. They can also act as gateways to improving reproductive, maternal, and child health services at the primary level and, in turn, can strengthen progress towards achieving the health-related

Millennium Development Goals (MDGs 4,5 and 6) for 2015 of reducing under-five mortality rates by two-thirds, maternal mortality rates by three- quarters, and halting the spread of HIV/AIDS (WHO, 2010a).To derive the benefit of these packages, nurses and midwives need to be actively involved in each health design to enhance implementation, knowing that they are at the forefront of patient care and have prolonged engagement with patients and families.

**2.3 UNAIDS Principles to Address HIV/AIDS**

In addition to WHO's four-pronged framework, UNAIDS (2011a) introduced four sets of overarching principles to stop new HIV infections among children and to keep their mothers alive. These are: 1) putting women living with HIV at the center of the response and providing optimal treatment for their own health in accordance to the 2010 WHO guidelines; 2) providing opportunity for country ownership; 3) leveraging synergies, linkages and integration with maternal, newborn and child health for improved sustainability; and (4) providing opportunity for shared responsibility and specific accountability.

First, women living with HIV should be at the centre of all national plans for eliminating new HIV infections among children. Such plans should meet the following criteria: a) be grounded in the interests of the mother and child, b) provide access to the best HIV prevention and treatment regimens based on the latest guidelines for mothers and children, c) provide HIV-positive women access to family planning services, d) include women in the national process of developing and implementing programs, especially mothers living with HIV, to tackle the barriers to services and to work as partners in providing care and e) encourage male involvement and support of men in all aspects of these programs and should address HIV and gender-related discrimination that impedes service access and uptake as well as client retention (UNAIDS,

2011a). In most African countries male involvement has been identified as a major constraint to coverage in PMTCT of HIV services (Morfaw et al.,2013; WHO, 2012b).

Second, country ownership refers to the responsibility of developing a national plan by all stakeholders to eliminate new HIV infections. These plans are evident in the Nigerian policy statement and the National Agency in Control of AIDS (NACA) strategies that incorporate the 'Three Ones' principle: "one national action framework, one national coordinating mechanism and one monitoring and evaluation system at country level" (UNAIDS, 2011a, p.8). However, Obasanjo and Oduwole (2006) questioned whether or not there was fair representation of key stakeholders within the bodies that set up these national plans.

UNAIDS (2011a) suggests that these types of plans should include strategic planning, priority setting, performance monitoring and progress tracking in cooperation with essential stakeholders such as networks of HIV-positive women, and private sector and civil society organizations. All policies and programs must align with the "Three Ones" principles for coordinated action.

Third, leveraging synergies to enhance sustainability should be a key part of all HIV national plans, which will strengthen synergies with existing programs such as maternal newborn and child health, family planning, and treatment in line with community and national contexts. In Nigeria, there is integration of PMTCT programs into all health care facilities including health centres (Federal Government of Nigeria, 2010).

The fourth principle of UNAIDS (2012a) is shared responsibility with specific accountability. The fight to eliminate new HIV infections and to keep mothers alive involves everyone from families to organizations, communities, and nations. Health services have to be responsive to the needs of women living with HIV. Communities must join efforts to eliminate

the stigma and discrimination associated with HIV and ensures all members of the community have access to HIV testing and counselling services (UNAIDS 2012a). Organizational partners must have specific tasks for which they must be accountable, and indicators must be put in place to measure progress (UNAIDS 2012b). In Nigeria, the delegation of each sector's task is the responsibility of the national HIV coordinating body, namely the NACA. This body also monitors the activities and progress of each implementing partner (National Agency in Control of AIDS, 2010).

**2.4 HIV Prevalence in Nigeria**

Nigeria reported its first case of AIDS in 1986, marking the start of the epidemic in the country. Subsequently, the government approved the antenatal care Sentinel Surveillance as the scheme for assessing the epidemic. Using the Sentinel Survey, Nigeria witnessed an upsurge in the prevalence of HIV between 1991 and 2001 of 1.8% in 1991, 3.8% in1993, 4.5% in1996, 5.4% in1999 and 5.8% in 2001. From 2003 until recently, there has been a steady decline: 5.0% in 2003, 4.4% in 2005, 4.6% in 2008 and 4.1% in 2010 (National Agency in Control of AIDS (2014). In 2012 the prevalence had declined to 3.4% (National HIV/AIDS and Reproductive Health Survey (NARHS)). Currently the prevalence of HIV among those 15 to 49 years is 3.2% (UNAIDS 2014). There is a wide variation in HIV prevalence within the six geopolitical zones in the country. The South South Zone has the highest prevalence (5.5%) while the lowest (1.8%) occurs in the South East Zone. Variation also exist between urban areas (3%) and rural (4%) (National Agency in Control of AIDS, 2014). Gender inequality also fuelled the HIV/AIDS epidemic with prevalence rates higher among females (3.5%) than males (3.3%). Girls are also vulnerable to infections earlier than boys (National HIV/AIDS and Reproductive Health Survey (NARHS). According to NACA (2014), the key drivers of the HIV epidemic in Nigeria include: low personal risk perception, multiple sexual partners, transactional and inter-generational sex,

ineffective and inefficient services for those with sexually transmitted diseases, and inadequate access to and poor quality of healthcare services. These drivers are rooted in gender inequalities and inequities, chronic and debilitating poverty, and HIV/AIDS-related stigma and discrimination, which continue to enhance the spread of the infection (National Agency in Control of AIDS, 2014). Mode of transmission studies show that there are pockets of concentrated epidemics amongst most at-risk persons which feed the general population: injecting drug users, female sex workers, and men who have sex with men. This group constitutes about 1% of the adult population, yet contributes almost 25% of new HIV infections (Cross River State Ministry of Health and FHI 360, 2013; Integrated Biological and Behavioural Surveillance Survey, 2010; National HIV/AIDS Reproductive Health Survey, 2012; National Agency in Control of AIDS, 2014). The prevalence of HIV among the most at-risk population is generally higher than in the general population. The prevalence among brothel-based female sex workers is estimated at 27.4%, 21.7% among non-brothel based female sex workers, 17.2% among men who have sex with men, and 4.2% among injection drug users. However NACA (2014) added that while the prevalence of HIV among non-brothel based female sex workers reduced from 37.4% in 2007 to 27.4% in 2010, and from 30.2% (2007) to 21.7% (2010) among brothel-based female sex workers, the prevalence is increasing among men who have sex with men, from 13.5% in 2007 to 17.4% in 2010.With an annual number of 220,394 new infections and with more females (120,003) affected than males (100,390), the need to combat MTCT and to promote policies to curb the menace of HIV generally in the country becomes imperative.

## 2.5 Policies on HIV

To combat the challenges imposed by HIV, international organizations, government and many legislators have made some important policy decisions for improvement. These include policies "that are intended to direct or influence the actions, behaviours or decisions of others" (Longest, 2006, p.1) including health policies that determine the course of action (or inaction) taken by governments or health care organizations to obtain a desired health outcome. These policies shape the general health care system, including the public and private sectors, and the political forces that affect the system (Abood, 2007).

In 2011, UNAIDS brought together a Global Task Team made up of 30 governments including those from all 22 priority countries with a high HIV prevalence, and 50 community groups, to set up a global plan of action to execute macro policy (UNAIDS, 2011a). The group developed the following visionary policy statement:

> All women, especially pregnant women, must have access to quality life-saving HIV prevention and treatment services, for themselves and their children. The rights of women living with HIV are respected and those women and their families and communities are empowered to fully engage in ensuring their own health and especially the health of their children. Adequate resources, human and financial, are available from both national and international sources in a timely and predictable manner while acknowledging that success is a shared responsibility. HIV, maternal health, newborn and child health, and family planning programs work together, deliver quality results and lead to improved health outcomes. Communities, in particular women living with HIV, are enabled and empowered to support women and their families to access the HIV prevention, treatment and care that they need. National and global leaders act in concert to support country-driven efforts and are held accountable for delivering results. (UNAIDS 2011ap 1)

These policies embraced the comprehensive four-pronged PMTCT framework and were informed by sound scientific approaches embedded in client-centered service delivery, which nurses by virtue of their experience are capable of implementing.

## 2.6 Nigeria Policy on HIV/AIDS

The Nigerian national response to the HIV epidemic, which has spanned two decades, has become particularly intense since 2002 (National Agency for the Control of AIDS, 2008). In 1988, the country established the National AIDS and Sexually Transmitted Infections Control Program in the Federal Ministry of Health, which marked the beginning of a more coordinated response to address HIV/AIDS in the health sector (Federal Government of Nigeria, 2010). In 1999, a multi-sectorial response was initiated, which led to the creation of the National Action Committee on HIV/AIDS that was in 2007 transformed into the National Agency for the Control of AIDS (Federal Government of Nigeria, 2010). These developments have facilitated the country's national response, which operates within the single framework referred to as the "Three Ones" guiding principle to coordinate the national response within Nigeria and its partners (UNAIDS, 2004). Nigeria's 'Three-Ones' framework includes: (a) One coordinating agency, i.e. NACA; (b) one strategic plan, i.e. the National Strategic framework and (c) one monitoring and evaluation framework - the Nigeria National Response Information Management System (Federal Government of Nigeria,2010). These frameworks will be described in the following sections.

**2.6.1 NACA: One Coordinating Agency:** The National Agency for the Control of AIDS (NACA) formerly known as the National Action Committee on AIDS was established to coordinate the various activities around HIV/AIDS in Nigeria. NACA's obligations entailed coordinating and sustaining advocacy in all sectors and at all levels for HIV/AIDS/STDs, and developing a framework that enhanced a multi-sectorial and multi-disciplinary response to HIV/AIDS in the country. NACA was also involved in presenting all plans on HIV/AIDS to the Presidential Council on AIDS for policy decisions. This organization was also responsible for

developing a strategic plan for the response to HIV/AIDS in Nigeria as well as to coordinate, monitor and evaluate the implementation of the national strategic plan for its control. The body also approved policies coordinating and facilitating the mobilization of resources for an effective and sustainable response to HIV/AIDS/STDs (NACA, 2010). The State Action Committee on AIDS and the Local Government Action Committee on AIDS (LACA) are the equivalent of NACA s at the sub-national level (NACA, 2010). These state and local government levels of AIDS committees were the sub-units examined in this case study.

**2.6.2 The National Strategic Framework:** The National Strategic Framework for 2010-2015 was developed in a participatory manner by the National Council on Health (the highest policy advisory body in the Nigerian health care service delivery system). This framework has eight strategic priority areas which include: a) Leadership and Governance for Health, b) Health Service Delivery, c) Human Resources for Health, d) Financing for Health, e) National Health Management Information System, f) Partnerships for Health, g) Community Participation, and h) Ownership and Research for Health. The framework serves as a guide to the federal, state and local governments in the selection of evidenced-based interventions that will, according to the federal Minister of Health, contribute to achieving the desired health outcomes for Nigerians (Federal Ministry of Health, 2010). Under leadership and governance for health, the framework provides policy directions for health development by optimizing the contribution of all stakeholders at each level. Health service delivery invigorates integrated service delivery towards a quality, equitable, and sustainable healthcare. This component incorporates strengthening professional regulatory bodies and institutions. Human resources for health entail planning and implementing strategies in order to enhance availability as well as ensure equity and quality of health care. The financing for health is to ensure that adequate and sustainable funds are

available for health care provision and consumption at local, state, and federal levels. A National Health Management Information System will provide effective information management for all the governments of the Federation and will be used as a management tool for informed decision making at all levels. Community participation involves community members in health development and management, as well as in community ownership to help sustain health outcomes. Partnerships for health will enhance the implementation of essential health services in line with national health policy goals. Research for health will utilize research to inform policy and programming that will improve health, achieve nationally and internationally health-related development goals, and contribute to the global knowledge platform. This component promotes cooperation and collaboration between ministries of health and local government area health authorities and with universities, communities, and others. The collaboration is to establish a strong link between the users of research, such as policy makers, and the producers of research, such as universities (Federal Ministry of Health, 2010; National Agency in Control of AIDs, 2012).

Though this strategic plan has been implemented, UNAIDS (2012b) reported that the Nigerian health care system is making much slower progress compared to other African countries and maternal and infant mortality index remains high. This index is use for determining the country's state of development and its critical public health situation (Alaskans, 2010). Chigozie *et al*. (2011) reported that the health systems research and policy approach, which aims at producing reliable and rigorous evidence to inform health decisions, is a new concept in Nigeria. Major challenges include capacity constraints at individual and organizational levels, communication gaps, and poor networking between policy makers and researchers in Nigeria.

**2.6.3 Monitoring and Evaluation Systems:** This third component of the "Three-Ones" principle of the Nigerian strategic response to the HIV/AIDS epidemic is the system for monitoring and evaluating, which is used for providing accurate, reliable, and timely information on progress made by the National Strategic Health Development Plan as well as reports on performance indicators (Federal Ministry of Health, 2010). Monitoring and evaluation activities also entail providing data to meet the requirements of the National Strategic Plan and its development partners, identifying sub-groups that are missing out on the provision of services, and using third-party evaluators that will allow for independent assessment. The Cross River State Ministry of Health, one of the sub-units in this case study, has a Monitoring and Evaluation Unit headed by a nurse leader and she regularly participates in obtaining data used for monitoring and evaluating HIV programs in the state. The National Strategic Framework stipulates the use of data and the involvement of key actors /stakeholders to inform decision making (Federal Ministry of Health, 2010). It also allows for synergy between generators of health care data and their involvement in major health decision making. In Nigeria, nurses are major stakeholders in the health care system but they do not form an integral part of the coordinating agency responsible for achieving positive outcomes within the eight priority components of the National Strategic Framework.

## 2.7 Nigeria Policy Statement on Prevention of Mother-to-Child HIV Transmission (PMTCT)

Following the global commitment to eliminate MTCT of HIV, the president of Nigeria also delivered a policy statement meant to control the spread of HIV/AIDS and to mitigate its social and economic impact (Federal Ministry of Health, 2009). The Nigerian PMTCT in HIV policy statement utilized the four-pronged approach and can be summarized into 6 key areas: 1) Integration of PMTCT of HIV services into existing maternal health care services; 2)

Encouragement of innovative partnerships between formal health care services and non-formal maternal health service providers such as traditional birth attendants; 3) Ensuring universal access to treatment; 4) Appropriate training of health care providers at all levels to provide quality prevention of PMTCT services; 5) Strong linkages of PMTCT programs with other health programs, such as malaria prevention programs; and 6) Male involvement and active participation (Federal Government of Nigeria, 2009). The following section describes these six key areas:

1). Integration of PMTCT services into existing maternal health care services involves

> All maternal health care services offered HIV Counselling and Testing (HCT) for all women of childbearing age, including pregnant women as part of existing integrated reproductive health care services and include referrals for family planning counselling and services where necessary. Testing was not made mandatory. Provider-initiated testing and counselling (PITC) was greatly encouraged in PMTCT services without compromising the ethical standards of informed consent and confidentiality. PITC was targeted not only at women presenting in the antenatal care period, but also those presenting for delivery and postnatal care whose HIV status is unknown, in order to reduce missed opportunities. (Federal Government of Nigeria, 2009 p.19)

In Nigeria, PMTCT services have been integrated into existing maternal and child health services with about 5622 sites offering them in the 36 states and the Federal capital territory Abuja (National Agency in Control of Aids, 2014). This is in line with WHO (2010) integration guidelines released to improve access to PMTCT programs, and to provide patient follow up and understanding about adherence (WHO 2010c). After integration, a 2012 assessment of PMTCT services and maternal and child care services in Nigerian health care facilities was conducted (Blazer 2014). About 101 PMTCT sites were purposively sampled from eight states: Anambra, Benue, Cross River (the study site), Kaduna, Lagos, Nasarawa, and Taraba, as well as the Federal Capital Territory of Abuja. This assessment captured information on the use of the guidelines, antiretroviral prophylaxis, and treatment regimens currently being used in Nigeria: HIV testing and counselling; HIV-exposed infant follow-up; community-facility linkages; and

HIV laboratory services. Results showed that in the facilities used for the study, the median integration score was seven (range 1.5 – 17), demonstrating the low level of integration of PMTCT services (Blazer 2014). The results further reveal that for primary health care facilities, the median level of integration was 7.25; in secondary health care facilities, it was 8, and in tertiary health care facilities, the median level of integration was 5. Generally, tertiary facilities scored lower on the integration scale than their primary and secondary counterparts. While tertiary facilities generally offered more services than primary and secondary facilities, their services tended to be less integrated (Blazer 2014). Chi, Moore and Holmes (2013) argued that though integration of PMTCT services may enhance coverage and reduce stigma, it cannot address the gap in the health infrastructure, such as staffing shortages and lack of physical space. There is a need for scientific evidence to support the quality of services provided in these facilities.

2). Encouraging innovative partnerships involves forming partnerships between the formal and the informal health care sector, such as traditional birth attendants, to enhance coverage in PMTCT services.

> Recognising the current low level of utilisation of formal health services and skilled attendants for antenatal care and delivery, innovative partnerships were encouraged between formal health care services and non-formal maternal health service providers such as traditional birth attendants in order to promote the access of all pregnant women to PMTCT. (Federal Government of Nigeria, 2009 p.19)

In Nigeria, as in many African countries, the informal sector provides some forms of health care services, including those for reproductive health issues and particularly for the poor (Ayede, 2012). Therefore, preferences of pregnant women for traditional birth attendants (TBAs) is common in Nigeria; however, their patronage of the TBA has perpetuated maternal and perinatal mortality as well as hindered PMTCT coverage (Ayede, 2012; Federal Ministry of Health,

2011).This is also a similar feature in other low- and middle-income countries (Perez et al.,2008;Wanyu et al.,2007).To ensure that 80% of pregnant women accessing antenatal care receive services for PMTCT of HIV, there is a need to incorporate TBAs as partners (Banajeh, 2005; Dube et al.,2008; Federal Ministry of Health, 2011; Luo et al.,2007).

According to the Federal Ministry of Health, collaboration and training of the informal cadre of community health resource persons will ensure an HIV/AIDS-free future generation (Federal Ministry of Health Nigeria, 2010). Innovative partnerships between formal and informal health services in Nigeria will provide opportunity for the training of TBAs, increase the proportion of deliveries attended to by skilled birth attendants, improve referral practices between TBAs and primary health care providers, improve the quality of care and uptake of PMTCT services, induce self-referrals to skilled healthcare providers and as well will ensure competence in essential newborn care and resuscitation (Federal Ministry of Health Nigeria, 2011). Even though this is a good innovation, Byrne and Morgan (2011) asserted that TBAs must be provided with appropriate knowledge, easy access to health personnel, and quality and regular supervision. These three components enable training to become a tool for TBA integration into the health care system. In the same vein, Balogun and Odeyemi (2010) asserted that even while partnerships with these women are encouraged, nurses play a unique role for the success of this innovation; they are the health professionals who can provide information related to PMTCT of HIV and they can also help to identify constraints associated with these services. Perez et al. (2008) also noted that there are exceptions to the extent of involvement of TBAs in PMTCT in HIV, since they are unable to perform a blood test for HIV, but nurses working closely with them could help to overcome this limitation. Israel et al. (2003) further asserted that to ensure effectiveness of the PMTCT programs, health workers at the facility and community

levels should conduct formative research that can be used to mobilize women, partners, and infant feeding counselling in the local context.

3). Ensuring universal access to PMTCT treatment involves increasing access for the most effective interventions that are equitable, accessible, affordable, comprehensive, and sustainable over a long period of time (AVERT, 2015).

According to the Federal Government of Nigeria (2009):

> In recognition of the effectiveness of antiretroviral medications to prevent mother-to-child transmission of HIV, Nigeria commits herself to ensuring universal access of all HIV-positive pregnant women and their children to antiretroviral medication and other relevant medical interventions to prevent vertical transmission of HIV and enhance the health and quality of life of the woman. (Federal Government of Nigeria, 2009 p.19)

Good access to treatment has reduced MTCT of HIV to below 2% in countries such as Brazil, Botswana, the United Kingdom, and the United States (Matida et al.,2005; Sprague, Chersich and Black, 2011; UNICEF/WHO/UNAIDS/UNFPA, 2009). Hussain et al. (2011), Nguyen et al. (2008), and Sprague, Chersich and Black (2011) attributed poor coverage in PMTCT in low- and middle-income countries to poor access by affected persons. Reports by the Cross River State Ministry of Health (2013) asserted that a limited number of PMTCT facilities restricted many persons from knowing their HIV status and receiving treatment. Although health facilities are often five kilometers away from the reach of the populace, not all centres offer PMTCT services. According to NACA (2014), government efforts to increase access to antiretroviral treatment commenced in 2002 with only 25 sites but since have increased to 820 in 2013, covering all 36 states and the Federal Capital Territory, Abuja. Also, the number of adults and children currently receiving antiretroviral drugs has increased from 302,973 in 2009 to 639,837 persons as of 2013. This increased availability and use of cost-effective antiretroviral treatment has had a significant impact on the public perception of the disease, access to

prevention services, and has led to improvements in the quality of life and life expectancy of people living with HIV. NACA in Nigeria (2014) asserted that the major challenge to coverage in activated facilities is lack of health care workers. Communities are advocating for recruitment of nurses and other health workers as well as activation of more PMTCT sites to enhance access. This recommendation tallied with El-Jardali and Lavis (2011) who reported that the increase in burden of chronic diseases places greater impact on the health system, and the regular programs and services are not efficient in meeting the health care needs of the populace.

4) Ensuring appropriate training of health care providers refers to providing health care workers with the necessary skills to administer appropriate interventions.

> Appropriate mechanisms were put in place to ensure the appropriate training of health care providers at all levels to provide quality PMTCT services. All HIV-positive pregnant women were offered quality counselling in nutritional care for themselves and their children according to the best nationally and internationally applicable evidence and protocols, taking due cognizance of the woman's specific physical, mental and social circumstances. Early Infant Diagnosis (EID) services were offered to all babies delivered by HIV-positive women and appropriate comprehensive HIV-related services. (Federal Government of Nigeria, 2009 p.20)

Success in PMTCT calls for task shifting, which entails training health workers to effectively undertake additional responsibilities recognized as vital components in realizing global health targets towards the elimination of mother to child transmission of HIV (Cross River State Government, 2013; Frizelle and Solomon, 2009; McCarthy, Voss, Salmon, Gross, Kelley and Riley, 2013; PEPFAR, 2012). These may include tasks that were primarily relegated to doctors or nurses. This strategy has the potential of expanding PMTCT services especially in an integrated maternal and child health setting with limited human resources (nurses and doctors) and access to a higher tier level of health facility (WHO, 2013a). This expanded role of nurses stipulates the need for nurses and other health workers to be adequately trained. Balogun and

Odeyemi (2010) and McCarthy et al. (2013) further asserted that nurses are involved in training other health workers including TBAs and periodically are involved in monitoring and evaluating their activities. This underscored the unique role of nurses as stipulated in the Nigerian policy statement.

5). Strong linkages of PMTCT of HIV programs with other health programs implies integrating PMTCT programs into already existing health programs in the community:

> All PMTCT services offered had strong linkages with or integrated focus on malaria prevention and treatment services for HIV-positive women, including promotion of insecticide-treated nets and intermittent presumptive treatment, in view of the scientific knowledge on the interactions between malaria and HIV in pregnancy. (Federal Government of Nigeria, 2009 p.20)

Linkages between the services of a facility and the community underpin effective PMTCT programs. In Nigeria the Federal Ministry of Health (2010) advocated for community PMTCT services to collaborate with the National Primary Health Care Development Agency to strengthen existing community-based structures such as village health committees and community development associations. This collaboration would enhance sensitization of community members to maternal and child health services and would promote sustainability of PMTCT programs. Other linkages to enhance coverage include those with people living with HIV/AIDs, support groups, community-based distributors of family planning commodities, , faith-based organizations, and voluntary health workers (Federal Ministry of Health Nigeria, 2010). PMTCT of HIV programs could also link to other health programs, such as the National Malaria Control and Roll Back Malaria programs, and those set up to screen for sexually transmitted diseases and tuberculosis (Federal Ministry of Health Nigeria, 2010; WHO, 2012b). These linkages provide a continuum of care, each augmenting and complementing the other to provide comprehensive multi-sectorial responses to a disease that affects all sectors of society

(PEPFAR, 2010). Formative evaluation on effective linkages should be assessed by community health workers (including nurses) to enhance maximum coverage and attainments of health care goals.

6). Male involvement and active participation fosters the use of innovative strategies to motivate men to become part of the HIV MTCT prevention programs.

> Male involvement and active participation were strongly encouraged as part of PMTCT programs; PMTCT services explored creative mechanisms and innovative ways to invite men's participation, address men's concerns and HIV-related treatment issues, and leverage their support as partners with a strong stake in PMTCT in the context of overall family health and well-being. These included men-targeted communication activities; couple counselling, couple-focused HCT, referrals to HIV treatment and reproductive health services, and linkages to support services as relevant to the health needs and HIV status of the man. (Federal Government of Nigeria, 2009 p.20)

In a male-dominated society like Nigeria, the involvement of men invokes acceptance of wives and children in any initiative (Peacock et al.,2009; Larsson et al.,2010). Men traditionally take the lead in sexual and reproductive health decision making in most African societies (Mlay, Lugina and Becker, 2008; Morfaw et al.,2013) and play a leading role in women's uptake of health services, adherence to PMTCT recommendations and treatment options, as well as in obtaining follow-up results (Morfaw et al.,2013; Medley et al.,2004; Peltzer et al.,2011). But Montgomery, Straten and Torjesen (2011), Theuring et al. (2009), and WHO (2012b) asserted that there is a need to move beyond seeing men as facilitators to empowering women and children in health care services to accepting them as an integral part of reproductive health policy and practice. This is in line with the Nigerian president`s PMTCT policy statement stipulating the need for men's involvement for themselves and their families. Nurses play a significant role in eliminating health system constraints and utilization of health care services by men, especially in the rural communities. According to Morfaw et al. (2013), the strategies utilized by nurses can foster or hinder male involvement depending on their perception of the male role in PMTCT

(Byamugisha et al.,2010; Montgomery et al.,2011). They recommend training of health workers to perceive male engagement in PMTCT for their own needs and not just as a tool for women's or children's health outcomes.

## 2.8 Current Strategies to Address Mother-to-Child Transmission (MTCT) of HIV in Nigeria

The strategy to eliminate MTCT of HIV in Nigeria is based on the Global Plan towards eliminating new HIV infections among children by 2015 and keeping their mothers alive (Joint United Nations Programme on HIV/AIDS, 2011). It incorporates the WHO's (2010a) four-pronged approach targeting mother and child survival (Federal Government of Nigeria, 2012; Federal Ministry of Health (Nigeria), 2010; National Agency in Control of Aids, 2014). Although each prong has its specific plan of intervention, the interventions are all interrelated with the optimal aim that evidence-based PMTCT packages will reduce the overall risk of maternal-to child-transmission to less than 2% (WHO, 2010a). Although there are four prongs in the WHO's document, Nigeria's PMTCT interventions are centred mostly on the third prong and can be summarized as HIV testing during maternal antenatal services, provision of antiretroviral therapy or antiretroviral prophylaxis for HIV-positive women during the antenatal period or labour, antiretroviral drugs to be given to infants after delivery, safe obstetric practices, and counselling on infant feeding, i.e. exclusive breastfeeding or formula feeding for HIV-positive babies (Federal Ministry of Health Nigeria,2010; Morfaw et al.,2013 ; National Agency in Control of Aids, 2014;Tudor Car et al.,2011).

Studies have revealed that in high income countries this plan has been effective and has reduced the incidence of new HIV infections in children to less than 1% when implemented appropriately (Tudor Car et al.,2011; Paintsil, 2009; WHO, 2012b). But without appropriate intervention, the risk of MTCT transmission of HIV ranges between 15 and 40% in low- and

middle-income countries (Tudor Car et al.,2011). For effective implementation of any strategy, national commitment is paramount. UNAIDS (2011a) urged the 22 most affected countries in sub-Saharan countries to place women's lives and their reproductive rights and needs at the core of national plans to improve interventions promoting the health of mothers and their children. Each country was to adopt the program framework based on the WHO's (2010a) four-pronged strategy

> This strategy provides the foundation from which national plans will be developed and implemented, and encompasses a range of HIV prevention and treatment measures for mothers and their children, together with essential maternal, newborn and child health services, including family planning, as an integral part of countries' efforts to achieve Millennium Development Goals (MDGs) 4, 5 and 6 (p. 10).

In April 2012, six Nigerian State Governors (including the governor from the Cross River State) met with the Joint United Nations Programme on HIV/AIDS and the U.S. President's Emergency Plan for AIDS Relief for the PMTCT to coordinate efforts and strategies to address this important aspect of HIV/AIDS spread (UNAIDS, 2012b). UNAIDS' Executive Director Michel Sidibé noted that even though policies are formed at the national level, it is only when leadership is assumed at respective state levels that new HIV infections among infants can be eliminated. To combat this epidemic, Nigeria developed a 6-year national plan (from 2010 to 2015) for the implementation of an accelerated PMTCT programme as an essential part of the national strategic plan for HIV, with high but achievable targets for every year. The nation strongly upholds that MTCT can be reduced with appropriate intervention to less than 2% with the use of antiretroviral prophylaxis or therapy provided to women during pregnancy, labour, and the breastfeeding period. Where a mother is not on antiretroviral drugs during breastfeeding, the breast-fed infant should be placed on antiretroviral prophylaxis until one week after cessation of all breastfeeding (FMOH, 2010). Nigeria's anticipated accomplishments by 2015 indicate that at

least 80% of all pregnant women, HIV-positive pregnant women and HIV-exposed infants, would have access to quality HIV testing, counselling, and more efficacious antiretroviral prophylaxis by 2015. Similarly, at least 80% of these women and their children would have access to quality infant feeding counselling and early infant diagnosis services by the same year (NACA, 2011).

Nigeria's PMTCT strategies are well aligned to the four broad prongs and are as follows: 1) Primary prevention of HIV infection in women of reproductive age and their partners. The Federal Ministry of Health (2010) national guidelines for achieving this prong incorporate approaches to improve the safety of sexual behaviour and practices, the provision of early diagnosis and treatment of sexually transmitted infections, and an increase in coverage of HIV testing and counselling services to women of child-bearing age, irrespective of HIV status. 2) Prevention of unintended pregnancies among HIV-positive women. National measures ensure that HIV-positive women and their partners receive adequate information and education about the associated risks of child bearing to permit informed choices of action. Measures also include providing family planning and counselling services that are easily accessible, promoting a dual method of contraceptive use (using condoms with other effective methods of contraception) and promoting contraceptive use in the immediate postpartum period. 3) Prevention of HIV transmission from infected mothers to their infants. National interventions in Nigeria toward the realization of this goal include providing HIV testing and counselling services, infant feeding counselling, antiretroviral prophylaxis and treatment to mothers and infant, and safe obstetric practices. In 2010, there was only moderate (62%) antenatal care coverage among pregnant women in 2010; only 39% were attended by skilled birth attendants at delivery (Nigeria Demographic and Health Survey, 2008) as compared to the global target of 90%. These statistics

demonstrate multiple missed opportunities across the continuum of care and the challenges to be overcome in order to eliminate the MTCT of HIV in Nigeria (Federal Government of Nigeria, 2012). 4**)** Provision of appropriate treatment, care and support to HIV-infected mothers, their infants and family. This national strategy targets mothers, exposed infants, and families. Activities include provision of antiretroviral antibiotics to mothers and infants coupled with early HIV diagnostic testing at 6 weeks, nutritional counselling, psychological support, and counselling in sexual and reproductive health services (Table 1).

**Table 1**: Alignment of the four prongs with PMTCT national strategies.

| S/N | Prongs | National strategies to achieve each prongs |
|---|---|---|
| 1 | Primary prevention of HIV infection in women of reproductive age group and their partners. | Incorporate approaches to promote safer sexual behaviour and practices through:<br>1. Early diagnosis and treatment of sexually transmitted infections.<br>2. Increased coverage of HIV testing and counselling services to women of child-bearing age irrespective of HIV status |
| 2. | Prevention of unintended pregnancies among HIV positive women. | Provide adequate information and education about associated risks of child bearing to HIV-positive women and their partners. Strategies includes:<br>1. Providing family planning and counselling services that are easily accessible.<br>2. Promoting condom use along with other effective methods of contraception (dual method) Promoting contraception in the immediate postpartum period. |
| 3. | Prevention of HIV transmission from infected mothers to their infants | Strategies includes:<br>1. Providing HIV testing and counselling services. |

| | | |
|---|---|---|
| | | 2. Providing infant feeding counselling.<br>3. Providing antiretroviral prophylaxis and safe obstetric practices |
| 4. | Provision of appropriate treatment, care and support to HIV-infected mothers, their infants and family: | Strategies includes:<br>1. Provision of retroviral antibiotics to mothers and infant coupled with early HIV diagnostic testing at 6 weeks.<br>2. Nutritional counselling.<br>3. Psychological support.<br>4. Sexual and reproductive health services. |

According to the 2012 progress report from the Federal Republic of Nigeria (2012), PMTCT coverage remained low with minimal improvement. About 1,120,178 (16.9%) women were counselled and tested for HIV in 2011 compared to 907,387 (13.7%) women in 2010. In 2011, of the 221,129 HIV-infected pregnant women found, only 37,868 (17.1%) received antiretroviral treatment to prevent MTCT of HIV. It was estimated that 58,495 (26.5%) of these HIV-infected pregnancies led to child infections that year, leading to a rise of 440,000 in the total number of children living with HIV (AVERT, 2013; UNAIDS, 2012b).

There was a decrease in the number of "pregnant women on antiretroviral prophylaxis taking single dose Nevirapine for PMTCT (24.5% in 2010 down to 8.4% in 2011) but an increase in the percentage of women taking Maternal Triple ARV (Option B) (from 25.2% in 2010 to 33.2% in 2011) as prophylaxis for PMTCT" (Federal Republic of Nigeria, 2012 p.30).

To meet the global target, there must be increased access to Cluster of Differentiation 4 testing among HIV-positive women (62% received testing in 2010 in Nigeria). The percentage of infants who started co-trimazole prophylaxis within 2 months of life increased above the 2% obtained in 2010, but early infant diagnoses (4%) are still very low (Federal Government of

Nigeria, 2012; World Health Organization/Joint United Nations Programme on HIV/AIDS/United Nations Children's Fund, 2011). According to the Federal Government in 2012, major challenges in PMTCT in Nigeria have been identified as: a) limited access to PMTCT programs, b) low rates of antenatal care and institutional delivery, c) high unmet needs for family planning, d) poor antiretroviral coverage to infants born to HIV-positive mothers, and little testing of infants born to HIV-positive mothers within two months of birth, leading to few HIV-positive children receiving antiretroviral drugs, and(e) lack of data on some key PMTCT indicators at the national level, thereby hindering tracking of the progress towards the elimination of MTCT targets.

These strategic interventions are identified as essential to fast-track the progress needed to meet the global target of eliminating mother-to-child transmission of HIV in Nigeria and to break the vicious cycle of HIV, which significantly contributes to infant mortality (Federal Government of Nigeria, 2012; Nigeria National Planning Commission, 2012). NACA (2011) identified major Nigerian challenges to effective PMTCT to include: lack of unified population-based plans at federal and state levels; insufficient government supervision; the donor-driven nature of PMTCT programs, with poor coordination, ineffective monitoring and evaluation of services; ineffective integration of HIV-preventive programs in reproductive health services; and poor infant feeding counselling services. Others include: lack of available early infant diagnosis in all PMTCT sites and children's hospitals, lack of integration of the private sector in technical working groups, inadequate resources, weak health systems, inadequate information on the scope of PMTCT services nationwide, wide gaps between attendees and health delivery facilities, and weak community and private sector engagement in the delivery of services (NACA, 2011). WHO (2007a) asserted that building the health system is the business of everybody. Similarly,

the American Institute for Business Management (2006) argued that it is stakeholders' responsibility to change a weak health care system into a national assert.

Research will help to identify the implementation constraints within each prong and appropriate remedies to be taken to enhance coverage. The Institute of Medicine (2010) called on the leadership of nurses (including those in Nigeria) to undertake collaborative research and to participate in decision-making fora to aid health care reform. The above challenges provide nursing leaders with the potential to develop effective engagement in PMTCT research; they can effectively collaborate with other stakeholders to provide evidence- based policy that would overcome barriers and the attainment of health goals in eliminating MTCT of HIV.

**2.9 Nurses' Role in the Prevention of Mother-to-Child Transmission of HIV**

Nursing is a dynamic, constantly changing profession, based on knowledge of human health drawn from theory, practice, and research. Nurses, as the largest group of health workers, are crucial for the successful operation of the health care system in Africa and to effect extensive changes in all aspects of it (Davis, 2012; IOM, 2010; Global Forum on Health Research, 2004; Greenhalgh, Kyriakidou and Peacock, 2004). Their various roles include researcher, client advocate, educator, clinical decision maker, policy maker as well as coordinator of care. Their roles provide people with the ability to achieve optimal health that is consistent with prevailing social, cultural, and scientific parameters (Hassmiller, 2010; IOM, 2010). The ability to work across disciplines and sectors of the health system provides nurses with the knowledge of relevant health services and policy design innovations, which provide the opportunity to use the best options for practice (IOM, 2010).

In PMTCT of HIV strategies, the contribution of nurses and midwives is essential for the successful elimination of new HIV in children and to meet the 2015 target in sub-Saharan

countries (International Center for AIDS Care and Treatment Program,2013). To attain this goal, the United States President's Emergency Plan for AIDS Relief (2005) identified the need for task shifting as a necessity due to the limited number of physicians in the health care system. This need has in turn extended and expanded the role of nurses to include: diagnosing and treating opportunistic infections; dispensing antiretroviral therapy (International Center for AIDS Care and Treatment Program,2013); providing combination antiretroviral therapy in resource-poor settings (Kredo, Adeniyi, Bateganya, Pienaar, 2014; Sanne, Orrell and Fox, 2010; Shumbusho et al.,2009); successfully integrating traditional birth attendants into the Nigerian health care system to enhance coverage in preventing MTCT (Ogbolu et al.,2013); using counsellors especially in infant feeding (Leshabari et al.,2007) and implementing PMTCT policies (The United States President's Emergency Plan for AIDS Relief, 2005). These roles assumed by nurses have helped to increase coverage in PMTCT strategies. Kredo et al. (2014) reported that there was a slightly lower rate (5.5%) of patients lost to follow-up in nurse-led retroviral management compared to the doctor's group (7.7%). Ogbolu et al. (2013) asserted that successful implementation of PMTCT policy and guidelines either nationally or globally by nurses needs both scientific and practical insight into the development and implementation of PMTCT strategies. The unique role of nurses in PMTCT has been articulated by WHO (2010b) to include advocacy work, education, and provision of competent, culturally sensitive and evidence-based nursing and midwifery services to improve health outcomes for individuals, families, and communities.

Successful implementation of task shifting has increased PMTCT of HIV coverage in many sub-Saharan countries. For example, the International Centre for AIDS care and treatment program, and the multi-drug PMTCT regimen built in the capacity for nurses to prescribe

antiretroviral drugs in South Africa, a specialized activity that previously only doctors were allowed to perform. This additional role has helped to reach the health needs of mothers and children with HIV in South Africa, one of the 22 countries with a high PMTCT coverage (International Centre for AIDS Care and Treatment Programs, 2013). In Ethiopia due to a shortage of physicians, an innovative task-shifting initiative utilized the nursing workforce to provide services for both paediatric and adult HIV clients, including evaluating patients for antiretroviral therapy eligibility, prescribing, providing follow-up care, refilling antiretroviral drug prescriptions, and managing minor complaints. This service has enabled physicians to focus on managing complicated cases (International Centre for AIDS Care and Treatment Programs, 2008). The contribution of nurses has enhanced the prevention of malnutrition in an HIV infants program in Swaziland through the development of an in-service training program (International Centre for AIDS Care and Treatment Programs, 2008). The International Centre for AIDS Care and Treatment Programs has identified that strengthening nursing and midwifery is a critical component of the health workforce throughout the world, and particularly in sub-Saharan Africa with the highest prevalence of HIV (International Centre for AIDS Care and Treatment Programs, 2012). Doherty et al. (2009) advocated for more nurses to be trained in PMTCT strategies**.** Lolordo (2012) reported on how the Tanzanian health care system had been strengthened by the use of nurses and midwives through a government-facilitated program known as Mothers and Infants, Safe Healthy Alive. This program focused on reducing the incidence of HIV infections transmitted from mother to child, and thus reduced infant and maternal mortality. Kafulafuta, Hami and Chodzaza (2005) asserted that midwives play an essential role in reducing maternal mortality, in PMTCT programs of HIV, and in strengthening health care generally. They noted that midwives are the only health workers that most women in

Malawi will ever see. Similiarly, Rujumba et al. (2012) contended that health workers (including nurses) play a significant role in PMTCT programs in Uganda and therefore should always be regarded as "stakeholders in any decision making pertaining to designing, implementation and strengthening of the PMTCT programme" (p.8).

WHO (2010b) stated that nurses contribute to reductions in newborn, infant, and maternal mortality in their role as skilled birth attendants and as providers of maternal and neonatal care, whether or not their patients have HIV. As members and coordinators of inter-professional teams, they provide people-centred care in their various communities thereby, improving health outcomes and the overall cost effectiveness of services. They are the unsung heroes in the Nigerian health care system, that are making contributions towards reducing the maternal and infant death associated with HIV, yet their voices are not heard in health care decision-making fora (Adeniji, 2014).

The non-inferiority randomized control trial that examined the services of nurses and doctors in providing antiretroviral drugs, conducted by Sanne et al. (2010), and the Cochrane review by Kredo et al. (2014), demonstrated that substituting nurses to initiate and manage antiretroviral drugs in low- and middle-income countries has many advantages, such as reduced number of clients lost to follow-up, no change in mortality rate compared to doctors, and no compromise to the quality of care. These findings show that nurses are well-equipped and well-positioned to lead in health care reforms. However, despite these attributes, the nursing profession still has some challenges to overcome in order for nurses to take on leadership roles. These challenges may include lack of adequate educational preparation for the assumption of new roles in a rapidly changing health care system (IOM, 2010) and to effectively fulfil their role in developing PMTCT of HIV strategies (Ogbolu et al.,2013). They remain unable to negotiate

the policy arena, as Davis (2012) noted, despite the fact that nurses provide 80% of health care worldwide. If nurses are integral to PMTCT of HIV implementation strategies, their input is essential to meeting health care goals. Mitchell (2003) stipulated that nurses are rarely consulted when health care reforms are recommended. To effectively contribute to PMTCT of HIV strategies, WHO (2010b) provided strategic directions for strengthening nursing and midwifery services for the period 2011-2015: ensuring universal coverage, providing people-centred health care, enacting policies affecting practice conditions, and enlarging national health programs to meet global goals and targets, such as those of PMTCT. This framework, if strictly adhered to, will provide policymakers, practitioners, and other stakeholders at every level with a broad base for collaborative action to enhance the capacity of nurses and midwives (WHO, 2010b).

WHO's framework for strengthening the nursing and midwifery workforce is based on five key areas: 1) Strengthening of health systems and services; 2) Nursing and midwifery policy and practice; 3) Education, training and career development; 4) Nursing and midwifery workforce management; and 5) Partnerships for nursing and midwifery services. Adhering to the WHO (2010b) framework on strengthening nursing and midwifery services will help eliminate barriers and increase nurses' efficiency by providing them with equal opportunities at the policy table.

## 2.10 Nursing Leadership in the Health Care System

Transforming the health care system to become more HIV friendly in sub-Saharan Africa requires a fundamental rethinking of the roles of many health care professionals, including nurses. Although nurses have always been involved in HIV prevention and treatment from inception of the epidemic (Yox and Farley, 2012), the ever-changing nature of the health care environment calls for more nurses and midwives, competent in the skills of leadership. The

WHO (2012a) identified the need for changing the mindset of health care stakeholders towards generating and using research evidence in decision making. The organization emphasized that the need for leadership in research and policy making among different health stakeholders forms a critical component of building the health care system. This is in line with Contino (2004) who asserted that leadership is one of the main determinants of any organization's success. In the same vein, Andresen (2013) noted that the success or failure of a group, institution, or organization depends on leadership. Nursing leader Florence Nightingale "developed leadership principles and practices that provide useful advocacy techniques for nurses practicing in the 21st century" (Selander and Crane, 2012 p.1). Leadership can therefore be seen as a tool to augment the problem-solving ability of the group and to actively engage Nigerian nurses with regard to research and policy formulation.

Although leadership is a concept commonly used in the literature, it has many interpretations and is not well-understood (Andresen, 2013). Leadership ability has been envisioned as the result of personality traits (Locke and Chesney, 1991), situational interactions, function, behaviour, and power (Greiner and Schein,1988; Richards and Engle, 1986; Weber,1947), vision and values (Hersey and Blanchard, 1988; Richards and Engle,1986), charisma (Weber, 1947), and intelligence (Mead, Hilton and Curtis, 2015; Tzu, 2013), among others. According to Richards and Engle (1986, p.206), "leadership is about articulating vision, embodying values and creating the environment within which things can be accomplished." On the other hand, Hersey and Blanchard (1988) defined leadership as "the process of influencing the activities of an individual or a group in an effort towards goal achievement in a given situation (p.86)." Naylor (2004, p.354) focussed on organizations and added that "leadership is the process of influencing people towards achievement of organizational goals." The Blackwell

Encyclopaedia of Political Science focussed on the power dimension of leadership and describes it as the power of a person or few people to persuade a group to accept a particular line of policy. According to Chemers (1997, p. 206) leadership encompasses "a process of social influence in which a person can enlist the aid and support of others in the accomplishment of a common task."

Furthermore, Mead, Hilton and Curtis (2015) asserted that leadership entails providing support through the provision of knowledge, experience, and emotional as well as social, or practical help to influence one's opinions or behaviours to accomplish a group task within a defined period of time. Gifford et al. (2012) stipulates that such leadership entails building relationships, defining the future, and helping individuals move towards their vision and goals. Gifford, Davies, Edwards, Griffin and Lybanon (2007) defined leadership as a multidimensional direction of influence exerted directly and indirectly on individuals, their environment, and organizational infrastructures. Common characteristics in all these definitions are four key elements as summarized by Cummings et al. (2008): a process, required influence, the setting or context, and common goals or visions. In line with the definition from Gifford et al. (2007), this study looks at nursing leaders who are in a position to exert direct and indirect influence on individual nurses, their practice environment, and the organizational culture, in order to actively involve nurses in research and policy formulation. Organizational culture connotes the beliefs and values that have been in existence in an organization for a long time and that influence nurses' attitudes and behaviour towards attainment of goals (Tsai, 2011). The task of leadership in nursing thus becomes identifying the avenue to actively integrate Nigerian nurses into research and policy formulation and, in the end, to relieve the disease burden associated with MTCT of HIV. As Etowa (2014, p.3) asserts, "the time is ripe for many dynamic nurse leaders in

Nigeria and Africa as a whole to mobilize the global nursing networks and intellectual capital to tackle the current health situation in the country and to fulfill their potential as leaders in health care delivery." Such leaders must be visible sources of inspiration to others and a strong support to professional nursing practice (Canadian Nurses Association, 2011; Murphy, Quillinan and Carolan, 2009). Abood (2007), Carnegie and Kiger (2009) and Ditlopo et al. (2014) reported limited leadership from nurses in policy development, which hinders their ability to influence changes governing the larger health care system. Priest et al. (2010), Hassmiller (2010) and IOM (2010) also discussed the limited involvement of nurses in research.

The need for nursing leadership in research has been identified as a critical link in translating research evidence into practice (Gifford et al.,2007). According to Alleyne and Jumaa (2007), leadership interventions and approaches significantly sway participants' “confidence and enhances their capacity to improve the quality of services provided to their patients even within a turbulent care environment" (p.3). Bally (2007) asserted that nursing leadership involves creating a mentoring culture and others have identified mentoring as an essential tool in building nurses' research capacity (Edward et al.,2009; Byrne and Keefe, 2002; Priest et al.,2007; Segrott, McIvor and Green, 2006; Selander and Crane, 2012). The leadership of experienced researchers provides assistance and direction to less experienced colleagues as an avenue to actively involve nurses in research in low- and middle-income countries (Edward et al.,2009). Leadership through mentoring was a technique also advocated by Florence Nightingale, who believed in the development of positive leadership characteristics over a period of time (Selander and Crane, 2012).

Leadership generally entails influencing individuals to attain organizational goals and the nursing workforce needs leaders who can steer the group towards attaining health care goals. In

line with this, the IOM (2010) advocated for nursing leadership to lead health care reform in the 21st century. If nurses are to take leadership, the question would be what type of leadership will be appropriate, because leadership practices can positively or negatively sway outcomes for the health care system, providers, and patients (Cummings et al.,2008). Cox (2001) noted that there are basically two types of leadership: transactional and transformational. Weber (1947) identified three types: bureaucratic-transactional, traditional, and charismatic. According to Weber leadership in the bureaucratic-transactional form is earned through normative rules and regulations, strict discipline, and systematic control. In traditional form, leadership is earned through legitimacy of governance in traditional ways, while in charismatic form, leadership is earned through dedication, illumination, and heroism. Weber further asserted that there is no ideal type of leadership; leadership is dynamic and permits the transfer from one form to another but charismatic leadership must be incorporated into a democratic approach for successful leadership. Weber (1947) pointed out that economic and social conditions affect the selection of a particular type of leadership.

A closer look at the characteristics of transactional and transformational leaders revealed that transactional leaders set goals, assess performance, and offer incentives or punishments depending on their evaluation of their followers' performance (WHO, 2009). The power of a transactional leader emanates from formal authority in and obligations to the organization and the goals of this leader are always specific, measurable, realistic, and attainable within the time period set for the task (Nikezić, Purić, and Purić, 2012). The transformational leader recognizes followers' needs and demands; therefore, leaders mobilize followers to meet their needs. WHO (2009) noted that transformational leaders are like charismatic leaders with motivation and inspiration, and are quite considerate. They offer supporters a sense of purpose, depict a picture

of success and self-confidence, can articulate shared goals, and can question traditional assumptions, while also considering the needs of subordinates. Nikezić et al. (2012) asserted that transformational leaders target changing existing patterns, belief, values, and goals to create new ones that foster greater commitment. The authors further identified the characteristics of a transformational leader as embodying creativity, team orientation, respect, coaching, and responsibility. These leaders understand the interactions of different social actors desiring a change from the status quo. They use a variety of tactics depending on the environmental circumstances to pursue their vision and set goals (Nikezić, Purić, and Purić, 2012). The non-involvement of nurses in the policy arena is a traditional assumption considered normal, but successful nursing leaders must possess the power, will, time, and the energy, as well as the political skills, to negotiate the legislative arena (Abood, 2007). Nurse leaders in Nigeria especially need to question this traditional assumption.

The unique role of all leaders is to use leadership to ensure that the long-term goals of the organization are met. Particularly in Nigeria, reducing the disease burden and providing quality health care to the Nigerian populace should be the aim of nursing leaders. Paternoster (2011) asserted that nurse leaders most possess transformational leadership traits that can help all nurses become self-advocates in their various health settings. He sees the four traits necessary for the transformational leadership style as: a) inspirational motivation; b) idealized influence; c) intellectual stimulation, and d) individualized consideration. By adopting these traits, nursing leaders will empower nurses to realize the desired changes in the health care system. Inspirational motivation allows the leader to articulate a compelling vision of the future, enthusiastically expressing hope and confidence about the goals to be achieved. The leader behaves in a manner that motivates and inspires followers by providing meaning, and is

concerned with members' activities and the development of a team spirit (Avolio and Bass, 2002). Avolio and Bass (2002) further contended that enthusiasm and optimism are true virtues of inspirational motivation leadership. Such leaders clearly communicate their expectations to followers and are committed to the team's vision and goals. Idealized influence traits permit the leader to instil pride in subjects, which moves above self-interest, builds respect, and allows them to exhibit a sense of power and confidence in followers. This leader has a strong sense of purpose, and considers the moral and ethical consequences of decisions taken. The intellectual stimulation trait, according to Paternoster (2011), provides the leader with differing perspectives when solving problems, mobilizes the ability to integrate other people's views, and seeks new measures to complete a set task. Individualized consideration provides a supportive environment to listen and carefully meet the individual needs of followers. This process may utilize delegation of tasks to enhance individual growth (Paternoster, 2011).

The best transformational leaders are those who can balance short-term results and long-term goals (Nikezić et al.,2012). Carnegie and Kiger (2009) asserted that professional goals differ from place to place and leaders need to decide which professional goals are necessary for the particular societies within which they work. Goals might entail challenging healthcare delivery, challenging social policy and regulation, suggesting methodologies for research, and sanctioning the democratization of the institutions which regulate research priorities and policy.

Nigerian nurse leaders may need to challenge some health care policies and regulations as well as regulate research priorities, among others. Contino (2004) noted that for nurse leaders to effectively lead others, they need to possess communication skills, organizational management skills, the ability to analyze and strategize, as well as to create and envision, all of which are attributes of transformational leadership. Weber (1978) added that such leaders work within the

existing systems or environments to achieve results by defining a clear hierarchy of decision making for effective running of their organizations. This hierarchy, according to him, consists of legitimate authority relations between leaders and followers in a “balanced state” (leaders are accepted by their followers).

In every health care system nurses are major stakeholders and have a leadership role to play to attain desired goals. Meyer et al. (2004) and IOM (2010) reported that synergistic relationships exist between the quality of patient care/health care outcomes and nursing leaders' active involvement in making decisions about care. Their leadership role helps to institute measures to improve and promote care, to enhance professional accountability, and to foster multidisciplinary teamwork and patient safety, all leading to the achievement of a national health strategy (Murphy, Quillinan and Carolan, 2009). Prybil (2007) urged hospital boards to reach out and engage clinical nursing leaders in developing goals and strategies for improving the quality of patient care in any prominent healthcare organization. Havens and Vasey (2005) emphasized that these leaders must then use research to make informed decisions that have an impact on patient care, working conditions, and organizational policy. Benner (2000), Canadian Nurses Association (2009), Contino (2004) and Nikezić et al. (2012) argued that leaders need educational training to enhance their leadership abilities. The Canadian Nurses Association (2009) maintained that the development of nursing leaders begins at the onset of the nursing program and continues throughout the career of every nurse. Leadership in this context implies helping nurses to lift their practice above simply scientific caring and to change individuals to take up a lifelong commitment to political action for system change. Murphy, Quillinan and Carolan (2009) stressed the need for nurse leaders to take account of the broader political context

in which their profession developed to help inform their involvement in policy making (Abood, 2007).

In Nigeria, Efem (2005) described the role of nursing leaders to include involvement in policy formulation and interpretation, provision of care in line with set standards, and participation in on-going nursing and medical research, among others. Similarly, the National Association of Nigerian Nurses and Midwives (NANNM) identified the role of nursing leaders to include participation in planning, policy-making, and in the administration of health care delivery services at all levels of government (NANNM, 2014). Furthermore, the West African College of Nursing (WACN) (2008) emphasized the unique role of nurse leaders, which entails assumption of leadership positions in nursing education, administration, research, and clinical practice, as well as being politically active to engage in policy and decision making on health and nursing matters at local, national, and international levels. The College's nurse leaders need these qualities in order to achieve positive health care system outcomes, especially necessary in the Nigerian health care system with its high disease burden. Successful nurse's leaders, Murphy, Quillinan and Carolan (2009) suggested, engage in lifelong learning through research to enhance decision making and the development of skills.

**2.11 Involvement of Nurses in Research**

Nursing research evolved about three decades ago as a way to embrace professional autonomy. Academic nurse researchers have contributed immensely to developing evidence-based practice; however, gaps still exist between research and actual clinical practice (Smirnoff et al.,2005). The unique role of nurses as implementers of PMTCT policy calls for their involvement in research productivity. UNICEF et al. (2009) noted that although much knowledge abounds on how to prevent MTCT of HIV, the challenge has been on how to expand

implementation and optimization of programs in low- and middle-income countries. Research is needed to overcome this challenge. In the same vein, Court (2006) asserted that a gap exists between research and HIV policy in developing countries and that this gap has had distressing consequences on the quality of life of the HIV patient. It has also provided the motivation for technical consultation on operations research that can enhance implementation in PMTCT of HIV programs and paediatric HIV/AIDS care, support, and treatment.

About 70 representatives from countries highly affected by HIV, international and donor organizations, implementing organizations and academic institutions participated in developing areas of PMTCT operational research (UNICEF et al.,2009). Research on health and disease control programs (such as PMTCT) involves generating practical serviceable knowledge, which can advance program implementation and is characterized by the variables of effectiveness, efficiency, quality, access, expansion, and sustainability, irrespective of the research design, methodology, and approach. Successful operational research studies have the potential to change policy and practice, and to improve program and health system performance (UNICEF et al.,2009). Operational research in preventing MTCT of HIV should target measures on how global guidelines can be implemented in low- and middle -income countries while taking into consideration the local context. This is a necessity because these countries lack formal channels to expedite the sharing of experiences or to systematically analyze existing field data, along with a dearth of global mechanisms to categorize priorities and provide global agendas (UNICEF et al.,2009).

The five broad areas that research in PMTCT should target include but are not limited to identifying: 1) effective strategies for providing and monitoring CD4 testing/antiretroviral treatment for HIV-positive pregnant and breastfeeding mothers; 2) effective ways for

implementing postpartum prophylaxis during breastfeeding; 3) possible methods to measure the effectiveness of PMTCT programs for both maternal and infant outcomes; 4) effective community strategies to increase utilization of PMTCT services; 5) measures to effectively involve family and male partners; 6) the consequence and impact of task-shifting in various settings; different levels of the health care system and different cadres of health workers; and 7) operational research related to PMTCT prongs 1 and 2 (UNICEF et al.,2009; WHO/UNICEF, 2012).

The PMTCT operational research committee advocated for the need to raise awareness towards research in national health and technical working groups as well as to build research capacity. The International Center for AIDS Care and Treatment Program (2013) asserted that nurses and midwives are on the frontlines against HIV, therefore their role is integral to HIV services including involvement in operational research. According to Ogbolu et al. (2013) nurses have an essential role to play in providing practical and scientific insight into the development as well as the implementation of strategies that support translation in both global and national practice settings. Ogbolu et al. (2013) appealed to researchers (including nurses), policymakers, and clinicians to work together so that research evidence can guide policy formulation and practice to effectively eliminate HIV transmission from mother to child. The Pan American Health Organization (PAHO, 2004) stipulated that nurses are in a unique position to develop strategy such as building research capacity, in order to strengthen their potential to provide services to help meet the health needs of both individuals and the community (Ager and Zarowsky, 2015; Asuquo et al.,2013; Etowa, 2014; Edward et al.,2009; Ofi, Sowunmi, Edet and Anarado, 2008).

Nursing research has been identified as one of the key areas of focus in the Nigerian National Strategic Health Development Plan (NSHDP), (Federal Ministry of Health (Nigeria), 2009). Although a number of organizations such as the Medical Research Council of Nigeria, the National Science and Technology Development Agency, and the Department of Planning, Research and Statistics exist to facilitate research in Nigeria, including nursing research, many factors still remain that hinder nurses' contributions to productive research in the country. These include lack of funding, high attrition rates from young researchers due to lack of mentorship programs, and a weak enabling environment. For example, the '10/90 - gap" which demonstrates the discrepancy between the size of disease burden and the allocation of health research funding, still exists in Nigeria (Ramsay, 2001). Other barriers to nursing research include lack of coordination, lack of regular fora to discuss health research, poor linkages between research and policy, as well as between international and national research agendas, sub-optimal capacity building strategies, and ineffectual documentation and publication (Federal Ministry of Health (Nigeria), 2009). For instance, the National Association of Nigerian Nurses and Midwives is identified as one of the associations to partner with other medical associations to achieve better health outcomes, but failure of cooperation among professional groups such as these has contributed to the poor performance of the health system (Federal Ministry of Health (Nigeria), 2009). Measures to overcome these barriers include building institutional capacities to promote, undertake, and utilize research for evidenced-based policy making and programming in health at all levels, encouraging collaborative research between institutions and communities, institutionalizing processes for setting health research agenda, and health research communication strategies at all levels (FMOH, 2009). In spite of this strategic research plan

since 2009, Nigeria's coverage in PMTCT programs remains low even though the 2015 global target called for eradication (AIDS info, 2014).

Nurses in Nigeria, and globally, are known to possess a high degree of expertise in the areas of disease prevention and health promotion, and can collaborate through research with other professionals to attain health system goals (WHO, 2010b; PAHO, 2004). The IOM (2010) has encouraged nurses to take the lead in collaborative health research for successful health care reform. Hinshaw and Grady (2010) specified that to influence health policy, research must address major public health issues, be of interest to multiple disciplines and audiences, involve an interdisciplinary team of investigators with multiple bodies of knowledge, and focus on families, patients, and communities. Also, the research must have the ability to integrate complex health issues, for example, to merge bio-behavioural concepts and indicators.

Once these characteristics are met, another challenge is determining how the research findings will be used to develop policy. Hinshaw and Grady (2010) noted that the most frequent barrier preventing nursing research from shaping policy was lack of congressional interest or not taking advantage of a window of opportunity. Long term nursing research programs will generate a larger body of scientific knowledge, allowing nurses to take advantage of any policy window created since nurse leaders can provide information on numerous situations.

Other barriers to nursing research include research that is not focused on major health concerns and a lack of research visibility to broader public and policy makers. Clancy, Glied, and Lurie (2012) argued that for nursing research to effectively catch policy attention it should: identify critical problems (such as PMTCT), explore the benefits and harms of policy solutions, and estimate the costs and consequences of policy proposals.

Edwards et al. (2009) reported on nurses' limited involvement in research in low- and middle-income countries, which they attributed to barriers due to power differentials in the health care system, limited research resources, lack of educational opportunities to build nursing research capacity, lack of research mentors, and lack of funding for nursing research. Ager and Zarowsky (2015) suggested that barriers to research in these countries could be grouped into three major areas: The recognition that privileged independent researchers over team work, globalization of knowledge (research rooted in context, e.g. funding research associated only with WHO recognized disease-burdened areas, and institutionalization of capacity (research conducted only within research institutes and universities). In order to enhance the capacity of health research, the complex interface between these three areas should be acknowledged and resolved by funding agencies.

Researchers in Nigeria have reported on the poor involvement of nurses in research and policy development in the country (Asuquo et al.,2012; Edet, Ella and Essienumoh, 2011; Etowa 2014; Fajemilehin, 2009). This limited involvement of nurses can be attributed to a number of factors: time constraints, lack of adequate staff and excessive work load, lack of research mentors, high cost, lack of organizational support, organizational characteristics (lack of evidence-based practice/policy protocols), and lack of other resources for transmitting research evidence into practice. These barriers could be overcome if nurses unified their effort as a group/association and not as individuals to attain a common goal (Taft and Nnna, 2008).

## 2.12 Involvement of Nurses in Policy Development

Health policy refers to decisions, plans, and actions that are undertaken to achieve specific health care goals within a society. Policy generally implies authoritative decision making, according to Stimpson and Hanley (2009), and involves the choice that a society,

segment of a society, or an organization makes regarding its goals and priorities and the ways it allocates its resources to attain health goals (Mason, Leavitt and Chaffee, 2007). PMTCT policy in this study therefore refers to the plan and action taken by various health care system stakeholders to attain the goal of eliminating mother-to-child HIV transmission. Such policy on an explicit health issue such as PMTCT, defines a pathway for the future, outlines priorities and the expected roles of different groups in the health care system, and builds consensus and informs the people (WHO, 2011). Choices of any policy reflect the values, beliefs, and attitudes of those designing the policy (Mason et al.,2007).

Nurses have values, and when governments develop policies that reflect nurses' values then they, as nurses, have a right to be part of the decision-making process, which is a political process. According to the WHO (2010b), when countries develop strategies to expand and improve programs related to PMTCT goals, the policy issues related to PMTCT program implementation and service delivery need to be addressed. The various PMTCT policy areas include: integration of PMTCT services with other health care services, expanding these services, provision of antiretroviral therapy, financing PMTCT services, and task shifting (WHO, 2010a). The overall goal of PMTCT policies and guidelines is to ensure the delivery of quality maternal, newborn, and child care services during routine antenatal care for all women, and includes comprehensive services for women living with HIV and care for HIV-exposed infants and young children (WHO, 2010a).To obtain a comprehensive response to PMTCT strategies, national and global stakeholders have an integral role to play in policy formulation and program development as well as to make country-specific recommendations (Jashi et al.,2013).

Policies pertaining to the integration of PMTCT in HIV services into already existing health programs in the health system capitalize on the strengths and resources of both programs.

Those at risk can be reached through existing services, improving access to the health care needs of women and children and increasing the overall public health impact of HIV programs (WHO, 2010a). Kim et al. (2008) stated that the successful integration of PMTCT programs depended on the need for all stakeholders to be involved in policy formation. Dohrn et al. (2009) and Raisler and Cohn (2005) reported that integration activities of PMTCT occur at most primary health care facilities headed by nurses; hence, most activities centred on the integration of PMTCT revolved around nurses for its success.

This underscores the need for nurses' involvement in PMTCT policy formulation in the study location, which has a high prevalence of HIV and MTCT of HIV transmission. Along with policies on integration, policies on task shifting are needed to rationalize redistribution of tasks among health workforce teams by shifting PMTCT treatment responsibilities from physicians to nurses. This is an area that nurses' input is mandatory, especially in resource-constrained countries (Dohrn et al.,2009; Ditlopo et al.,2014; Kredo et al.,2014; Ogbolu et al.,2013; WHO, 2007). Although nurses are generally well-prepared educationally to play a leadership role within clinical environments, their contribution to health policy process is low, even in the face of MTCT of HIV challenges, where nurses play leading roles in counseling and related HIV services. Several authors affirmed the limited involvement nurses had in forming health system policy; a top-down manner of policy making favours nurses implementing health policies but disfavours their involvement in policy formulation (Asuquo et al.,2013; Ditlopo et al.,2014; Edward et al.,2009; Leavitt, 2009; Richter et al.,2012; Shariff , 2014). Raisler and Cohn (2005) also reported that nurses form the backbone of the new PMTCT programs and are the largest group of health workers available to diagnose and treat opportunistic infections and dispense antiretroviral therapy, but they are rarely consulted regarding clinical and policy decision

making. For example, national groups representing the voices of nurses, such as the National Association of Nigerian Nurses and Midwives, and the Nursing and Midwifery Council of Nigeria, are not represented in the National Agency in Control of HIV/AIDS in Nigeria. Hence, they do not even partake in major decision making in Nigeria (Fagbemi, 2012). Their input into the plans and policy development taking place in ministries of health and donor organizations are needed in sub-Saharan Africa to meet the challenge of MTCT of HIV.

Though Hassmiller (2010), IOM (2010), ICN (2014) and WHO (2010b) agreed for the need of nurses to be actively involved in health care planning and decision making, they pointed out that they remained marginalized in these activities. Toofany, (2005) further added that very few nurses practicing in clinical settings engaged in policy debates or perceived health policy to be a "nursing issue." Nurses' limited representation in decision making enforces their powerlessness in spite of their numbers (Gaventa, 2011; Weber, 1978). Abood (2007) reported that the nursing profession has been slow to recognize and utilize its power to support and impact health care policy. Others emphasize the need for nurses to participate in public policy formulation and political activities in order to meet their responsibilities in providing optimal health to their communities and the nation (Ennen, 2001; Spenceley, Reutter and Allen, 2006).

It is worth noting that the health care system is a conglomeration of different professionals with little shared knowledge but they connected together to meet the health needs of the populace. Recognition of each professional group's contribution to bring about common goals will involve equal representation (Abood, 2007). Failure to engage all professionals in strategic communication and action in a balanced way leads to 'systemic imperatives' (Polifroni and Welch, 1999). Under such circumstances, those who have the greatest power usually have the greatest say, implying that rules and regulations would be created by others (Meleis, 2007).

Gaventa (2012) asserted that in this state of powerlessness nurses will only carry out instructions and abide by the rules and regulations of the rulers in the system. In Nigeria, Asuquo *et al*. (2013) argued that nurses were not involved in policy development, even though they are well represented at various levels of the Nigerian health care system, including the ministries of health at both the state and federal levels. However, their voices are still often absent at policy development and in decision-making arenas.

During International Nurses' Week in Abuja in 2011, the national president of the National Association of Nigerian Nurses and Midwives challenged the Federal Government to establish appropriate regulatory bodies and include professional nurse's associations in the formulation of essential health services, policies, and programs to enhance optimal health of the populace (Fagbemi, 2012). It was evident that the Nigerian association felt underutilized. Major barriers to nurses contributing to policy-making proccesses include political factors, issues of competent leadership, the inability to use nursing research as an influence on policy making, lack of public policy understanding, and inadequate skills in policy development (Akunja , Kaseje, Obago, Ochieng, 2012; International Council of Nurses, 2005; Kunaviktikul et al.,2010;WHO, 2004). Meleis (2007) added that lack of research training, limited experience with effective knowledge transfer strategies, and few opportunities for dialogue with policy makers are additional barriers. Ditlopo et al. (2014) agreed, stating that most nurses (especially frontline nurses) were not aware of most health policies in South Africa except policies associated with remuneration which affects them directly, and that they were unaware of their various group representatives in policy arenas. Taft and Nanna (2008) noted that most nurses do not have the knowledge on how to influence policy, and that identifying where and how decisions are made can help to lessen the mystery and ambiguity associated with policy making. While Phaladze

(2003) asserted that nurses lack the expertise to contribute to policy decisions, Mason, Leavit and Cheffee (2007) described the four spheres of government, professional associations, workplace, and community, in which nurses could engage in policy and political action. With poor PMTCT coverage in Nigeria, the need to examine the barriers to nursing research regarding eliminating mother-to-child HIV transmission and the extent to which nurses contribute to public health policy becomes imperative. Suggested measures for active involvement in order to strengthen the health care system in Nigeria are urgently needed.

**2.13 Summary**

The preceding literature review has illuminated the various dimensions affecting the involvement of nurses and midwives in productive health research and policy development in the context of MTCT of HIV. The literature has presented the global policies and strategies that guided the development of Nigerian PMTCT policies and implementation strategies associated with each of the 4 prongs identified. The extent of PMTCT coverage following the implementation of PMTCT programs in the Nigerian health care system is also highlighted. An examination of this literature has also revealed the unique roles and contributions of nurses as frontline clinical practitioners in implementing interventions associated with the prongs. However, not much has been written on the contributions nurses can make in policy formulation associated with PMTCT in Nigeria. While Nigerian nurses have some limited involvement in health research, no literature was found outlining the contribution of nurses in the context of MTCT. The need for nursing leadership has been identified as an essential component to foster nurses' involvement in productive research and subsequent policy development to achieve the elimination of mother-to-child HIV transmission. This study will attempt to bridge this gap that currently exists in the Nigerian literature and will include identifying measures to actively involve nurses in research and policy development in the country.

# CHAPTER 3: THEORETICAL PERSPECTIVES

This chapter describes the theoretical perspectives that guided this work, from the identification and refinement of the research question and research design to specific data collection and analysis. It also discusses the rigor of the scientific method used as well as the findings. Given the complexity of mother-to-child transmission of HIV/AIDS (MTCT) and nurses' role in addressing this healthcare issue, it is necessary to locate this work within a critical social theory and the theoretical lens of power. Through the work of critical social theorists like Habermas (1978), and power theorists such as Weber (1947) and Gaventa (1980), a comprehensive understanding of nurses' roles in research, policy, and overall health care strategies in the context of MTCT will be presented. The chapter begins with the theoretical perspectives adopted, then is followed by a discussion of the critical social theory and the power theories of Weber (1947) and Gaventa (1980), integrating the relevance of these theoretical perspectives to nursing. The chapter will conclude with a description of the integrated theoretical framework used in this study to examine the contributions of nurses to research and policy development in the context of MTCT of HIV/AIDS in Nigeria.

## 3.1 Adopted Theoretical Perspectives

The theoretical perspectives adopted for this study are those of critical social theorist Jürgen Habermas of the Frankfurt School (Habermas, 1978) and the power theories of Weber (Weber 1947) and Gaventa (Gaventa, 1980). These theoretical perspectives were adopted to guide the design of the research questions and facilitate the interpretation of phenomena. The social critical lens utilized explains the social, political, and economic realities that have shaped the nursing environment in the study setting (Stevens, 1989), while power theory exposes power inequities in the setting and facilitates the analysis and discussion of findings. From a critical

social theory point of view, social life is structured by meanings, rules, and conventions that the individuals (nurses) as societal beings adhere to; therefore, an understanding of these conventions is central to understanding human activities (Allen, Benner and Diekelmann, 1986).

### 3.2 Critical Social Theory

Critical social theory evolved from generations of German philosophers and social theorists in the Western European Marxist tradition known as the Frankfurt School, established in 1937. According to Browne (2001), this theory does not epitomize a unified school of thought but incorporates diverse components of theory heavily influenced by the Frankfurt School theory, with the aim of reconsidering and questioning the social philosophy of Marxist theory (Allen-brown, 2001). Horkheimer (1982, p.244) identified a theory as critical when it seeks "to liberate human beings from the circumstances that enslave them" and this enslavement may be their ideology which Geuss (1981) ascribed as the major obstacle to human liberation. Through the internalization of ideologies, these (mis)representations of social processes are made to appear inevitable, natural, and constant, yet they serve to reinforce interests of the dominant group (Allen, 1989; Gaventa and Pettit 2011).

Critical philosophers opposed Marxist theory and wanted to move it beyond labor and class divisions (Ingram and Simon-Ingram, 1991; Kim and Holter, 1995) and indiscriminate applications of science (Carr and Kemmis, 1986). McCarthy (1991) argued that the major purpose of critical social theory is to make problematic what is taken for granted in culture, so that a degree of social justice can be obtained by those who are oppressed. Allen-Brown (2001) observed that the critical component of this theory not only scrutinizes negatives but exposes contradictions, social inequalities, and dominances in any environment, like a health care system. Critical social theory is effective in examining relationships of power and the underlying

structures in society that produce population inequalities (Grams and Christ, 1992). These societal structures determine, for example, the types of employment and wages that are made available to certain groups of people, distribution of wealth, access to education, and decisions concerning availability of healthcare services (Stevens, 1989). This relationship of power, according to Gaventa's theory of quiescence, is the silent agreement in conditions of glaring inequality. He asserted that an apparent lack of conflict in communities or organizations is both a sign and a consequence of deliberate use of power mechanisms that keep the subordinates in the community or organisation in mute compliance with the situation (Seeboldt and Guijt, 2010). The various theoretical perspectives used in this study will be presented in the subsequent sections, starting with philosophical assumptions of critical theory, followed by Habermas' critical theory, then the power theories of Weber and Gaventa.

**3.2.1 Philosophical Assumptions:** Evident in critical theory is the underlying assumption that individuals, groups, and society are under a self-imposed or externally imposed influence, and all three (individuals, groups, and society) are capable of being emancipated from oppressive power embedded in the basic function and structure of society (Peca, 2000). Many social processes define the privileges, mistreatment, and powerlessness distributed among persons and societal groups (Allen, 1989). The primary goal of critical theory is to break the clutch of closed systems of thought and to break the unreflective confirmation of societal functions (Steven, 1989). Breaking away from closed systems of thought will allow individuals and groups to perceive the social, political, and economic contradictions that favour the dominant groups and to take action against oppressive incongruities. This is referred to as a process of conscientization by (Freire 2002).

Emancipation connotes the establishment of truly democratic institutions capable of withstanding the corrosive effects of capitalism and the state administration (Habermas,1978). The process of emancipation involves analytically visualizing the society to unravel the prevailing dominant system, revealing the contradictions embedded in domination, assessing societal potential for emancipation, and criticizing the system to bring about change (Steven, 1989). The above process involves reflective interpretation (Ray, 1992). To challenge the status quo and emancipate from oppression, the process of critique, conscientization, dialogue, and action is required (Steven, 1989). Each person is capable of critical involvement, and due to their social nature, can appraise themselves subjectively and make objective sense of what is happening in their social world (Peca, 2000). The oppressed group, informed by critique, becomes conscientized and engage in dialogue with one another. Dialogue enhances critical reflection on the environment and the oppressed situation, and empowers subjects to engage in context-specific action to bring about desired social change.

This reflective process enhanced by dialogue is conceptualized as dialectical technique (Peca, 2000; Steven, 1989). According to Plato, the dialectical method is a form of discourse or dialogue between two or more people with different viewpoints about a subject, with a desire to establish the truth of the matter directed by reasoned arguments. Eemeren (2003) added that the goal of the dialectic method of reasoning is to resolve disagreement. This method provides an avenue to scrutinize claims for their relevance and strength (Habermas,1987). According to Rehg (2003), this infers a stance that neither inaccurately dismisses nor naively accepts what is suggested or recommended from expert authority. Similarly, Habermas's theory of communication action asserts that actors in social interaction should make and accept rational claims on the belief that good reasons could be provided to justify such claims.

**3.2.2 Jürgen Habermas' Critical Social Theory:** From the 1960s, Habermas was a dominant contributor to the critical theory perspectives in the Frankfurt School, following his work on communicative reason (Habermas, 1990). Habermas' work is best understood as the fruit of an ongoing response to the critical theory of the first generation of Frankfurt School theorists (Howe, 2000; Morrow and Torres, 2002; Seiler, 2012). Habermas (1971) asserted that human beings seek to discover the difference between reality and appearance in all spheres of life and will utilize both subjective and objective positions (ontological assumption of being). A critical social theory ontological stance is historical realism in which truth (reality) is moulded "by social, political, cultural, economic, ethnic and gender values crystallized over time" (Guba and Lincoln, 2000, p.165). Reality is therefore seen as a social construct with many realities existing with no single or primary objective (Ritchie and Lewis, 2007). By utilizing critical thought, self-reflection and self-knowledge can be achieved by individuals whose values were clouded and their situations can be viewed in a new perspective (Habermas, 1978, Polifroni and Welch, 1999).

Habermas' epistemologies on the nature of human interests that shape knowledge are related to three domains: technical, practical, and critical emancipatory interests. The idea of technical application interest involves empirical-analytic science with the absolute aim of controlling nature and the social environment through prediction (Ingram and Simon-Ingram, 1999; Steven, 1989), which Habermas opined is to control others. Practical interest focuses on historical-hermeneutic interests, which utilize communication as a tool to attain mutual understanding between persons or social groups (Allen-Brown, 2001; Ingram and Simon-Ingram, 1991). The emancipatory domain recognizes 'self-knowledge' or self-reflection, and is associated with the manner in which one's history and biography has influenced an individual's self-

perception, his/her roles, as well as social expectations. Emancipation is derived from forces (ideas, institutional or environmental) which limit options and rational control over lives; such forces, which might have been taken for granted, are seen as beyond human control.

A critical emancipatory interest combines both empirical analytic science (causal explanatory) and historical-hermeneutic (interpretive procedure) in verifying which social regularities are invariant and which are not. Through critical self-reflection, knowledge is gained, leading to a transformed consciousness and self-emancipation (Allen-Brown, 2001; Ingram and Simon-Ingram, 1991). The critical emancipatory combination is made possible through model communication patterns, where there is no falsification of facts and the communication adopts dialogue that is not based on power relationships (Morrow and Brown, 1994). Habermas (1978) recounted that the domain of empirical-analytic science and historical-hermeneutic interests are needed to generate emancipatory knowledge that will liberate individuals and groups (like nurses) from internalized societal structures (like health care system bureaucracies) as well as values imposed by society. Critical social theory thus allows for different views in addressing reality and that is why it was used in this study to address specific research problems.

Habermas elucidated on the need for emancipation by developing the theory of communication, which is viewed as a vehicle in shaping personal and social identity and mutual understanding of the world (Ingram and Simon-Ingram,1991). Habermas believed that individuals can reach common understanding and coordinate actions by reasoned argument, consensus, and cooperation (Habermas, 1984). The theory has two main components of inter-subjective communication: communication competence and an ideal speech situation. Communication competence or know-how infers proficiency in speech and is used to test claims of truth, rightness, and authenticity through argument. The argument must meet the approval of

those affected and they must provide reasons for their agreement or disagreement in a force-free environment. Such is termed transcendental-pragmatic justification (Habermas, 1984). In an ideal speech situation, Habermas argued that it is the interpersonal situation in which we converse that provides the necessary context for informed opinion (Jone, Magda and Jo Ann, 2012). In formulating the concept of an ideal speech situation, Habermas stressed the need for the opportunity for people to speak freely, freedom to challenge the rules or the topic of discussion, adequate opportunity to acquire the skills of discourse (including those of the media), and freedom from violence and other forms of coercion. Habermas argued that through the historical and social context of interaction, knowledge is constructed. A strong relationship exists between knowledge and rationality and with such knowledge, social change can occur by criticizing cultural and social conceptions (Habermas, 1984; Kincheloe and Mclaren, 2000).

Habermas' critical social theory is used in this study to enhance critique, conscientization (subjective appraisal of individualized contributions towards strategies to reduce MTCT of HIV), dialogue, and action for emancipation from barriers in the health care system. The restrictive and alienating barriers, when exposed and alleviated, will help to empower nurses for active involvement in research and policy formulation. To attain such knowledge and truth, there are two underlying assumptions. The first assumption is that linguistic communication must have consensus and understanding among the participants involved in communication, and the second is that ideal truth fortifies each encounter (Ray, 1992; Habermas, 1984). These assumptions determine the extent to which individuals (nurses) are visualized as experts in their field of practice and play a central role in resolutions of issues affecting them. Through this tool, hidden power inequities can be exposed and oppressive structures changed by the empowerment of individuals to take reasonable action (Berman, Ford-Gillboe and Campbell, 1998). The following

section provides an in-depth analysis of some theories of power and their relevance to this nursing study.

### 3.3 Theories of Power

Weber (1947) and Gaventa's (1980) theories of power guided the development of this study. Using several major concepts, the authors theorized on the various means in which societies/organizations are organized in hierarchical systems of domination and subordination. The term 'power' has an undertone of unilateral impact with the aim of influencing others to gain prestige, honour, and reputation or as a means of making social action possible (De Moll, 2010; Handgraaf, 2008). It plays a vital role in organizational policies and organizational success or failure (Weber, 1947) In Nigeria it may have an essential role in meeting health-related millennium developmental goals and in eliminating mother-to-child transmission of HIV.

**3.3.1 Weber's Theory of Power:** Max Weber was a German sociologist whose approach to power was related to his interest in bureaucracy. He discussed power in the context of the organization and its structures. Weber (1947) asserted that organizational bureaucracy, used as a powerful tool, could disrupt the more democratic forms of any organization. He asserted that we need to think broadly about power and to identify its subtle manifestation in areas least accessible to observation, because power either through coercive or non-coercive forms may impose some internal constraints, which subjects believe in or give their consent to by abiding to the status quo without identifying is interplay. In bureaucratic settings, Weber asserted that power infers the ability to make decisions and to put such decisions into action/practice, irrespective of opposition from others (Weber, 1947), or it refers to the ability of an actor (within a social setting) to carry out his will despite resistance to it (Weber 1978). Weber therefore links his theory on power with concepts of authority and rule. According to Sadan (2004), Weber

perceived the "organizational power of bureaucracy as the source of the mechanization and routinization of human life, and as a threat to the freedom of the human spirit" (Sadan, 2004, p.35). Imputed in the above definition is that the activation of power is dependent on a person's will, even in opposition to the will of someone else (Sadan, 2004). Power is often exercised to cause subjects to obey the private preferences of those who possess the power; it therefore becomes the product of obedience to the preferences of others (Dahl, 1961).

Weber developed a multidimensional approach to social stratification referred to as the three-component theory of stratification, or Weberian Stratification. This stratification replicates the interplay of wealth, prestige, and power in society. The theorist believed that social structural relations affect human behaviour and consciousness. According to Weber, the manifestation of power takes many forms such as through class, status, and party (or political power); class reveals economic order, status reveals social order while the political party that one belongs to reveals political order. Therefore, class, status, and party affect not only the individual but produce effects on other members of the community, consequently empowering some and making others powerless (Weber, 1947). Power therefore becomes an issue of domination, grounded in economic or authoritarian interests (Sudan, 2004).

According to Weber (2010), the economic order reveals the extent of material wealth acquisition, status shows the extent of prestige one has among others, and party infers power, which according to Weber, implies the ability of people or groups to achieve their goals despite opposition from others. French and Bell (1999) asserted that people in power intentionally influence people's beliefs, emotions, and behaviour to achieve their goals. Weber argues that there are basically two dimensions of power: power possession and the exercise of power (Weber, 1947). Power possession is an individual's ability to control available social resources.

These resources could be land, capital, social respect, physical strength, or intellectual knowledge. Liveseey (2006) asserts that social resources are anything that is socially desired and limited, which some people can possess and others cannot. Power therefore implies the ability to possess and control these social resources in spite of opposition. According to Enock and Markwell (2010), problems with power emanate from the goals of those in possession of power and not by the possession of power alone. Therefore, if the goals foster the interests of everyone concerned, power in this regard becomes appreciated. The exercise of power is the ability to have your own way with others, irrespective of their efforts to resist you (Weber, 1947). Consequently, an individual's social prestige, class position, and membership in a political group will enhance one's ability to dominate and keep others in subordinate positions.

Though power can be perceived as unjust, the application of power is a necessity to humans as social beings. According to Foucault (1980), power helps to make social action possible as it may constrain or enable action in a given social setting. The interplay of power has many advantages, according to Enock and Markwell (2010, p.1) "without influence (power), people would have no cooperation and no society, and without leadership (power) in medical, political, technological, financial, spiritual and organizational activities, humankind would not have the standard of living it does today." Foucault (1980) asserted that power is not really exorbitant, oppressive, or harmful (though it could be all of these things); it can have a positive aspect.

> We must cease once and for all to describe the effects of power in negative terms: it 'excludes', it 'represses', it 'censors', it 'abstracts', it 'masks', it 'conceals'. In fact, power produces; it produces reality; it produces domains of objects and rituals of truth. The individual and the knowledge that may be gained of him belong to this production. (p.194)

Falbo and Peplau (1980) asserted that people use a variety of power tactics to prompt people into action every day. These tactics include criticizing, bullying, complaining, collaborating,

avoiding, manipulating, demanding, disengaging, humoring, inspiring, negotiating, socializing and supplicating.

Power often ensues through coercion or submission to domination, but more frequently through authority. Weber identified sources of formal authority that activate authentic power; the three sources of legitimate power he believed were charismatic, traditional, and the rational-legal. These sources of authority are legitimate forms of domination. The legitimacy of domination does not infer rationality or natural justice, but domination is authentic when the subordinates assent, obey, and consider domination to be desirable, or at least bearable and not worth challenging. “It is not so much the actions of the dominant that create this, but rather the willingness of those subordinates to believe in the legitimacy of the claims of the dominant” (Gingrich, 1999 p.1). Traditional authority is made legal by the sanctity of tradition, which passes the right to rule through heredity. This authority maintains the status quo and does not facilitate social change; it is perceived as a means by which inequality is created and preserved (Weber, 1958). Weber asserted that the creation of any new law contrary to traditional norms is considered impossible in principle, unless such law is in consonance with traditional norms (Williams, 2005; Weber, 1958). Charismatic authority is based on apparent extraordinary characteristics of an individual whose mission and vision inspire others. According to Weber, charismatic authority is defined as "resting on devotion to the exceptional sanctity, heroism or exemplary character of an individual person, and of the normative patterns or order revealed or ordained by him" (Weber, 1958, p. 215). According to Williams (2005), charismatic authority is perceived by Weber to be held by someone heading a new social movement. Legal-rational authority is sanctioned by law and such authority is resting on "rational grounds–resting on a belief in the legality of enacted rules and the right of those elevated to authority under such rules

to issue commands" (Weber, 1968, p.215). Obedience here is given to a set of uniform principles not to an individual (Weber, 1958). This system of authority is found in the modern state, public corporations, city governments, and private and voluntary associations (Williams, 2005).

Weber (1958) considered an organization to be part of the broader society based on the principles of organizational structure, specialization, predictability and stability, rationality and democracy. Organizations are run by legal-rational forms of authority, which provide the right for those in elevated positions (stakeholders) to issue commands, make decisions, or promulgate policies**.** The shared decision-making space is attributed as power (Depoe, Delicath and Marie-France, 2004; Weber, 1958) with the ultimate aim of attaining the organizational desired outcome. Aumann (2008) asserted that in interactive decision theory, the outcome of power is the ability of actor/actors to bring about outcomes (Depoe, Delicath and Marie-France, 2004). Weber (1998) asserted that traditional methods of public participation (such as attending meetings and public hearings and letter-writing comment period) are part of a strategy for command and control, where decision making and technical information are guarded. He advocated the need for pluralism and collaboration in decision making to avoid hierarchy and centralization of power. In the same vein, Daniel and Walker (2001, p.71) asserted that people should not only be invited to assess their reaction to a decision already taken or their input in a decision situation, but to be in the process of decision making itself:

> When a decision authority seeks input from other parties, it will invite feedback on its terms. The decision authority might present a range of possible alternative decisions or propose a specific action and then seek the reactions of other parties, such as those likely to be affected by the decision. The decision authority may ask for ideas as it begins a planning process. In either case, the decision authority provides opportunities for participation in decision situation without participating in the process of decision making itself (Daniel and Walker, 2001, p.71).

**3.3.2 Gaventa's Theory of Power:** Gaventa's (1980) theory of power is a continuation of Weber's approach, both in the definition of power and in the attribution of power to a human factor. This theory helps to depict the direct and indirect ways in which social powerlessness is created and maintained. He perceived powerlessness as a social situation that has its roots in conditions of social inequality and not as a personal problem of the powerless. Gaventa asserted that a theory of power is integral to examining a stakeholder's role in any organization, as it helps to address who has the power and where that power originates. Power itself may be derived from the nature of a stakeholder's organization and his or her position with respect to other stakeholders (Gaventa, 2003). It is the role of stakeholders to make decisions/policies that aid the effective running of the organization, but power differentials enhance active participation of some and eliminate others from the process of decision making. Gaventa (1980) emphasized that the purpose of power is to prevent groups from participating in the decision-making processes and also to obtain the passive agreement of these groups to such a situation. Therefore, who prevails in decision making seems the best way to determine which individual and groups have more power in social life (Sadan, 2004). Gaventa and Pettit (2011) and Dahl (1969) asserted that power in the community or organization may be studied by examining who participated, who gains or who loses, and who prevails in the decision-making process.

Gaventa first formulated his ideas on power in 1980 in the American Central Appalachian region, valley rich in natural resources, especially coal. He was determined to know why community members remained obedient in spite of oppression and discrimination from the rule of the socially elite. He discovered that the social elites utilized power principally to prevent the rise of conflicts and to attain social quiescence. An apparent lack of conflict in any community or organization he identified as both a sign and a consequence of the deliberate use

of power mechanisms that keep the ruled in mute compliance with the situation (Sadan, 2004). Gaventa based his model of quiescence, the silent agreement in conditions of glaring inequality, on Luke's (1974) three dimensions of power, and described how each dimension related to power and to powerlessness. In the One-Dimensional Approach to Power, Gaventa postulated that in the overt arena of power relations, A's power over B is demonstrated to the extent to which A can make B to do something which B would not have done, had it not been for A (Gaventa,1980). This overt (direct) power dimension can be explored by means of observation of behaviour: who participates, who profits, who loses, and who expresses himself in the decision-making process. Pateman (1970) recommends that rather than blaming victims for not participating in the decision-making process, education and social integration should be utilized to produce a permanent change in behavior.

In the Two-Dimensional Approach to Power, Gaventa asserted that power is activated, not just to triumph over the other participants in the decision-making process, but also to exclude certain subjects or participants from the process (Gaventa, 1980). Sadan (2004) stipulated that in this dimension one can examine power by observing who decides what, when, how, and who remains outside the decision-making arena. This is similar to Barry (2013), who asserted that policy-making processes are not a rational weighing up of alternatives, but are driven by powerful socio-economic forces that set the agenda, structure decision-makers' choices, constrain implementation, and ensure that the interests of the most powerful (or of the system as a whole) determines the outputs and the outcomes of the political system. Non-participation in decision-making is assumed to be a manifestation of fear and weakness, and not that of indifference (Sadan, 2004). The mechanism of action utilized by perpetuators of power include preventing decision making and mobilization of bias. Decision making could be prevented through the use

of force or threat of sanctions. The mobilization of bias comes about by reinforcing and emphasizing values, beliefs, ceremonies, and institutional procedures, which present a very particular and limited definition of problems (Sadan, 2004). By mobilizing bias, it is possible to establish new barriers and new symbols that are aimed at thwarting efforts, thereby widening the scope of conflict.

The Three-Dimensional Approach to power highlights more latent behaviour (indirect). Gaventa (1980) stipulated that B is influenced by A to do what he would not have done, because A's influences determine and shapes B's will. The mechanism of action comes about by actors investing in resources (such as votes) and talents (personal efficacy, political experience and organizational strength) in order to win an advantage.

Gaventa's (1980) theory of power draws attention to the great influence of indirect mechanisms in the creation of powerlessness by eliminating certain groups from major decision making and policy formulation. Many authors have reported on nurse's non- involvement in health care research and decision making (Abood, 2007; Asuquo *et al.*,2010; Hassmiller, 2010; IOM, 2010; Mason, Leavitt and Chaffee, 2007). Toofany (2005) asserted that few nurses practicing in clinical settings engage in policy debates or perceive health policy to be a 'nursing issue.' Abood (2007) reported that the health care system is a conglomeration of different professionals with diverse knowledge but they connect together to meet the health needs of the populace, especially with the global effort to eliminate mother-to-child HIV transmission. The recognition of each professional's contribution in bringing about this common goal will involve equal representation of every group in decision making.

### 3.4 Critical Social Theory, Power, and Nursing Work

Critical Social Theory (CST) is a multidisciplinary framework with the implicit goal of advancing the emancipatory function of knowledge. It approaches this goal by promoting the role of criticism in the search for quality education and practice (Leonardo, 2004). In the early 1980s, a few nursing scholars (Kendall, 1992; Steven, 1989) pointed out the lack of attention nurses paid towards the social, economic, political, and historical conditions influencing health, clients, and nursing practice. Browne (2000) argued that empiricism and interpretivism lacked the power to address the inequities, structural constraints, and oppression within society and the health care system in particular; hence, critical social theory was seen as a theoretical and philosophical orientation to bridge this gap. Nursing science must generate and apply knowledge from various epistemological traditions such as empiricism (objectivist), interpretivism or constructivism (subjectivist), or a combination of the two hermeneutic philosophies (Browne, 2000) due to the complexities of nursing's social and ethical obligations.

In nursing, critical social theory has emerged as an important research orientation that has aligned nurse researchers to the kinds of questions relating to prevailing social conditions and the organization of human activity, posed in a way that leads to practice interventions (Berman, Ford-Gillboe and Campbell, 1998). Many authors view critical social theory as an alternative research paradigm in nursing that provides the impetus to discourse on health disparities and social injustices (Berman, Ford-Gillboe and Campbell, 1998; Henderson, 1995; Morrow, 1994; Mohammed, 2006). Browne (2000) emphasized the use of critical social theory to inform discourse on the oppressive socio-political conditions affecting health and health care. Such oppressive conditions include lack of nursing representation in decision-making arenas to ensure appropriate interventions.

The exercise of power in nursing cannot be overemphasized; it becomes a necessity if nurses are to attain professional autonomy. Power is needed in nursing to raise professional status, define a nursing area of expertise, as well as achieve and maintain autonomy and influence (Manojlovich, 2007). The absence of power to achieve these goals portrays nurses' powerlessness and the need to identify systemic and individual constraints. Schattschneider (1960) used a theory of power to illuminate some traditional power structures that promote relationships of inequality in the health care system between physicians and nurses. He upheld the need to address the injustices in a patriarchal health care system that devalues and controls nurses and others. McDonald, Jayasuriya and Harris (2012) also use power theory to assess power dynamics that affect multidisciplinary collaboration and decision making in the health care system. Manojlovich (2007) asserted that nurses need to exercise control in three major areas: the content of practice, the context of practice, and the competence of nursing practice. To remain or be in control, Gaventa and Pettit (2011) identified strategies to challenge overt power inequalities, such as lobbying, public advocacy, and mobilization to affect what decisions are made on policies, budgets, rules, or procedures. These strategies are also effective in organizations to articulate voices through the 'official' decision-making channels. Covert power inequities can be overcome by utilizing strategies to strengthen people's voices through participatory research and the media to challenge how issues are framed. Strategies to challenge latent power approaches include raising awareness, education, participatory research to validate peoples' own knowledge, uses of the media, and popular communication methods to challenge dominant stereotypes and discourses in addition to changes in approaches to schooling and socialization (Gaventa and Pettit, 2011).

### 3.5 An Integrated Theoretical Framework

Some authors have linked critical social theory with power theory (Dorahy, 2013; Umrath, 2009), and this integrated framework views power theory engrained in critical social theory, due to the ability of critical theory to emancipate people from their closed system of thought, as well as enhance self-realization (Steven, 1989). According to Umrath (2009), while critical social theory and Weberian power theory share a common interest in the advancement of modern capitalist society, critical social theory's concern is directed primarily towards overcoming dominant societal constellations. On the other hand, Weber's purpose is to understand the meaning of the processes that lead to domination. Understanding the process of domination and overcoming officious health care systems and societal limitations informed this integration. Democratic societies are not really as democratic as believed; because citizens are manipulated by forces of power that make them remain silent by reasons of domination or subordination, instead of enjoying equality and interdependence (Steinberg and Kincheloe, 2010). Such forces of power can take the form of class, status, and party (Weber, 1947). Critical social theory therefore seeks to:1) understand society and its organizational governance, 2) utilize a holistic approach to evaluate any social relationships, 3) identify forms of social domination, and 4) provide orientation towards societal change with the attainment of social justice through critiquing (Corradetti, 2011).

Criticism uncovers deeply rooted forms of irrationality deposited in contingent and historical institutional foundations and processes. Hence this theory digs beneath the surface of social life and exposes the assumptions that keep members from a full and true understanding of how the organization or the society operates (Crossman, 2015). Power theory does not take institutional or societal power relations for granted but calls these relationships into question by

concerning itself with their origins and how they manipulate their subjects. Weber (1978) asserted that power remains hidden in most bureaucratic administrations and there is a need to examine the subtle interplay of power in areas least accessible to observation (Weber, 1978). This bureaucratic administration is epitomized as an all-encompassing domination of formal rationality over substantive values. For Weber the notion of rationality infers "purposive rationality," which aims at achieving goals through the selection of the best possible means of action. The main purpose of power theory is for individuals and groups to attain a cooperative form of self-actualization when freed from coercive mechanisms of domination in bureaucratic administration. Crossman (2015) asserted that three core conditions must be met when this theory is used: it must clarify what is erroneous with existing social reality, identify the people to change it, and provide standards for criticism and achievable practical goals for social change.

Therefore, understanding the ways one is oppressed enables one to take action to change oppressive forces; this knowledge is power. The critical theory approach to policy focuses on three main areas: 1) Identifying the associations among policy context, process and content, particularly how the interaction between the processes and contexts influence the content, agenda setting, and choice of policy instruments.; 2) Analysing and exposing the ideologies and values underpinning policy issues and their proposed solutions;  and 3) Outlining the reality of organizational processes, particularly how people experience policies in their daily environments (Reutter and Duncan 2006). According to Mill et al. (2001), the ultimate goal in any policy analysis informed by Habermas is to identify the power relations intrinsic in policy processes. Weber asserted that in every organization, there is an organizational power of bureaucracy which acts as a threat to the freedom of some, while providing others with the mandate to issue commands, make decisions, or promulgate policies. These decision or policies may foster the

private preferences of those who possess the power and not necessarily the organizational goals. According to Weber (1947), there are subtle manifestation of power in areas that subjects may not realize, therefore they believe and accept the agreement by abiding to the status quo without identifying the interplay of power. But Gaventa and Barrett (2010) argued that the interplay of power, either directly or indirectly, may keep subjects in salient agreement in the face of glaring inequities. Therefore, determining the overt, covert, and latent forces which hinder nurses' participation in research and policy involvement becomes imperative.

In this study, the power theories of Weber and Gaventa are well aligned with critical social theory. Critical social theory provides the lens to illuminate internalized ideologies that prevent individuals and groups from achieving their goals. It makes problematic what is taken for granted. A critical social theory analysis further helps to uncover the realities and interactions between policy contexts, contents, and processes, while power theory illuminates the overt, covert, and latent interchange of power in the contexts, contents, and processes in policy as well as in areas least accessible to observation. Theory is used to examine factors that keep nurses in mute compliance in the presence of glaring inequalities in decision-making processes and research involvement. Critical social and power theories are therefore effective in examining relationships of power and the underlying structures (cultural, social, economic, and political) influencing contexts, contents, and processes in the health care system to produce inequalities in research and policy formulations (Fig. 1).

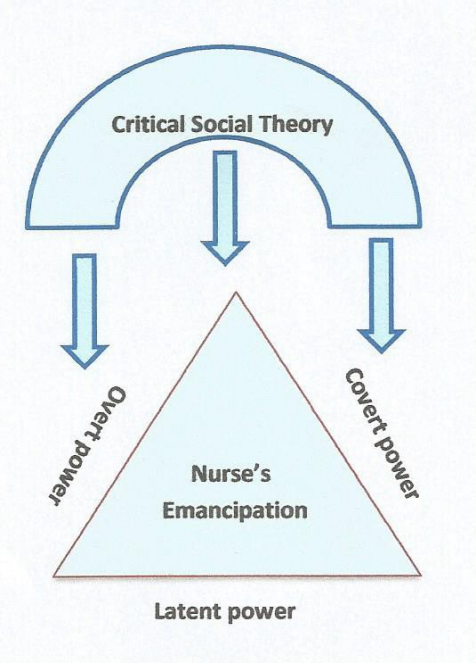


**Figure 1: An integrated theoretical framework of critical social and power theories**

### 3.6 Summary

Critical social theory and power theory are used in this study to illuminate power inequities and emancipate nurses from negative organizational constraints that prevent them from making reasonable contributions in research and policy formulation. This integrated framework reveals the subtle interplay of power and prescribes measures on how to actively engage nurses in research and policy formation with the aim of eliminating mother-to-child HIV transmission in Nigeria.

# CHAPTER 4: METHODOLOGY

This chapter presents the qualitative research methodology used in this study, I ncluding the participatory action research (PAR) and case study principles that guided the specific methods for sampling, data collection, and analysis as well as the research process evaluation strategies. The chapter begins with an overview of the research design followed by a comprehensive description of participatory action research and its relevance to nursing. The case study approaches, including its underpinnings, study settings, and boundaries, are presented. The data collection methods used in this study, such as interviews, focus groups, and document reviews as well as sampling and participant recruitment, are described. Data analyses methods including thematic analysis are identified followed by the case study: Cross River State and its four embedded units. The demographic characteristics of the participants are explained and the contributions of the local advisory committee are presented. Finally, the chapter concludes with a discussion of the steps taken to ensure scientific rigor in the study, and ethical considerations.

## 4.1 Research Design

Qualitative research design is used for this study. According to Creswell (2013), it is an ideal way to identify the knowledge claims of the researcher (theoretical perspective), strategies of inquiry, as well as the methods of data collection and analysis that will be used. While utilizing qualitative research as a strategy for inquiry, it is the philosophical stance that guides the researcher. Although an ontological assumption stresses the nature of reality, especially its socially constructed nature, the epistemological assumption invokes an intimate relationship between the researcher and those being researched (Creswell, 2009; Denzin and Lincoln, 2000). The axiological assumption of qualitative research is value-laden; therefore, the researcher epitomizes their values and biases, coupled with the value-laden nature of the findings (Denzin

and Lincoln, 2005). The rhetorical assumption highlights the language of the research, with the researcher writing in a personal and literary style (Creswell, 2013). On the other hand, the quantitative inquiry examines the cause and effect relationship emphasized in measurement.

According to Creswell (2013) the choice of any research approach depends primarily on the nature of the research problem and the questions being asked. The case study approach informed by PAR principles is chosen for this study. Stake (1995) indicates that a case study enhances the investigation of a complex social unit by using various methods, thereby providing a comprehensive view of phenomenon being studied (Stake, 1995). Since the case study takes place in a natural setting, the research is anchored in real-life situations, resulting in a holistic and rich account of a phenomenon. According to McNiff and Whitehead (2006), participatory action research provides participants with an opportunity to participate in the research process as well as enhance knowledge development. The case study approach was chosen to assess the social, political, and economic structures (contextual factors) that have influenced nurses' involvement in research and policy development. Apart from identifying the various factors and recommendations, the need to actively engage nurses in creating change in their situation necessitated the use of PAR, which has the potential of mobilizing participants to become change agents and co-researchers (McNiff and Whitehead 2006). The use of both the case study approach and PAR in this study facilitated not only a comprehensive examination of nurses' involvement in research and policy formulation in the context of MTCT, but also a collective action for social change. The main tenets of PAR are introduced prior to discussing the case study research approach in this work.

### 4.2 Participatory Action Research (PAR)

Participatory action research is said to have developed from action research and has gradually emerged as a methodology for interventions, development, and change within

communities and groups (Freire, 1982; McNiff and Whitehead, 2006). PAR originated when scholars expressed their dissatisfaction with traditional methodologies that did not adequately address the real interests of marginalized groups (Dickson, 2000; Kemmis and Mctaggart, 1988). The primary focus of PAR is spurring participants into collective action to enhance change (McNiff and Whitehead, 2006). It is believed that people learn best, and are more willing to apply what they have learnt, when they do it themselves (McNiff and Whitehead, 2006). O'Brien (2001) viewed PAR as the best research method when a holistic approach is needed to solve existing problems. According to Chambers (2008, p.297) "Participatory action research is not a monolithic body of ideas and methods but rather a pluralistic orientation to knowledge making and social change."

Schwandt (2001) identified three major characteristics of PAR that differentiate it from other research methodologies: 1) participatory characteristics that enhance collaboration and cooperation between the researcher and the participants for problem identification, method choices, data collection and use of results, 2) the use of democratic principles and ideals, and 3) the production of knowledge, which enhances consciousness creation and empowerment for collective action. However, some authors described PAR as research process, which utilizes a three-part process of education, social investigation and action to share in the creation of social knowledge with oppressed people (Park et.al.1993; Maguire,1987). Inherent in these characteristics is the assumption that knowledge empowers those oppressed. According to Smith and Romero (2010), the prolonged collaborative relationship of PAR is what provides participants with an opportunity to reflect on their sociocultural locations and to generate an experience of communal efficacy as well as create and implement action for social change. Participatory action research has a lot of advantages with endears this research method to it users

**4.2.1 Advantages and disadvantages of participatory action research:** In terms of advantages, participatory action research as a recognized approach to social investigation, is endowed with some benefits to the participants as well as the researcher, through its process of combining education, research and collective action (Park et al.1993). The critical consciousness raised by the education and knowledge generation (i.e. investigation) components of PAR empowers the researcher and co-researcher (i.e. the group or participants) to become a major tool or catalyst for social change. This social change comes in three key ways namely: Developing a critical consciousness of both participants and researcher creates transformation that could, improve the lives of those involved in the research process; who may also transform societal structures and relationship (Bennet,2004). Knowledge provides impetus to solve practical problems among a community or group of people thereby enhancing a fairer and more egalitarian society (Maguire,1987).\

PAR has the unique ability of changing its participants into researchers (McNiff and Whitehead, 2006). Group involvement in PAR also provides opportunity for greater sensitivity and self-awareness of the problem. Participants developed trust and self-confidence as well as knowledgeable about resources to change their condition. Involving the group with a common PAR objective aids in producing practical outcomes that are workable (Walter,2009). Humanistic approach is enhanced through involvement of everybody in solving social problem (Tagum,2013). Hall (1981) stated that PAR can be used as an effective and manipulative "tool" for getting the views of the majority into the heart and minds of those that oppose their views.

Despite the advantages of PAR outlined above, the research approach also has some disadvantages such as: lack of identified leader, lack of agreement, some may suffer isolation, increase unhappiness, lack of time, loss of scientific objectivity, some may become manipulative,

dropout, creation of fractions, attitude of superiority and loose timeline. According to Walter (2009) the democratic processes and group involvement may lead to competing research agendas, since there is no leader. Interestingly, classifying group members to have shared interest does not result in an agreement on what the problem is and how it might best be addressed, as some group members may have different opinion about the problem at hand. Bennet (2004) stated that some participants may become ostracized from their community because of their involvement in the PAR project. In addition, Cornwall and Jewkes (1995) stated that participation in the project may lead to increase unhappiness, due to a heightened awareness of the oppressed by their oppressors. The added barrier of time when it comes to research involvement is a disadvantage also common in PAR, even when the group members are interested in the research project, generally research related activity is time consuming (Cornwall and Jewkes,1995). The authors further added that most oppressed individuals (economically oppressed) may be busy trying to secure the basic necessities of life, more than participating in research activities.

According to Bergold and Thomas (2012) some researcher may lose their scientific objectivity to data analysis in neutral way, because of working so closely with study participants/co-researchers. Instead the researcher becomes an advocacy for the people's issues and not an objective researcher reporting on study findings. Some powerful leaders may try to manipulate the research agenda in line with their personal interest, the need to watch for such manipulative intentions becomes imperative to attained set goals (Cornwall and Jewkes,1995). Tagum (2013) stated that managing the large number of people to attained the various group meetings is a problem, and many participants may drop-out while the research process is going on, with new members brought in, the process of re-sensitization must be repeated. The creation

of fractions within the participatory group is a common characteristic in PAR relations. Such fractions may exist in terms of class tensions, factionalism and ethnicity, which can have direct impact upon participatory research process (Pigozzi,1982). The author further stated that participants/co-researchers may developed attitude of 'superiority" over other members, which might lead to unnecessary antagonism even from those the research was suppose to benefit. Walter (2009) added that PAR process has loose timelines as the process evolves according to the group. Therefore, knowing when the problem becomes resolved is not possible, hence become a major disadvantage in utilizing PAR.

**4.2.2 Relevance of PAR in nursing:** To bridge the theory and practice gap, PAR has served as the most suitable research methodology for nurses because of its participatory process (Greenwood, 1984; Glasson, Chang and Bidewell, 2008). It has been used as an essential tool to evaluate models of care and changes in nursing practice (Hart and Bond, 1995; Glasson, Chang, Chenoweth, Hancock, Hill-Murray, and Collier, 2006). The cyclical reflective nature of PAR endears it to nurses because it is similar to the nursing process, which utilizes various steps to meet client needs and produce autonomy among nurse practitioners (Hart, 1996; Glasson et al.,2006; Pastor-montero et al.,2012). It has the ability to facilitate change in education and practice and also serves as an effective tool in narrowing the theory-practice gap through its collaborative principles (Glasson, Chang, Bidewell, 2008). Glasson et al. (2006) utilised PAR to improve the quality of nursing care for acutely ill patients through a model of care which was developed, implemented, and evaluated by the process. Pastor-montero et al.(2012) utilized PAR to improve care provided to parents who experienced a perinatal loss, while Etowa, Bernard,

Clow and Onyisan (2007) used PAR to mobilize black women to improve their access to healthcare.

PAR has been widely used to engage nurses in research. Fournier, Mill, Kipp and Walusimbi (2007) employed PAR to provide nurses with voices through collective reflection on practice, making meaning of their experience and changing their understanding of the role in HIV/AIDS care. Similarly, Mill et al. (2013) and Richter et al. (2013) have used PAR to engage nurses in sub-Saharan Africa and the Caribbean in HIV/AIDS research and policy development. Etowa et al. (2011) also used a community- based PAR approach to actively engage aboriginal nurses in the investigation of their work-life issues in eastern Canada.

Loewenson et al. (2010) revealed that health systems research is an essential avenue for knowledge generation to inform pathways and policies for accomplishing millennium developmental goals. PAR provides a means of changing the traditional research methods and involves care receivers and providers as active agents of change to organize research evidence, motivate action, and challenge the marginalization that weakens achievement of universal health coverage. The authors added that 'the systemic processes that produce marginalization and inequality also need to be made visible, understood and challenged" (Loewenson et al.,2010 p.35). Flores et al. (2010) employed PAR to determine if public polices and resources were addressing local access to health care, providing collaboration between rural citizens and front-line health workers. Researchers in Guatemala revealed that marginalized citizens were empowered to scrutinize public policies and demand appropriate interventions from local and central governments (Loewenson et al.,2010).

PAR as a research methodology enhances communication among various health professionals and health system consumers. Therefore, PAR provides a means of detecting

unrecognized health problems in communities, work-related problems and problems among health workers, thereby serving as a good research method of strengthening health care systems (Loewenson et al.,2010). This component correlates with Habermas (1984) who used linguistic communication to attain consensus in a force free environment. Thus PAR is a good fit with critical social theory. A WHO (2005) task force report demonstrated that the PAR methodology has the potential to generate knowledge to strengthen health systems and attain the Millennium Development Goals, especially goals 4 to 6 (that is reducing child mortality, improving maternal health, and combating HIV/AIDS, malaria, and other diseases). These three health-related goals will strengthen other MDGs such as eradication of poverty and development, since ill health causes poverty and loss of income.

O'Brien (2001) identified four main types of PAR: traditional, contextual, radical, and educational action research. The traditional approach involves concepts and practices of field theory. Group activities tilt toward the conservative, maintaining the status quo with regards to organizational power structures. The contextual approach involves reconstituting the structural relations among actors in a social environment and allows social transformation to occur by consensus. The radical approach, commonly seen in liberationist movements and international development circles, struggles for social transformation using the advocacy process to strengthen marginalized groups in society (O'Brien 2001). This type is also referred to as critical PAR (Kemmis and McTaggart, 2005). The radical type of PAR is used in this research. The fourth type, educational action research, has its foundations in the writings of John Dewey, who believed that educators should be included in community problem-solving.

I chose PAR as a methodology framework in this study for five main reasons. First, PAR is used to mobilize nurses and non-nurse stakeholders in the health care system for

collective policy and research leadership. Second, the concept of collaboration between the researcher and participant, which is an integral component of PAR, allows the participant to be a full subject in the research process, rather than an object to be studied (McNiff and Whitehead 2006; Kemmis and McTaggart, 2005). It was necessary to obtain the perception of stakeholders affiliated with eliminating mother-to-child HIV transmission in Nigeria in order to have a comprehensive view on the extent of nurses' involvement in research and policy. Third is the emancipatory component, which helps participants to explore the means in which their life practices are shaped and constrained by cultural, economic, and political structures as well as identify strategies to recover and emancipate themselves from such constraints. Fourth, the critical component provides an avenue for critical assessment of the social world and identifies how discourses and social relationships of power can contest and reconstitute unfair and fruitless practices. This critical assessment exposes power inequities embedded in the health care system that previously were not recognized. Last is the action or change component, which is the central point of the process. The fundamental idea is for participants to collaborate with the researcher to develop an insight into facilitators that would result in action. According to McNiff and Whitehead (2006), researcher and participant may assume different roles for collaboration, which requires clarification from the onset. Such roles may include participants as researchers, participant as problem formulators, and the development of a participants' network as a knowledge-sharing platform (Kemmis and McTaggart, 2005). The researchers may become colleagues or participants (O'Brien, 2001). In this study, participants are co-researchers and were involved in clarifying the research questions, as well as in the overall research process, including providing input into data analysis and evaluation of the research findings.

**4.2.3 Advisory Committee:** An Advisory Committee was constituted for this study, made up of key nursing and non-nursing leaders from the various embedded units. The formation of an advisory committee is in line with the principle of PAR that utilizes the democratic process in the creation of new knowledge. Group activities require active involvement in every stage of the research process, which include shared ownership of research projects, shared analysis of the problem, and orientation towards action (Kemmis and Mctaggart, 2005). Although the study participants were not involved in the initial conceptualization of this project, all members unanimously gave consent to and supported the research progress. This was contrary to Dickson (2000) who stated that when issues and questions emanate from the participants they are more willing to participate, however, Streubert (2011) affirmed that in nursing most issues to be studied emanate from the researcher, but when such problem is in tune with participant's daily experience, they are more willing to take action. Purposive and snowball sampling techniques enhanced the selection of advisory group members.

The advisory group activities started with a visit to the Director of Nursing services in the state and a declaration of the researcher's intensions. This initial visit set the ball rolling as she identified some nursing leaders and suggested the use of the CRS Nursing Association committee meetings to identify other key nurses. This action was in line with the Asian NGO coalition (2010), which asserted that researchers' immersion in the field is essential for effective recruitment of study participants or "co-researchers." Recruited core members were doctors, nurses and midwives, all leaders in their clinical, academic, nursing association or community areas.

The terms of reference of this group included being involved in every stage of the research process with shared ownership of research projects, helping to analyze the problem and orienting

the project towards action (Kemmis and Mctaggart, 2005). Members contributed ideas, set priorities, supported and promoted the interest of the group to nurse leaders in the clinical, educational, and community areas. Members also became a sounding board, providing initial guidance to recruitment of other participants by motivating them on a one-and-one basis coupled with informal group discussions. The strategy was to raise the physical, emotional, and mental energies of participants to a level in which they could take collective action.

The advisory committee was made up 10 members. To broaden perspectives, nursing leaders from the various health units suggested involving staff in the continuing education department. An additional 6 participants who were willing and enthusiastic about the research activity were added to the group. These 6 participants and the 10 advisory members formed the initial nursing research group. No incentives were offered for participation. However, according to PAR principles, the group provided the atmosphere where input from each participant could challenge and stimulate the others to create a learning environment with remarkable vitality and creativity. Denzin and Lincoln (2005) indicated that a research exercise with PAR methodology makes research more humanistic and relevant to the lives of the participants. Most participants had acknowledged interest in this research method, which enhanced their research capacity and fostered their involvement in health care research.

**4.3 Case Study Research Approach**

Stake's (1995) case study approach was used to investigate nurses' involvement in research and policy related to MTCT of HIV in Cross River State, Nigeria. According to Stake (1995), a case study is a recognized vehicle in conducting qualitative research; it can be used to investigate single or multiple cases. Stake (1995, p.11) defined the case study as the "study of peculiarity and complexity of a single case, coming to understand its activity within important

circumstances." He later asserted that "as a form of research, the case study is defined by interest in individual cases, not by the methods of inquiry used" (1998, p.5). Therefore, it allows researchers to focus on complex situations while taking the context of the situation into consideration (Keen and Packwood, 1995). The case study also allows the exploration of issues through multiple lenses and so enhances multiple facets of the phenomenon to be revealed and understood (Baxter and Jack, 2008; Stake, 1995). A case is defined as a phenomenon occurring in a bounded context (Miles and Huberman, 1994) or a specific, complex functioning thing such as people and programs in a bounded system (Stake ,1995). This bounded case or system may be an activity, event, or project that are limited by time and place (Creswell, 2013), time and activity (Stake, 1995) and by definition and context (Miles and Huberman, 1994). According to Stake (1995) the case study approach has some distinct advantages that make it an acceptable research tool for this study: its applicability when there are no clear cut boundaries between the phenomenon to be studied and the context, when detailed interaction of the case with its context is needed, when there is no behavioural manipulation, and when the political, historical, physical, economic, cultural, and situational contexts are to be discovered.

Multiple realities are valued in case studies; they also allow for subjectivity as they occur in a natural environment. Yin (1989) proposes that the case study enjoys a distinct advantage over other qualitative traditions when the emphasis of the inquiry is on a current phenomenon that is situated in a real life milieu. These characteristics were compatible with the objectives of this project eliciting data on how and why nurses are or are not involved in research and policy formulation in the context of MTCT of HIV in Nigeria.

To obtain an in-depth understanding of nurses' involvement in research and policy affecting MTCT of HIV, this study is considered as a single case with embedded units. Stake

(2005) stated that a single case is a case of one particular entity or event at a specific time. A single case containing more than one unit of analysis is known as a single case with a sub-unit or embedded unit of analysis (Stake, 1995; Yin, 2003). Scholz and Tietje (2002) asserted that the identification of sub-units allows for a more detailed level of inquiry. Baxter and Jack (2008) further stated that single cases with embedded units provide an opportunity to look at the various sub-units situated within the larger case, adding credibility to findings when data is analyzed within the sub-units separately (within case analysis), between the different sub-units (between case analysis), or across all of the sub-units (cross-case analysis). The ability to engage in such rich analysis serves to illuminate the case (Baxter and Jack, 2008).

Stake (1995) asserted that the focus of research questions, the nature of the study, and the curiosity of the researcher is the determinant of the strategy for analysis. The case study also utilizes a concurrent method of data collection and data analysis until data saturation is achieved, a process which ensures data collection on every facet of the phenomenon of interest and analysis is through direct interpretation of individual instances and aggregation of instances until a class is formed (Stake,1995).These qualities prompted me to choose this form of study design to enhance a detailed exploration of the phenomenon of interest, which is nurses' involvement in research and policy towards eliminating mother-to-child HIV transmission.

In this study the main case is Cross River State (CRS) also regarded as the first level case. The second level case involves the four embedded units: CRS health establishments, nursing associations, HIV/AIDS support organizations, and health care institutions. The third level case comprises the various sub-units that constituted the four embedded units named in the second level. These are: 1) the State Ministry of Health (SMOH) and the State Agency in Control of Aids (SACA), which is made up of CRS health establishments; 2) the National

Association of Nigerian Nurses and Midwives (NANNM) and the West African College of Nursing (WACN), representing the nursing associations; 3) Family Health International (FHI) 360 and Saving One Million Lives (SOML), which made up the HIV/AIDS Support Organizations; and 4) the University of Calabar Teaching Hospital (UCTH); General Hospital, Calabar; General Hospital, Ogoja; and primary health care coordinators, representing health care institutions. The fourth and final level of the case involved the individual study participants, regarded as stakeholders, from the embedded units described above. See details of this multiple-level case study in Figure 2 below.

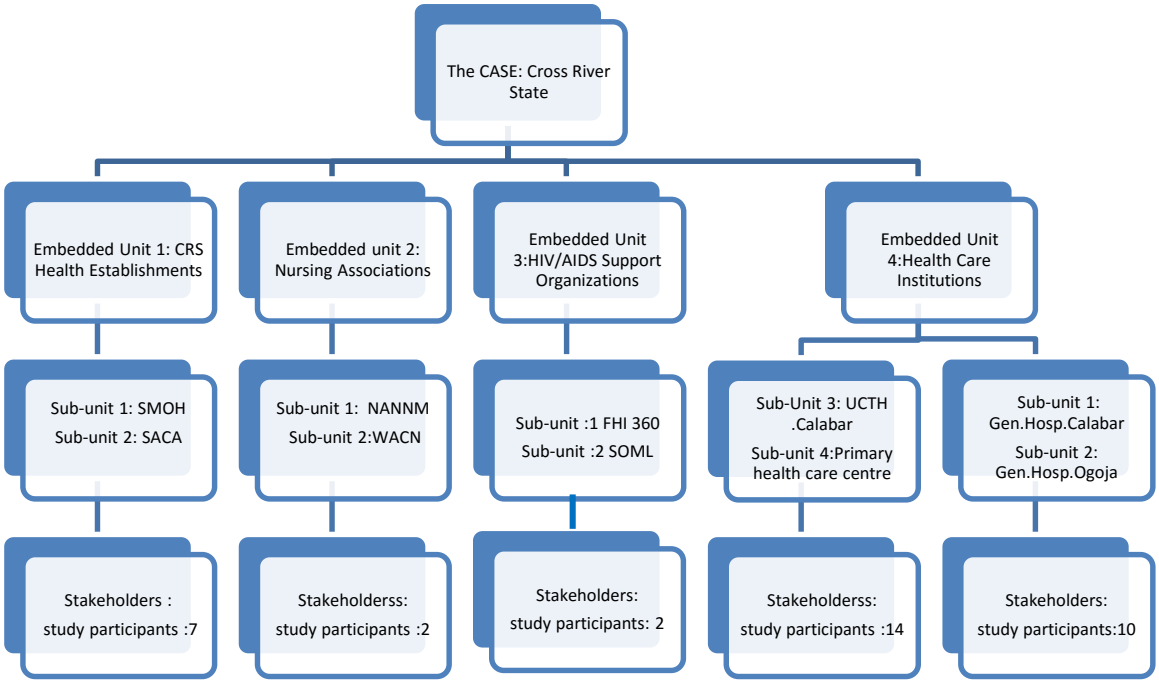


**Fig.2:** A single case; Cross River State in Nigeria with embedded units

CRS - Cross River State,
SMOH - State Ministry of Health
SACA - State Agency in Control of Aids
NANNM - National Association of Nigerian Nurses and Midwives
WACN - West African College of Nursing

FHI - Family Health International (FHI) 360
SOML - Saving One Million Lives
UCTH - University of Calabar Teaching Hospital

The Cross River State Health Care system (HCS) is in line with the national HCS and is based on the three-tier system of primary, secondary and tertiary care. The Federal Government provides for tertiary health care facilities, the State ministries of health for the secondary level of care, while local governments provide for primary health services. The National Agency for the Control of AIDS (NACA) coordinates the overall national response to HIV/AIDS. The State Agency for the Control of AIDS (SACA) and the Local Government Agency for the Control of AIDS (LACA) are the coordinating bodies at the sub-national levels. The Ministry of Health and Local Government Councils serve as the focal point, providing leadership and policy direction for all health programs in the state and local government areas.

Thirty participants, each regarded as a stakeholder, were recruited for this study from the different sub-units that made up the case. Purposive sampling and snowball techniques guided the recruitment of study participants in the various sub-units. The ability to assess the various sub-units situated within a larger case enriched the study and allowed data to be analyzed within the sub-units separately (within case analysis), between the different sub-units (between case analysis), or across all of the sub-units (cross-case analysis). This rich analysis illuminated the case (Stake, 1995).

## 4.4 Study Setting

The Cross River State (CRS), which is one of 36 states in Nigeria, has a land mass of 23,074km$^2$. The state is surrounded by bodies of water from the tributaries of the Cross River and the Atlantic Ocean. It is within the south-south zone and located at the southern part of the country. The capital of Cross River State is Calabar. The health care system in CSR has about 72 doctors and 1,037 nurses for 3 million people. The state is divided into 18 local government areas: Abi, Akamkpa, Akpabuyo, Bakassi, Bekwara, Biase, Boki, Calabar Municipal, Calabar South, Etung, Ikom, Obanliku, Obubra, Obudu, Odukpani, Ogoja, Yakurr, and Yala**.** Six local government areas make up a zone. For this study, one urban and one rural local government area was chosen from each zone: Ogoja and Obudu in the northern part of the state, Ikom and Obubra in the Central, and Calabar Municipal and Calabar South in the south. From these local government areas the different tiers of health care system were chosen. The 18 local government areas formed the sub-unit in the main case and through purposive and snowballing techniques nursing leaders in the various areas were reached. Non-nurses in key decision-making roles (i.e. HIV Program coordinators, implementation partners and medical doctors) were also sources of data through in-depth individual interviews.

Cross River State (Fig. 3) was chosen for the study because it has a high prevalence of HIV 7.1% (FMOH, 2011). The State constitute one of the 12+1 states which together contribute 70% of Nigeria's mother to child transmission of HIV (MTCT) burden. Also home to 12,027 HIV positive pregnant women, which in the absence of interventions will results to 4,009 preventable cases of paediatric HIV infection. She has been marked for PMTCT service saturation since 2012 (Cross River State Government and FHI360,2013). In addition, Cross River state was a convenient sample population for this study, since it is my state of residence

and workplace. My professional colleagues, formal and informal networks were instrumental to the success of the project activities especially the participatory action research processes.

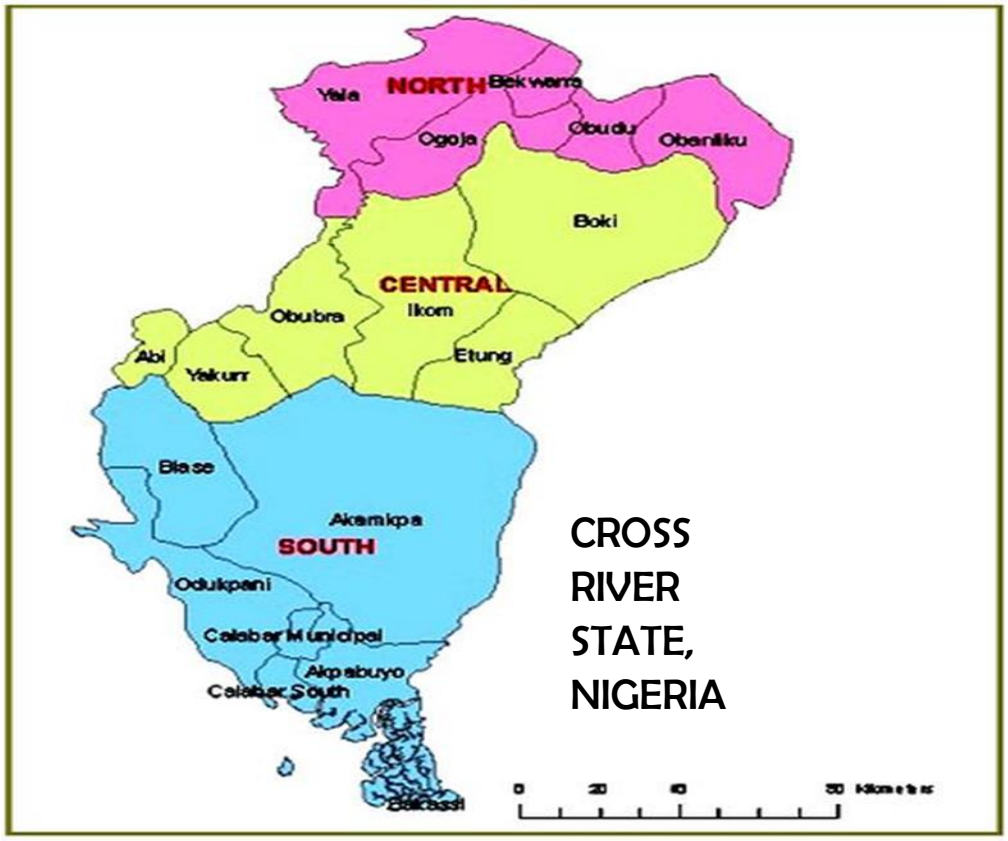


**Fig.3**: Map of Cross River State of Nigeria showing the 18 Local government Areas

### 4.5 Boundary of Study and Inclusion Criteria

This study examined nurses who had held leadership positions from 2001 to 2014, including their current leadership position, from their work in nursing organizations, non-governmental organizations (implementing partners), and government institutions in Nigeria. The period 2001 represents the year that a global commitment was made to institute PMTCT of HIV programs (United Nations, 2001). In order to be included in the study, each participant had to have been a nurse leader or non-nurse in a key decision-making role (i.e. HIV program

coordinators, implementing partners, Primary Health Care Coordinator, etc.) involved in the elimination of mother-to-child HIV transmission programme in the state.

Each nurse participant had to:

1. Be residing in Cross River State.

2. Have worked at least for six months in a leadership position.

3. Have agreed to participate in the study by providing informed and voluntary verbal consent.

For non-nurses, each participant had to:

1. Be residing in Cross River State.

2. Have been involved in the PMTCT program in the state for at least six months.

3. Have worked either in a health care facility, the Ministry of Health or agency for the control of HIV/AIDS in the state

4. Have agreed to participate in the study by providing informed and voluntary verbal consent.

**4.6 Data Collection Methods**

The case study as a qualitative tool of inquiry emphasizes the use of multiple methods of data collection in order to provide a comprehensive picture of the case being studied (Creswell, 2007). Stake (1995) asserted that each researcher must identify the data collection method that is most appropriate to portray/understand the case and to answer the research question. In this study the exceptional strength of the case study approach was evidenced through the use of interviews, focus group discussions, and document reviews, as well as field notes used to record observations, informal conversations, and the examination of related documents using a format developed for the study. Stake (1995) noted that data gathering begins even before the commitment to conduct the study through first impressions, acquaintances with other cases, and background information. Most

of these kinds of ill-defined data were obtained informally as the researcher became familiar with the case. They were later replaced, discarded, or refined.

**4.6.1 Interviews:** Qualitative interviews are predominantly useful for obtaining the story behind a participant's experiences or the meanings of central themes in the real (living) world of the subjects (McNamara, 1999; Kvale, 1996). An interview may be defined as a "conversation directed to a definite purpose other than satisfaction in the conversation itself" (Bingham and Moore, 1959, p.3). It is inextricably and unavoidably historically, politically, and contextually bound (Fontana and Frey 2005, p. 695). There are basically three types of interview: structured, semi-structured, and unstructured (Fontana and Frey 2005). The semi structured design format was utilized because it allowed for understanding the complex behaviour of respondents without imposing an *a priori* categorization that might have limited the field of inquiry (Fontana and Frey, 2005). The open-ended format provided the opportunity to probe for more information by asking questions to gain clarity and deeper insight. The semi-structured format also allowed for the development of questions prior to meeting with the participants. Specific topics and issues for the interview were provided as open-ended questions, which helped to ensure the collection of necessary information as well as consistency in questioning all interviewees (Fontana and Frey, 2005). The principles of critical social theory, which were incorporated into every stage of the research, influenced the design of the interview questions that focused on learning about the extent of nurses' involvement in research and policy development and the various social, economic, and environmental facilitators and barriers to the desired change. Fontana and Frey (2005) contended that in qualitative inquiries, the quality of the study is dependent on obtaining data that offer adequate insight into the case, and to obtain adequate data, interview questions must be clearly worded to enhance understanding. In this study the interview guide (Appendix

B) was developed by the researcher based on the research purpose, objectives and the literature review conducted. Specific questions in the interview guide are well aligned with the different objectives and dimensions of existing literature on the phenomenon of interest. This interview guide was also reviewed by my thesis research committee members, who are expert's researchers. The interview questions were pilot tested with two nurse's leaders (not included as participants in this study) in University of Calabar, Medical Centre to ensure they were relevant. Although no changes were made following the pilot testing, the interview guide continue to evolve as it is often the case in qualitative research.

According to Fontana and Frey (2005), interviews, being a social interaction between two people, are influenced by the context such as where interviews take place, the language and culture of the respondents, the ways and manner in which the interviewer presents herself; all might contribute to the power relationships at work which might prevent or enhance rich sources of data. Each interview took place in a mutually agreed upon quiet and private location that was convenient for the participant including offices, conference rooms and homes. There was no language barrier, because all participants understood English language, which is the recognised language of instruction in Nigeria. Before commencing the interview, information about the study, its risks and benefits, were provided to the interviewee and they were given the opportunity to ask any question related to any aspect of the study. After answering participants' questions, information about the interview consent form (Appendix D) was given and consent obtained. After due consent was granted by the interviewee, he/she was asked to provide demographic information through the completion of a questionnaire (Appendix A).

After adequate completion of the questionnaire, the interview began. An audio tape recorder was used to record the discussion; notes were also taken to guard against loss of information, and

should the tape recorder fail or the interview not be perceptible (Creswell, 1998). After each interview, my thoughts were written as field notes. Information in the field notes included interview location, time of interview, duration, overall content of the interview, key phrases and ideas peculiar to the individual interviews. The field notes also assisted me during further analysis of data. After each interview, the researcher listened to each tape again. The length of the interview was approximately 80 minutes with 30 interviews conducted in all. At the end of each interview, participants were told that if need be, they might be invited to a focus group discussion in the near future to aid in the validation of the study findings. During the course of the interview names of people that some participants mentioned were transcribe as 'XX' and where participant demanded for deletion of the entire tapes or part of tapes it was done. However, only one participant chose not to be recorded and field note was used to capture her story.

**4.6.2 Document review:** According to Stake (1995), most studies require additional sources of information, such as minutes of meetings, letters, memoranda, agendas, study reports, or any items that could supplement interview data. Therefore, relevant documents were selected for inclusion in the study based on their applicability to the research objectives. Reviews of documents were conducted in the various facilities and no copies were made. Relevant data from documents reviewed were captured in the field notes. These documents are outlined below:

1. National PMTCT Operational Guideline: This document provides comprehensive description on how to integrate PMTCT into existing maternal and child health care services in Nigeria.
2. Cross River State operational plan for elimination of mother-to-child HIV transmission 2013 to 2015 (2013): This document highlights the different strategic PMTCT plan for the state taking into consideration the recommended four-pronged strategy. The

document contains key interventions to be implemented as a component of maternal, neonatal, and child health (MCH) services and is in line with the National/State PMTCT program, 210pp.

3. Report of Cross River state-wide rapid health facility assessment in preparation for elimination of mother-to-child transmission of HIV (2013): This report identifies the need assessment of antenatal facilities in the state with plans to roll out PMTCT services in the state, 86pp.
4. PMTCT Task File: This File document contains activities of PMTCT Task teams for each thematic area in the state. It covers activities from March 2013 - May 2014.
5. Role of PMTCT focal persons in the various health care facilities: This is an internal document highlighting the specific roles of each focal person in respect of their routine PMTCT activities.
6. Minutes of meetings:
   a. 2nd CRS PMTCT implementation Meeting held on 17TH July 2012;
   b. Minutes of progress Report on PMTCT implementation Meeting 21st August 2013;
   c. Monthly minutes of heads of departments meetings in State Ministry of health, from October 2012 to June 2014.

   These minutes' highlight contributions of various stakeholders with regards to state PMTCT activities.
7. Nigeria Progress Report on global AIDS responds: This report highlights the progress in the national response and the collective efforts stakeholders.

8. NACA established mechanisms to support HIV & AIDS research in the country. This document provides guidelines on areas of research activities.
9. NACA's leadership in the formulation of policies and sector-specific guidelines on HIV/AIDS. This document provides guidelines on policy formulation.
10. Schedule of duties of directors, head of units and program coordinators of the Cross River State Ministry of health Calabar.
11. Guideline of activities of State STD/HIV program coordinator/PMTCT focal persons.
12. SACA role in harmonising implementing partner's activities in Cross River State,
13. FHI Briefs: File document on the lead-implementing partner: FHI 360.
14. National Policy on HIV/AIDS in Nigeria. This document is prepared by the Federal Ministry of Health for the health practitioners in Nigeria in respect of HIV/AIDS scourge.
15. The constitution of the National Association of Nigeria Nurses and Midwives.

These documents retrieved from the various embedded units clarified and enhanced my understanding of the phenomenon being studied. For instance, these documents were useful in clarifying the role of different stakeholders in policy formulation and implementation.

**4.6.3 Focus group discussion:** Focus Group Discussion is a qualitative method of data collection which relies on systematic group questioning (Fontana and Frey, 2005). It is defined as a "carefully planned series of discussions designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment" (Krueger and Casey, 2000, p. 5). The goal of the group is to elicit a discussion that allows the researcher to view the world from the participants' perspective. According to Gill, Stewart, Treasure and Chadwick (2008), focus group discussion is used to understand people's opinions of a program, event, or service and to explore

the rationale behind their thoughts or behaviours or to facilitate the expression of their perceptions of a certain phenomenon in an open, free, relaxed format. Other scholars asserted that focus groups may be used to refine information previously known about a topic or may be designed to elicit new insight and information by examining a topic from a new angle (Heary and Hennessy, 2000; Nassar-McMillan and Borders, 2002).

In this study, the two focus group discussion conducted were used to clarify, extend, qualify, or challenge my interpretation of the data collected through interviews and documents review, and to obtain feedback from the research participants. In other words, the focus group discussion provided a forum for member-checking/validation of interpretation of the interview data and credibility for data analysis. Hence, some of the interview participants with rich information were invited to a focus group discussion. Each participant was provided with focus group information letter (see Appendix G).

According to the Health Communication Unit (2002), there are basically three types of focus groups: exploratory, phenomenological, and clinical. An exploratory focus group, the format used in this study, helps to enhance the understanding of an issue, generate hypotheses in concept development, and is a form of pilot testing. Phenomenological focus groups seek to understand the experiences and outlooks of participants (as consumers, potential consumers and/ or opinion leaders). A clinical focus group is used to examine unconscious mechanisms operating within people that impact on their behaviour or predispositions to behaviour (Calder, 1977). The exploratory focus group discussion in this study was used to clarify information obtained during individual interviews and enhance insight into understanding the factors which hinder nurses' involvement in research and policy development. It also identified measures to effectively involve nurses in research.

Morrison-Beedee et al. (2001) asserted that if focus group discussion is conducted with multiple groups for comparison, a structured focus group guide is necessary to maintain consistency throughout data collection. See Appendix F for focus group guide. Nurse leaders from the various sub-units made up the discussant population in this study. The participants were selected by the advisory group to attend two focus group sessions consisting of 5 to 8 members each. The two focus group sessions were held in the seminar room of Department of Nursing Science, University of Calabar, Calabar. Focus group participants were advised to avoid discussion of sensitive matters in the group as the researcher could not guarantee that everyone in the group could maintain the confidentiality of such information. (Appendix E for Focus Group Consent Form). All focus group data were transcribed verbatim and coded along with other sets of study data.

**4.6.4 Sampling and participant recruitment:** Qualitative inquiry is typically known for its in-depth focus on relatively small samples. According to Patton (1990) "Trustworthiness, meaningfulness and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the observational/analytical capabilities of the researcher than with sample size" (Patton, 1990, p. 184-185). He further asserted that sample size depends on what the researcher desires to know, the purpose of inquiry, what is at stake, what will be useful, what will have credibility, and what can be done with available time and resources. Hence in-depth information from a small number of people becomes very valuable; especially when the cases were richly informative, they enhanced the credibility of the small sample size (Ezzy, 2002). Marshall, Cardon, Poddar and Fontenot (2013) described three criteria to rationalize the qualitative interview sample size: 1) citing the recommendations of qualitative methodologists. 2) Citing sample sizes used in previous studies with similar research problems

and designs and 3) using internal justification which involves statistical demonstration of saturation in a set of data.

This study uses the recommendations of qualitative methodologists. Though recommendations vary from one methodologist to another there is significant intersection among the various recommended ranges. Creswell (2007) recommended at least 20 to 30 interviewees; Denzin and Lincoln (2005) recommended 30 to 50; Morse and field, (2002) endorsed 20 to 30 interviewees with 2 to 3 interviews per person; DePaulo (2000) approved a sample of 30 or less. Methodologists affirm that these sample sizes are adequate to paint a comprehensive picture of the perceptions of individuals or their stories. However, the final decision about sample size in this study was based on evidence of data saturation, which occurred after data was collected from 30 nurses and non-nurse leaders. Data saturation occurs when no new information of significance is obtained from further data collection (Guba and Lincoln, 2000).

The principle of appropriateness and adequacy as well as heterogeneity of sample informs the recruitment of study participants. In this study, appropriateness involved the identification and use of participants who would subscribe to the research objectives while adequacy relates to ensuring that sufficient data informing the phenomenon of interest is obtained (Morse and Field, 2002). In reference to these principles, purposive (critical case sampling) and snowballing sampling techniques were used to select study participants (nurses and non-nurse's leaders) who provided rich sources of information from the entire state. Critical purposive sampling is a type of purposive sampling technique that permits identification of information-rich sources and according to Patton (2002): "Permits logical generalization and maximum application of information to other cases" (Patton 2002, p. 243). To ensure heterogeneity of sample and maximum variation of sample size, leaders from the three zones in Cross River State were reach.

In this investigation, information-rich cases were categorized as being from nurse or non-nurse leaders who were willing to participate in the research and from whom much could be learnt about the issues that related to the purpose of the study. Using the purposive sampling technique, key nursing leaders were reached from the four embedded units. By utilizing the snowball technique, leaders from the 18 local government areas were found. The snowball technique has the advantage of identifying information-rich cases in a group that is not known to the researcher, and is based on the assumption that group members know individuals who are knowledgeable about certain topics (Creswell, 2007). Therefore, key nursing leaders in various embedded units helped to identify other relevant nursing and non-nursing leaders in the 18 local government areas of the state.

The sampling procedures started with meeting the Director of Nursing Services of the state and providing her with adequate information about the participatory methodological approach and anticipated results. She consented to be involved and as well identified other information-rich sources in the area of research interest. The researcher then provided study information to the identified participants and obtained their consent for an interview or involvement in the advisory committee. Many times during an individual's interview, participants identified other leaders who should be contacted and if not mentioned, the researcher asked them to suggest the names of others to whom the researcher should speak. These participants were also asked for names and as the researcher continued to repeat this process, information-rich cases were identified and the snowball began to grow (Patton, 2002). Essentially, each of the participants who suggested the names of other nurses or non-nurse leaders in PMTCT in HIV programs became an informant, with the chain of informants diverging as many sources were suggested, then converging as key names were mentioned repeatedly (Patton, 2002).

The recruitment of study participants from the local government councils utilized a purposive sampling technique as well. Nurse-leaders and non-nurse leaders actively involved in HIV/PMTCT programs in the state for 6 or more months were involved. A sample population of 30 participants, which included 10 advisory committee members (9 nurse leaders and one non-nurse leader) and 15 nurses and non-nurse leaders (program coordinators and implementing partners), 5 frontline nurses in PMTCT of HIV programs, participated in the inquiry. Primary health care coordinators from each local government area mentioned also participated in the study.

The recruitment techniques commenced with a telephone call to potential participants. The study information letter (Appendix C) was used to inform potential participants about myself, provided a brief description of my research purpose/intentions and the time commitment that would be required. Arrangements were made for further contact with participants who expressed interest in the study. On the specified date, the information letter (Appendix C) was given to participants to read before signing the individual interview consent form (Appendix D), after which the demographic questionnaire (Appendix A) was given to participants. Two nurse leaders declined participation in the study; one was about to take her annual leave and the other complained about lack of time. I thanked all participants for their interest and the time they spent during interactions and interview sessions. The recruitment procedure continued until data saturation was attained at a sample size of 30 participants.

**4.6.5 Data analysis:** Qualitative data analysis is a systematic search for meaning, a dynamic process which utilizes intuitive and inductive processes to gain a deeper understanding of what has been studied and to continually refine the interpretations (Creswell, 2009; Basit, 2003).

Researchers employ their experience with study settings, participants, and documents to interpret their data (Taylor and Bogdan, 1998). According to Hatch (2002, p. 148)

> Qualitative analysis means organizing and interrogating data in ways that allow researchers to see patterns, identify themes, discover relationships, develop explanations, make interpretations, mount critiques, or generate theories. It often involves synthesis, evaluation, interpretation, categorization, hypothesizing, comparison, and pattern finding. (Hatch 2002, p.148)

Smith and Firth (2011) asserted that methods for undertaking qualitative data analysis can be divided into three categories: sociolinguistic methods which involve discourse and conversation analysis and explore the use and meaning of language; methods typified by grounded theory that focus on developing the theory; and methods such as content and thematic analysis that describe and interpret participants' views. The last method was used in this study. The objective of analyzing qualitative data is to determine the categories, relationships, and assumptions that inform the respondents' view of the world in general and of the topic in particular (McCracken, 1988). In line with Braun and Clarke (2006) and Creswell (2009), data analysis in this study utilized an intuitive and inductive process that enhanced the discovery of themes, concepts, and proposition (thematic analysis). Stake (1995) asserted that an integral aspect of the case study research method is that data analysis begins in the field. Interweaving of data analysis with the data collection process helped the cycling back and forth between thinking about the existing data and formulating strategies for collecting new data to fill in gaps (Burnard,1991). Stake (1995) noted that researchers, through reflection and experience, decide on the form of analysis that will work best for the study. He further described two strategic ways in which researchers can describe new meanings in case study research approach through direct interpretation of individual instance and through categorical aggregation of instance until something can be said about the case. The direct interpretation and categorical aggregation involves the search for pattern and the pattern is usually

derived from the research questions. He further asserted that pattern may also emerge from the analyzed data. In this study pattern is derived from the research questions and attention is also paid to the pattern that emerged from the analyzed data.

According to Creswell (2009) the process of data analysis begins with a series of steps involving data management, reading and memoing, describing, classifying, interpreting and developing a narrative that is a true representation of the story in the case study. Creswell (2003) asserted that in qualitative analysis the participants' interpretations are significant in terms of giving the most appropriate explanations for their behaviours, actions, and thoughts. Therefore, the easily accessible and theoretical flexible approach of thematic analysis provided the approach for this study (Alhojailan, 2012). Alhojailan further contended that thematic analysis is appropriate in both inductive and deductive methodologies, which are also used here. It is also appropriate when data collection starts with precise content and then moves to broader generalizations and finally to theories. This process ensures that the themes are effectively linked to the data (Patton, 1990).

**4.6.6 Thematic analysis:** Thematic analysis also provides the opportunity to code and categorize data into themes (Alhojailan, 2012), a method that is also used in this study. Thematic analysis is a conventional approach in a qualitative study that provides an opportunity to understand the potential of any issue more widely (Marks and Yardley, 2004). It is useful in analyzing interviews, focus group discussions, documents, etc. (Fereday and Muir-Cochrane, 2006). It involves searching through data to identify recurrent issues (Creswell, 2009). A theme captures an important aspect of the data with respect to the research question and represents some level of patterned response or meaning within the data set (Braun and Clarke, 2006). According to Namey, Guest, Thairu and Johnson (2008),

> Thematic analysis moves beyond counting explicit words or phrases and focuses on identifying and describing both implicit and explicit ideas. Codes developed for ideas or themes are then applied or linked to raw data as summary markers for later analysis, which may include comparing the relative frequencies of themes or topics within a data set, looking for code co-occurrence, or graphically displaying code relationships. (p. 138)

Braun and Clarke (2006) identified 6 phases of conducting thematic analysis. The first commenced with familiarizing oneself with the data collected, which involved transcribing data, reading and re-reading the data, and noting down initial ideas. Phase two involved generating initial codes through coding interesting features of the data in a systematic fashion across the entire data set, also collating data relevant to each code. Phase three involved searching for themes. This is mainly collating codes into potential themes and gathering all data relevant to each potential theme. The fourth phase entailed reviewing themes to ensure that the themes and codes are related to the extracts, ideas, and the entire data set or are generating a thematic 'map' of the analysis. Phase five required defining and naming the themes. This includes an ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme. The final phase entailed producing the report which involved selection of vivid and compelling extracts.

Participants' interpretations are significant in qualitative analysis since they provide the most appropriate explanations for participants' behaviours, actions, and thoughts (Creswell, 2009). Thematic analysis provides an approach for participants to identify themes related to the data and is a manageable approach for participant analysis. In this study, data collection and data analysis were considered to be complementary functions, which were carried out simultaneously. Each analysis transcript revealed areas with limited information and a further probe ensued in subsequent interviews.

Prior to data analysis, all audio-taped interviews were transcribed verbatim and numbered serially in the computer file. This organization of data into computer files was a strategy to enhance easy retrieval by the researcher. Using Braun and Clarke's (2006) phases of thematic analysis helped the researcher to gain an in-depth understanding of the data including how to proceed with reading /re-reading of the transcript and memoing. The in-depth understanding created a sense of data credibility and reflected on the overall meaning of the entire database as well as recognition of data pattern (Creswell, 2007). Some portions of the text were highlighted with comments and compelling ideas written in the margin. The researcher used the left margin of the transcribed interviews for coding while the right margin was used for comments about the content.

Line-by-line coding of the entire individual transcription was done. After coding three transcriptions, a code table was developed and the transcript and code table sent to the supervisor to code the documents as well. The results were compared and new codes were added to the list as they emerged. Also, data relevant to each code were collated. The next stage involved searching for themes by collating codes into potential themes and gathering all data relevant to each potential theme. The next stage entailed sorting the themes and codes to make sure that they were related to the main idea. The researcher used the computer to trace the link between codes and sub-themes and themes, which appeared as a tree. The link was traced from codes (leafs) to sub-themes (little branches) and themes (major branches). Each of the themes was defined and in the last phase of analysis, attention was devoted to portraying the story of each case through the use of quotes that gave voice to the participants (Guba and Lincoln, 1988). After, within-embedded unit analysis was conducted to obtain the collective stories of participants in all embedded units, the list of themes and sub-themes from each embedded unit was then presented

to members of the research group to obtained their input and further analysis. During this meeting their suggestions were written in the field note to enhanced further analysis of the data. Their input was discussed with my supervisor before integration, then a cross-case analysis of embedded units was conducted. In the cross-case analysis of embedded units, an aggregation of key words or ideas representing each cases were grouped together to illuminate the extent of nurses' awareness of strategies, of involvement in research and policy, as well as of barriers to their work in these areas. The across-case analysis was also presented to the advisory committee and research group for their input, validation and recommendation.

## 4.7 The Case: Cross River State

The case is made up of four embedded units. The various sub-units in the embedded units are responsible for coordinating and implementing health activities to help try to control the prevalence of HIV in the state. PMTCT of HIV programs is a thematic area under HIV and invokes a multi-sectorial approach involving all the various sub-units identified in the four embedded units.

**4.7.1 Embedded unit one: Cross River State health establishment:** These state establishments consist of the Ministry of Health and the State Agency in Control of Aids. The state Ministry of Health was established in 1962 and serves as one of the 15 state ministries that coordinate government policies and activities to enhance strategic development. All ministries are headed politically by a commissioner who is a member of the state executive council and administratively by a permanent secretary. The state Ministry of Health is accountable for coordinating health issues in the state. It has the mandate of providing health care to the people of Cross River State and serves as the focal point in the provision of leadership and policy direction for all the health programs in the state. The Ministry provides health care

services to Cross Riverians through 548 primary health care facilities, 17 secondary health facilities, and 2 tertiary facilities (Cross River State (CRS) Ministry of Health, 2010). It also regulates health care practice in the private sector and monitors programs to facilitate the attainment of national and international targets for health care provision. The state vision is "to enable all members of Cross River State Society to confidently access first class health services, which is a national benchmark for quality health care" (Cross River State Ministry of Health, 2010 p.12). Its mission is "to provide and manage a comprehensive and integrated quality health care delivery to the people of Cross River State, with emphasis on meeting the needs of the poor, particularly those in rural communities (Cross River State Ministry of Health, 2010 p.12)". The Department of Public Health in the CRS Ministry of Health coordinates HIV/AIDS programs in the state, under the State AIDS and Sexually Transmitted Infection Control program (SASCP). Under SASCP there are several key HIV thematic areas: PMTCT of HIV programs, antiretroviral therapy, HIV counselling and testing, monitoring and evaluation, care and support, testing of HIV and tuberculosis. Implementing partners collaborate with the Ministry of Health to train nurses and other health workers in each of the thematic areas to provide various HIV/AIDS services to the populace.

The State Agency for the Control of AIDS (SACA) is an offshoot of the National Agency in Control of AIDS, which was formed in 2002 in response to the global and national emergency strategy for HIV/AIDS. SACA, along with the National Agency, utilized the 'Three Ones' coordinating principles: one National AIDS Coordinating Authority, one National Strategic Framework, and one National Monitoring and Evaluation Framework. While the National Agency in Control of AIDS coordinates all HIV activities at the federal level, SACA and the Local Agency for the Control of AIDS coordinate the state and the local government levels,

respectively. Their mandates entail planning and coordinating the activities of the various sectors in line with the National Response Strategic Framework, formulating policies and guidelines on HIV/AIDS, supporting HIV/AIDS research in the country, mobilizing resources, building capacity, monitoring and evaluating the multi-sectorial HIV and AIDS responses at the national, state, and local government levels.

**4.7.2 Embedded unit two: Nursing Associations:** Nursing Associations consist of two sub-units: the National Association of Nigerian Nurses and Midwives (NANNM), and the West African College of Nursing (WACN). The Cross River State Chapter of NANNM was established in 1977 with a philosophical stance of fostering activities that bring about positive changes required in making the nursing profession more responsive to the health needs of individuals, families, and communities. It also believes in continuing education of the nurse and in nursing research as a major way of improving quality in nursing practice, as well as protecting the interests of its members with contemporary professions, employers, and the public at large. NANNM is totally independent of government control. The national president also serves as Chairman of the National Executive Council and presides over all state chapters and committees of the Association. Each state office is staffed by the state chairman, who is the political head of NANNM. He presides over all state conferences and meetings, fosters the aims and objectives of the association at the state level, and upholds the provisions of NANNM's constitution.

The aims and objectives of the organization entail organizing all registered nurses who are qualified for membership; providing a forum or avenue where nurses speak with one voice; setting and improving the standard of service that nurses give to the general public; improving nursing education at all levels throughout the federation; and participating in planning, policy making, and administration of health care delivery services at all levels of government. Others

include promoting places whereby understanding, fellowship, and unity can be achieved and maintained at all times among all members of the nursing profession; raising the standard of the profession, and obtaining just and proper remuneration, hours of work, and other condition of service that will enhance the dignity of the profession and the non-socioeconomic interests of members; extending protection (legal or otherwise) to members of the association, seeking the interest of and acting as guardian to other groups within the nursing profession; and upholding the international codes of nursing ethics and the position statement enunciated by the International Council of Nurses, as well as the WHO.

The Cross River and Akwa Ibom States' Chapters of the West African College of Nursing exists to coordinate the activities of nurses in the two states. The organization was established in 1981 to embrace educational advancement beyond the basic registered Nurse Training programs by supporting continuing post-basic courses across the sub-region. Their aims and objectives included promoting excellence in nursing education (at the basic and post-basic level) and maintaining the standard of nursing within the sub-region; formulating and supporting nursing educational programs; contributing to the improvement of health care within the West African sub-region; planning and implementing continuing educational programs for nursing personnel and promoting/ encouraging research in the field of nursing. Fellows of the College are competent to provide leadership and management skills in any area of practice: providing specialist nursing care in accordance with the principles and concepts of the nursing process and other approaches to care in their respective area; providing care to clients in accordance with legal and ethical principles; assuming leadership positions in nursing education, administration, research and clinical practice. Other competencies include planning, developing, and implementing nursing and health programs with other team members at the primary, secondary,

and tertiary levels of the health care system, being politically active to influence decisions that affect nursing and health at strategic levels; participating in policy and decision making on health and nursing matters at local, national, and international levels; providing consultancy and advisory services to local, national, and international health organizations and agencies requiring such services; initiating, interpreting and using research findings to improve nursing and health care services, among others.

**4.7.3 Embedded unit three: HIV/AIDS support organizations:** HIV/AIDS support organizations consist of two sub-units: Family Health International (FHI) 360 and Saving One Million Lives (SOML), both of which are implementing partners. FHI 360 is the lead implementing partner in the Cross River State. The Cross River State FHI 360 was established in 2013 as a non-profit human development organization dedicated to improving lives in lasting ways by advancing integrated, locally driven solutions. FHI was established in 1971 at the University of North Carolina in Chapel Hill from a contraceptive research project. In 2011, the team of experts from Family Health International and the Academy for Educational Development came together to create FHI 360. A combination of experts from different fields created a unique mix of capabilities to address today's interrelated development challenges. Through the strengthening of the Integrated Delivery of HIV/AIDS Services (SIDHAS) project, funded by the U.S. Agency for International Development, FHI 360 led a consortium of partners to support the Government of Nigeria in its quest to achieve the elimination of mother-to-child HIV transmission by 2015, especially in the country's 12 states, plus the Federal Capital Territory, that contribute 70% of Nigeria's HIV burden and are known as the 12+1.

In 2013, FHI 360 provided technical assistance in conducting a state-wide rapid health facilities assessment in 8 of the 12+1 priority states aimed at by the strengthening the integrated

delivery of HIV/AIDS Services. FHI 360 also partnered with the Joint United Nations Programme on HIV/AIDS (UNAIDS) and UNICEF to conduct an impact estimation of the state operational plans to eliminate mother-to-child HIV transmission. It is believed that when the operational plans are fully implemented in all eight states, they will help prevent 66,698 HIV infections among women of reproductive age, 119,340 pregnancies among HIV-positive women of reproductive age, 127,870 HIV infections among HIV-exposed infants, 37,293 deaths among HIV-exposed infants, and 955 maternal deaths among HIV-positive women (National Agency for the Control of AIDS,2014).

FHI 360 activities in the CRS incorporate providing technical assistance for rapid health facility assessments to enhance expansion of PMTCT services, developing operational plans for elimination of mother-to-child HIV transmission, building capacity for state and local government stakeholders to deliver quality services for the PMTCT programs through a combination of facility and community initiatives, activating sites for the provision of PMTCT services, and supporting early infant diagnosis. The organization is headed by a program coordinator who affiliates with the state's program coordinator in the Ministry of Health to run all state HIV programs.

Saving One Million Lives (SOML) is a health program run by the Federal Ministry of Health that was inaugurated on October 16th, 2012 under the Presidential HIV plan. The same year, the Cross River State SOML was also established. This comprehensive initiative was designed to expand access to essential primary health services and commodities for Nigeria's women and children. The SOML Steering Committee is government led. It is chaired by the Honourable Minister for Health, is a multi-stakeholder collaboration that includes relevant administrators from the federal and state governments, and national and international

development partners (multilateral, bilateral, non-government agencies and private sector). The initiative comprises several components that will contribute to saving one million lives in Nigeria through improving maternal, newborn and child health and PMTCT programs, providing increased access to quality HIV testing and counselling to mothers; and treatment of infected mothers and exploring the feasibility of universal access to HIV treatment to all those infected, among others. The PMTCT component of SOML is anchored on the premise that by 2015 the country will be able to eliminate mother-to-child HIV transmission in Nigeria to the point that it is no longer a public health issue (Federal Ministry of Health 2012). In line with the program's objectives, the state program coordinator deployed to Cross River State works to support PMTCT programs in the state. His unique roles include making Cross River State actualize its operational plan, and supporting the state in capacity building by providing technical assistance and resource mobilization.

**4.7.4 Embedded unit 4: health care institutions:** This embedded unit is made up of health care institutions comprised of four sub-units: a tertiary facility, the University of Calabar Teaching Hospital (UCTH); secondary health facilities (General Hospital, Calabar, and General Hospital, Ogoja); and primary health facilities involving six sub-units of primary health centers in Obudu and Ogoja in the Northern Senatorial District, in Ikom and Obubra in the Central Senatorial district, and in Calabar Municipality and Calabar South in the Southern Senatorial District.

The University of Calabar Teaching Hospital (UCTH) is a tertiary health care facility in Cross River State. The health facility started as St. Margaret's hospital, established in 1897 by the British colonial government and serving a population of over 500,000 in the Calabar community. It became a teaching hospital in 1979. The hospital has about 500 beds, with a staff of about 2195.

There are 24 wards in the general and gynaecological sections of the hospital, which are headed by charge nurses. As a tertiary institution, UCTH offers medical, nursing, pharmaceutical, radiographic and medical laboratories services, among others. The Director of Nursing supervises registered nurses and other personnel under nursing units, sets up and co-ordinates nursing services in conjunction with other health services, ensures that quality nursing care is provided and appropriate administrative procedures are followed, assists in the establishment of unit policies and procedures, administers nursing unit budgets and ensures that supplies and equipment are available, assists in the selection, evaluation and professional development of nursing personnel, and collaborates on research projects related to nursing and medical care and multidisciplinary services.

The General Hospital in Calabar is a secondary health care facility in CRS. Operating originally as facility for disease control, it was inaugurated as a general hospital in 1991 by the then military Head of State General Ibrahim Badamosi Babangida. The hospital has about 138 beds, with 354 permanents and 65 casual staff. The hospital has 8 departments and provides medical, nursing, pharmaceutical, radiographic, medical laboratory, medical records, accident and emergency, ante-natal, post-natal, PMTCT, dialysis, and surgical services.

From an organizational perspective, the hospital is headed by a medical superintendent, who serves as the Chief Medical Director of the hospital. There is also a medical superintendent in-charge, a hospital administrator, and heads of the different departments. The hospital is supervised by a management board that includes all heads of the various departments mentioned above and other external personnel appointed by the state government. The nursing department is made up of an administrative office headed by the Chief Nursing Superintendent and seven wards headed by charge nurses.

The General Hospital in Ogoja is a secondary health care institution in CSR built in 1915 by Mr. W.C. Sayer, the first provincial commissioner for Ogoja province and the Abakaliki area. Until 1980, the hospital provided only medical/surgical services and tuberculosis treatment. After 1980 the hospital grew to a referral hospital with approval from the Nigerian Medical Council to train house officers. The hospital has about 132 beds, with 254 staff, and provides medical, nursing, pharmaceutical, radiographic, laboratory, medical records, accident and emergency, antenatal, postnatal, and PMTCT services, as well as directly observed therapy (DOT), Vesico Vaginal Fistula repairs, and other surgeries. The hospital also houses the International Center for Aids care and treatment, now called the Center for Integrated Health, a program that was established in 2005. It focuses on providing comprehensive family care, treatment, and support for people living with HIV/AIDS in the Northern senatorial district of Cross River State. The PMTCT activities are integrated into maternal and child health services.

The hospital is headed by a medical superintendent, who serves as the Chief Medical Director of the hospital. Similar to the General Hospital in Calabar, there is also a hospital administrator and heads of the different departments and the hospital is supervised by the same type of management board. The nursing superintendent liaises with the nursing department in the Ministry of Health on matters affecting nursing officers, student nurses, ward orderlies, and public health workers. The superintendent carries out functions assigned by the medical superintendent but he or she is also a member of management board involved in policy making and the smooth running of the hospital.

The primary health care systems are directly coordinated by primary health care departments housed within the 18 local government councils in Cross River State. Primary health care forms an integral part of the national health system in Nigeria, being the first level of

contact for individuals and community members. It brings health care as close as possible to where people live and work. The local government's Civil Service Commission is responsible for the employment of all cadres of workers who are then sent to the different local government councils under a unified system of services–they can be transferred to any community in any of the local government areas in the state. Each local government council is headed by a chairman and is assisted by a head of the local government administration, Honourable Councillors, and a secretary of council. The last two posts are purely political appointments. The head of local government administration constitutes the career civil service arm of the local government council (administrative arm), and contains 6 other departments besides the department of primary health.

The department of primary health provides general health services (preventive, curative, rehabilitative, and health promotion) to the population at the entry point to the health care system. The department is headed by a primary health care coordinator who is known also as the Director of Primary Health Care (all nurses). There are 18 primary health care coordinators in the 18 local government areas in the state. Each coordinator is assisted by a program officer (a nurse) in each thematic area such as malaria, HIV, PMTCT, monitoring and evaluation, health education, reproductive health, immunization, and nutrition. The primary health care coordinators coordinate the activities of all the primary health care facilities in the local government area; contribute to leading strategic planning processes in conjunction with the chairman and commissioner for health; ensure that health system-specific strategic goals are developed and/or incorporated into any planning processes; participate in periodic strategic planning; collaborate with various departments within the council in identifying and prioritizing periodic quality improvement; and evaluate the activities that will ensure improved health outcomes in the local government area.

They also oversee the management and coordination of the primary health care services in order to achieve the operational objectives; contribute to effective financial planning and management by following the council's established financial policies and procedures; set budgets and maintain finances; identify, in conjunction with the chairman and other staff, the human resource requirements needed to deliver primary health services in line with the Cross River State operating plan.

Cross River State is divided into the three districts of the Northern, Central and Southern senatorial districts with 6 local government areas in each. Two primary health care coordinators were chosen from each senatorial district for this study: from the Northern district, one each from Ogoja and Obudu; from the Central district, one each from Ikom and Obubra; and from the Southern district, one each from Calabar South and Calabar Municipality. These coordinators, depending on the thematic issue with which they are involved, report to the heads of local government administrations, chairmen of local government councils, commissioner for health or other implementing partners. The general provision of health care at this level is largely the responsibility of local governments with the support of state ministries of health and within the purview of national health policy.

**4.8 Demographic Characteristics of Participants**

To ensure maximum diversity of perspectives, both nurses and non-nurse leaders from different agencies, organizations, health facilities, and associations directly and indirectly affiliated with MTCT programs were purposefully selected to be included in the study. According to Patton (2002) samples with great diversity facilitate the discovery of both unique and multiple perspectives on the phenomenon of interest, as well as shared and central patterns across the cases. The distribution of demographic variables is presented in Table 2. Twenty-five of the participants

were female (83.30%) while 5(16.67%) were male. The majority (56.67%) were between the ages of 51 and 60 years.

**Table 2**: Frequency distribution of demographic variables among the study participants

| **Variables** | **Frequency** | **%** |
|---|---|---|
| **Sex** | | |
| Male | 5 | 16.67 |
| Female | 25 | 83.33 |
| Age Range (years) | | |
| 21 – 30 | 1 | 3.33 |
| 31 – 40 | 3 | 10.00 |
| 41 - 50 | 9 | 30.00 |
| 51 – 60 | 17 | 56.67 |
| 61 years and above | 0 | 0.00 |

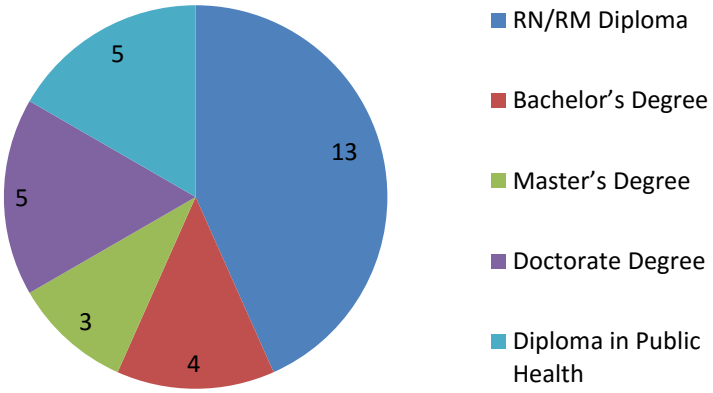


**Figure 4**: Pie Chart of educational qualification of participants

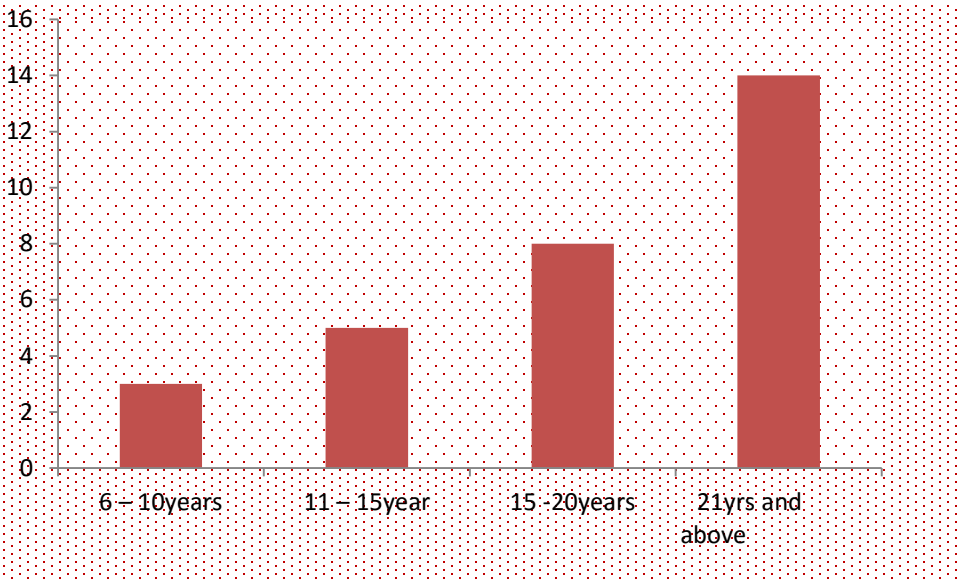


**Figure 5**: Bar chart showing years of working experience

### 4.9 Ensuring Rigor in the Qualitative Study

The goal of rigor in qualitative research is to correctly represent the study participants' experience (Streubert and Carpenter, 2003). Bartex and Jack (2008) noted that case study qualitative researchers utilize many processes to ensure credibility of their work, which includes writing research questions clearly, choosing an appropriate case study design, using purposeful sampling strategies, and triangulating data sources. Collecting and comparing data is a primary strategy to enhance quality in research and is based on the principles of the idea convergence and the confirmation of findings (Bartex and Jack, 2008).

Emden and Sandelowski (1999) suggested that the criteria for rigor varies among studies and researchers, hence judgement must be based on the methodological, theoretical, and philosophical underpinnings of the study. Based upon these assumptions rigor is determined through researchers' attention to and confirmation of information discovered (Streubert, 2003). Fossey, Harvey, McDermott and Davidson (2002) stated that adhering to the principles of appropriateness and adequacy in the sampling procedures enhanced rigor in

qualitative research while Carnevale (2002) emphasized that apart from appropriateness and adequacy of principles, a ‘good’ nursing qualitative study must address a significant nursing problem and criteria for methodological rigor to be met. The literature review chapter in this study revealed the significance of nurses’ involvement in research and policy and Guba and Lincoln's (2000) criteria was used to judge the methodological soundness of this study. Creswell (2007) stated that the use of reflection or the maintenance of field notes and peer examination of the data are integrated into qualitative studies to establish credibility. Guba and Lincoln (2000) identified four criteria for judging the soundness of qualitative research: credibility, transferability, dependability, and confirmability. These measures have been employed in this study.

**4.9.1 Credibility:** Credibility refers to confidence in the truth of the data and their interpretations. Qualitative researchers represent te instrument of data collection and their research skills and experience affects the credibility of the study findings (Patton, 2002). The extensive background of my supervisor and the entire thesis committee in this field helped to establish the credibility of this study. Credibility of research ensures unification between the respondent's view and the researcher’s interpretation of respondents’ contributions (Schwandt, 2001; Tobin and Begley, 2004).

The credibility of this work is also enhanced through engagement in peer debriefing, a verification procedure that is recognized as providing an external check on the research procedures (Creswell, 2007). The debriefing was conducted by my thesis supervisor, who monitored every aspect of the progress from systematic development of the proposal, through data collection, the review of my interpretations, the provision of feedback on the organization of the themes, to the presentation of the final narrative report. Members of the advisory committee

and research group also provided input into data collection process as well as input into preliminary findings. In September, 2015, the two findings chapters emanating from the interview, focus group discussion and document review were presented to the advisory committee's members and research group. The step by step process leading to the final findings were shared. I also solicited their feedback on my interpretation of their stories. This feedback or member checking process was very helpful in generating the ideas captured in my discussion chapter such as the individual barriers and facilitators as shown in the Tree animation model (figure 6). Participants were satisfied with the study findings as it reflected their realities. Ideas from participants were discussed with my supervisor before integration into the discussion chapter including implications and recommendations. Lincoln and Guba (1985) also affirmed this as a credible method of assessing credibility of study findings. In addition, in this study, credibility was ensured through prolonged engagement in the field and reflective journaling of the processes. I live and work in the study setting in Nigeria and I spent some time to understand the everyday activities of nurses during the data collection period. As indicated in the description of the study design above, the study provided opportunity for focus group participants to validate the research findings. This is a common evaluation strategy used in qualitative research to ensure scientific rigor (Creswell, 2007).

**4.9.2 Transferability:** This refers to the possibility of generalization, which indicates the possibility that the study findings generated could be applied to another group or be applied in another context (Streubert-Speziale, 2007). According to Stake (1995), naturalistic generalizations represent conclusions arrived at through personal engagement in life's affairs or by vicarious experience so well constructed that the persons feels as if it had happened to them. These naturalistic generalizations will be embedded in the readers' experience whether

verbalised openly or not (Stake, 1995). Guba and Lincoln (2000) emphasized that it is not the place of the researcher to provide an index of transferability, but it is his/her place to provide a data base that makes a transferability judgement possible on the part of potential appliers. In this study, I attempted to enhance the possibility of transferability through ensuring that an appropriate sampling method was chosen, which entailed involving an equal representation of leaders from the three geopolitical zones in Cross River State and including different organizations, agencies, and tiers of the health system, as well as nursing associations. A good description of study participants allows readers to make decisions regarding whether or not transferring to other context is possible. The provision of adequate information on each of the research processes, the characteristics of the study participants, and accurate descriptions of research analysis and findings, will determine how findings in this study might be transferred to other contexts.

**4.9.3 Dependability:** Dependability is achieved through a process of auditing or of making an audit trail. Constructing an audit trail involves providing the details of data analysis and some of the decisions that led to the findings. Researchers are responsible for ensuring that the logical process of research and clear documentation is completed (Schwandt, 2001). This process will provide a documented trial of events where others can examine the researcher's documentation of data, methods, decisions, and findings (Tobin and Begley, 2004). Krefting (1991) stated that consistency of the findings or "dependability" of the data can be promoted by having multiple researchers independently code a set of data and then meet together to come to consensus on the emerging codes and categories or through a process of double coding; or where a set of data are coded, and then after a period of time the researcher returns and codes the same data set and compares the results (Krefting, 1991). In this study, field notes were used and a self-critical

account of the research process was maintained. The researcher's supervisor also helped in coding data, after which consensus was reached.

**4.9.4 Confirmability:** This is concerned with establishing that data and interpretations of the findings are not figments of the researcher's imagination, but are clearly derived from the data (Tobin and Begley, 2004). It also involves continuous documentation of both objective and subjective data confirmed with the informants. To ensure confirmability of findings in this study, the researcher allowed informants to express their experiences, values, and beliefs without constraint. The researcher checked the truthfulness of the analyzed data with direct feedback during focus group discussions. Field notes were used throughout the data analysis process.

## 4.10 Ethical Considerations

The University of Ottawa Health Sciences Research Ethics Board (REB) provided conditional approval until ethics approval was obtained from the local study site; the University of Calabar Teaching Hospital REB, which is responsible for ethics approval of projects conducted in Cross River State. Please see Appendix I. Full ethics approval was obtained from the University of Ottawa REB thereafter. See Appendices H. Support in principle for the study was also received from the various heads of embedded units where the research was to be conducted. Data collection did not commence until these approvals were received. The principles and guidelines for international bioethics standards was adhered to including obtaining informed consent, ensuring anonymity, not using subjects of extreme vulnerability, determining cost-benefit ratio, respecting subjects, assuring participants that they have the right to withdraw from a study, preserving of project material, and revealing any study risk (WHO,2011).

Respect for participants was ensured through professional communication with participants from the beginning (Fontana and Frey, 2005). After information was provided, informed consent was obtained from each participant before the interview commenced. They were assured that their participation in the study was voluntary and they were informed of their right to withdraw from the study at any time. Participants also provided consent to be audiotaped during the interview, and were told that they had the right to refuse to answer to any questions, or to turn off the tape recorder at any time if they wished. Light refreshments were provided during the interview. To show appreciation for the participants' time, an honorarium of ₦3000 ($20CAD) was provided to each participant.

To ensure the confidentiality of the study data, each participant was assigned a study identification code number. The assigned code number identified all audiotapes, interview transcripts, and demographic data and was stored in a separate locked cupboard. Computer files of interview transcripts and other study-related documents were password protected. All study materials have been secured in a locked file cabinet and will be transferred to my supervisor's office at the University of Ottawa upon completion of this thesis report for safe storage. In accordance with the policy of the University of Ottawa, the study documents will be retained in this secure location for five years and then destroyed through a shredding process by the researcher's supervisor. The audio files will be permanently erase to make sure that the data is no longer recoverable on the hard drive. Computer files will be completely deleted from the system.

# CHAPTER 5

## FINDINGS: PART 1- WITHIN-UNIT ANALYSIS

This chapter presents the data generated from the within-unit analysis of the four embedded units in this study. The study examined nurses' involvement in research and policy development in the context of MTCT of HIV/AIDS. The four embedded units are 1) Cross River State (CRS) health establishments, 2) nursing organizations; 3) HIV/AIDS support organizations, and 4) health care institutions. The themes generated from the within-unit analysis of these four embedded units will be presented. Within-unit analysis refers to the interpretation of data related to two levels of a single case study design; i.e. the detailed account of the individual stakeholders and that of the organizations within each embedded unit. Study participants provided inputs into research analysis which according to Kemmis & McTaggar, (2007) PAR dictates shared ownership inputs into every aspect of research process. Though participants did not have access to any individual raw data. Preliminary themes and sub-themes that emerged from each embedded-unit was presented to the study participants for further analysis and inputs. Example of an additional theme added was going with the flow, which shows nurses general apathy towards research and their reluctance to make waves fearing negative consequences. Across -case analysis of major themes and sub-theme which incorporated focus group discussion and document review was also shared with the group for their inputs and identification of inaccuracies. All suggestions were integrated after due sanctioning by my supervisor.

The chapter will start with an overview of the themes as shown in Table 3 below, followed by a presentation of each of the four themes: intimate knowledge of health care, marginal involvement in knowledge creation, limited nurses' involvement in MTCT policy decision making, and "going with the flow." The chapter will conclude with a summary of the themes.

**Table 3**: Within-Unit analysis and supporting quotes

| Embedded Units/Sub-cases | Major themes/sub-themes | Quotes |
|---|---|---|
| Unit 1: Health Establishments | 1. **Intimate knowledge of health care**.<br>• Knowledge of local/global HIV trends | "But it was after our last sentinel report that I realised the percentage of pregnant women that were affected and you can imagine the numbers of babies that would be positive, and I also compared HIV prevalence in Cross River State to other states in Nigeria". |
| | • Knowledge of local strategies | "The prongs are essential tools for meeting global targets, as they provide the yardsticks for evaluating implementation success". |
| | • Knowledge of barriers to MTCT uptake | "I had interacted with some women who delivered outside the health facility after due registration. They keep saying that they are scared of delivering in the facility because the traditional birth attendants told them, if they do, they will die, because their birth canal has been sealed with a key and that traditional birth attendants alone possess the power to loosen the women in labour". |
| | 2. **Marginal involvement in knowledge creation**<br>• Minimal participation in knowledge creation | "I am not among those who plan these researches, they draw up the proposal and send it to us in the state, and we help in monitoring the data collected. I am not involved in any independent or individual research, apart from that which has to do with my official capacity". |
| | • Challenges/barriers associated with knowledge creation | "During my training days, research was not included in our curriculum" |

| | | |
|---|---|---|
| | • Envisioning solutions to improve knowledge creation | "If you want nurses to be involved in research, go back to their curriculum and work from there" |
| | **3.Limited nurses' involvement in MTCT policy decision making**<br>• Nominal participation of nurses in policy decision making. | "Nurses implement policies; we do not formulate policies".<br><br>"To be precise, we look at how to overcome implementation constraints and not to formulate policy, that role is reserved for Directors, Permanent Secretary and the Commissioner" |
| | • Challenges/barriers to nurses' contributions in decision-making fora | "Nurses are not and will not be involved in policy formulation; it is a higher level of thinking". |
| | • Envisioning solutions to improve nurses' contributions in decision making. | "Higher educational degrees will widen horizons, enhance competence and eliminate inferiority complexes when interacting with other professionals"<br>"It is time we start advocating for ourselves as a group" |
| | **4.Going with the flow**<br><br>• Difficulty rocking the boat | "Let them run the system the way they like; I'll do what I can. You know if you raise an alarm you can be transferred to where your voice will never be heard. It is enough that nurses are involved in implementing PMTCT policy". |
| | • Bowing to professional pressure. | "Most of us lack research skills. You will see most of us collecting data for others, that is all we can do" |
| UNIT 2: Nursing Organizations | 1. **Intimate Knowledge of Health care**.<br>• Knowledge of local/ global HIV trends | "Take a look at this fact sheet. What is the global prevalence? About 35 million people globally, but more than 90% of the people infected are in developing countries and two-thirds of the global prevalence is in sub-Saharan Africa. You can see it is not a global issue. It may be a global concern, but more of the problem of developing countries or call it Africa`s problem". |
| | • Mobilizing local strategies | "We believe in promoting activities that leads to positive changes in our community and health care system, so we organize workshops and seminars to sensitize the nurses. With resource persons in prevention of mother- to-child HIV transmission units, we build nurses' capacity in line with national recommended standards". |

| | | |
|---|---|---|
| | 2. **Marginal involvement in knowledge creation**<br>• Minimal participation in knowledge creation | "We can't do without research if our profession must advance, but I am not involved in any HIV research". "I am not involved in research apart from my PhD thesis and it is not pertaining to HIV" |
| | • Challenges/barriers associated with knowledge creation | "Research is not an immediate need according to Maslow's hierarchy of needs you know, and I don't look at it as the next level of needs, for me there are other pressing needs" |
| | • Envisioning solutions | "Research workshop followed with research funding is the only measure that would involve nurses in research" |
| | 3. **Limited nurse's involvement in PMTCT policy decision making**<br>• Nominal participation of nurses in policy decision making. | "It is not a regular practice to have nurses to be involved in policy formulation". |
| | • Challenges/barriers to nurses 'contribution in decision making forum | "Some professional groups (nurses) are marginalized in the health care system, their opinion does not matter and other professionals think that they have nothing to offer during policy formulation" |
| | • Envisioning solutions to improve nurses' contribution in decision-making forum | "You cannot really take away politics from policies, the two go together" |
| UNIT 3 : AIDS Support Organisations | 1. **Intimate Knowledge of health care**<br>• Knowledge of local HIV trends | "On a zonal basis CRS occupies the third position with high HIV prevalence, with Akwa Ibom leading and closely followed by Rivers State". |
| | • Knowledge of local/global strategies | "So FHI 360 decided to embark on an ambitious project known as 'scale-up rapid activator plan' which entailed expanding prevention of mother-to-child HIV transmission services to about 380 primary health care centres including private sectors and faith-based organizations and also comprehensive retroviral services in selected facilities" |

| | | |
|---|---|---|
| | • Integral nursing role | "With limited medical doctors in the state, nurses become the main stakeholders. We rely on in the State Aids and sexually transmitted infection control program; they manage almost all primary health care facilities in the state". |
| | 2. **Marginal involvement in knowledge creation**<br>• Minimal participation in knowledge creation | "Though they do not initiate any study, we need them to supervise, collect data or validate collected data". |
| | • Challenges/barriers associated with knowledge creation | "I have worked with many nurses, but directly with about five in our organization, I think they are not very enthusiastic about a research component" |
| | • Envisioning solutions | If research becomes the criteria for promotion or employment, people will on their own prepare themselves by building their research capacity, and value research seminars or workshops" |
| | 3. **Limited nurses' involvement in PMTCT policy decision making**<br>• Nominal participation of nurses in policy decision making, | "I know we need nurses in implementing most policies in the country, but at that level (policy formulation) they are not usually needed" |
| | • Challenges/barriers to nurses' contribution in decision-making forum | "Although we cannot do without the nursing workforce, if we must attain our set goals, they are not among the key actors we need in developing human resource policy or PMTCT policies in this state." |
| | • Envisioning solutions to improve nurses' contributions in decision making | The way forward is to create awareness using nursing associations |
| UNIT 4: Health Care Institutions | 1 **Intimate Knowledge of health care**<br>• Knowledge of local/globa HIV trends | "The scourge of HIV is so obvious in this tertiary institution, due to referral from private, primary and secondary facilities, and on a daily basis we admit many cases of HIV including pregnant women and children." "There is no day we do not have one HIV case in the ward and there is no clinic day that two or more pregnant women would not be screened positive." |

| | | |
|---|---|---|
| | • Knowledge of local strategies | "Prevention of mother-to-child HIV transmission section has been incorporated into our ante-natal department, and we have staff specially trained to offer these services".<br><br>"The national flow chart guides all our activities from the entry point which is antenatal clinic, counselling and testing, initiation of antiretroviral therapy, delivery care of positive babies and compliance and family planning". |
| | • Integral role of implementing partners | "Cross River State generally has received a great support from USAID and FHI 360; they helped in activating our PMTCT site and training nurses to work in the site." |
| | • Knowledge of barriers to PMTCT uptake | "As soon as some women are told they are positive, they stop coming to the hospital and turn to their churches or traditional birth attendants and how to track these women is a problem".<br><br>"Most pregnant women register with us, but deliver at home or with the traditional birth attendants; therefore, there are challenges of screening the babies". |
| | **2.Marginal involvement in knowledge creation**<br>• Minimal participation in knowledge creation | Once, our unit head asks me to help a group in gathering some<br>data in our unit, that was how I got involved in research, although I never knew what they were using the data for" |
| | • Challenges/barriers associated with knowledge creation | "Apart from collection and validation of collected data, I can't be involved in any other role because I don't have the skills". |
| | • Envisioning solutions | "Outside of a research workshop, I think we need research mentors because seminars and workshops have been organized in time past with little success" |
| | **3.Limited nurses' involvement in PMTCT policy decision making**<br>• Nominal participation of nurses in policy decision making, | "Formulation of policies is always a top to bottom policy flow, what is decided at the national is what the state do". "I am not aware of any nurse being involved at that level of policy". |
| | • Challenges/barriers to nurses 'contribution in decision making forum | "In this local government headquarters, no nurse is serving as an administrator or political head in any of the units. So how can we be involved in policy when we can't occupy such post" |

| | | |
|---|---|---|
| | • Envisioning solutions to improve nurses' contributions in decision making. | "We need nurses to take the lead in political campaign, so that we vote for them, not always voting for others. Let join the system politics" |
| | **4.Going with the flow**<br>• Difficulty rocking the boat. | "Involvement or non-involvement in policy is not my problem, I don't even desire it, if they want my contribution they will ask for it" |
| | • Bowing to professional pressure | "Well, bedside nursing is not associated with research; it is for those in schools and not for me" |

**Key:** **UNIT 1:** Health Establishments
Sub-cases: Ministry of Health (MOH) and State Agency in Control of AIDs (SACA)

**UNIT 2:** Nursing Organisations
Sub-Cases: National Association of Nigerian Nurses and Midwives (NANNM) and West African College of Nursing (WACN)

**UNIT 3:** AIDS Support Organization
Sub-cases: Family Health International (FHI) 360 and Saving One Million Lives (SOML)

**UNIT 4:** Health Care Institutions
Sub-cases: University of Calabar Teaching Hospital (UCTH), General Hospitals Calabar and Ogoja, and primary health care facilities.

In summary, Table 3 above has three major columns. Column 1 contains the four main units: unit 1: the health establishments; unit 2: the nursing organizations; unit 3: HIV/AIDS support organizations, and unit 4: health care institutions. These units situate the various settings of the stakeholders used in this study. Column 2 contains the various themes and sub-themes emanating from each unit while column 3 contains the corresponding quotes to each sub-theme.

### 5.1 Embedded Unit 1: CRS Health Establishments

This unit is made up of two sub-units: The State Ministry of Health (MOH) and the State Agency in Control of AIDS (SACA). The participants' interviews and the documents reviewed

generated the following three main themes: 1) Intimate knowledge of health care; 2) Marginal involvement of nurses in knowledge creation; 3) Limited nurses' involvement in PMTCT policy decision making, and 4) Going with the flow.

**5.1.1 Theme 1: Intimate knowledge of health care:** Intimate knowledge of health care refers to the participants' in-depth understanding of the effects of HIV on the health care system. The theme has three sub-themes: knowledge of local HIV trends, knowledge of local strategies, and knowledge of barriers to PMTCT uptake. These sub-themes illuminate the extent of nurses' awareness on the trends, effects, and ameliorative strategies as well as the associated barriers to PMTCT uptake.

***Knowledge of local/global HIV trends:*** HIV/AIDS is perceived as a major public health challenge in Nigeria. For example, one of the study participants noted that: “HIV has been a challenge not only in the health sector, but also in the entire populace” (012, p.2). The ill effect is obvious in women and children as it is the leading cause of illness and death among this group. This notion is supported by this participant, who indicated that “the burden of HIV is obvious in the most vulnerable members of society, especially mothers and children” (012, p.2). With more children affected, she added “we don’t have any future” (011, p.5).

A nurse leader (with a clinical background) noted that HIV has become a perennial disease due to its effects on unborn children.

> HIV has become a perennial and embedded problem in our country, because we have involved our future generations. With the high prevalence among women and girls, it [affects] our unborn children and perpetuates the menace of HIV to our present and future generations. (017, p.2)

As if visualizing the faces of affected children, she saw previously, she elaborated on the impact.

> The greatest adverse effect of HIV is on our innocent children, who through no fault of their own become victims, bear the pains, born into suffering, experience the world in

> agony, where radiant innocent smiles and laughter would have been, you see should I say grief stricken, I don`t know the right terminology, but no cheers at all. Am speaking from personal experience, I think the innocent children bear the brunt of this disease. (017, p.3)

Although one participant identified lack of appropriate HIV intervention as a major factor fuelling MTCT of HIV in Nigeria, other participants in this unit attributed myths and misconceptions among the populace surrounding the disease as the major cause of its high prevalence. " In 1987 when HIV was first discovered in the state, it was difficult to convince many about the reality of such an infection and so the possibility of mother-to-child HIV transmission still remains a myth to many" (011, p.3). This misconception hampered interventions, resulting in an increased number of MTCTs of HIV. Health care professionals also failed to realize the extent of HIV's devastating effect until the sentinel survey report brought home the impact of the disease on mothers and children to study participants in this administrative setting.

> But it was after our last sentinel report that I realized the percentage of pregnant women that were affected and you can imagine the numbers of babies that would be positive, and I also compared HIV prevalence in Cross River State to other states in Nigeria. (02, p.1)

It was quite obvious that most participants were aware of the state and national prevalence in comparison to the global burden; such awareness emanated from the state-conducted sentinel reports.

> Nigeria as a nation contributes 30% of the global HIV burden and Cross River State (CRS) is one of the 12+1 states which together contribute nearly 70% of Nigeria's mother-to-child transmission of HIV burden. You see, the prevalence of HIV at the last sentinel report was 4.1% in the country, while CRS prevalence is about 7.1% and ranks 9th amongst all states. (021, p.2)

All study participants in this unit attested to the high impact of HIV as well as MTCT. One attested to having experienced the impact of HIV in all life's ramifications: "On an individual basis, I have witnessed the effect on close relations and at the professional level, the effect of HIV in the health care system, community, and the nation as a whole" (06, p.6). On a personal

note she declared, “let me use this opportunity to admonish all nurses, whether administrative, educational, or clinical; don’t just watch HIV, fight it before it attacks you” (06, p.7).

***Knowledge of local strategies:*** Participants (both nurses and non-nurses) in this unit demonstrated understanding of the various strategies utilized by their establishment to combat the menace of HIV. The strategies identified are organized according to what is utilized in the various establishments. The very first strategy was the establishment in the country of an HIV coordinating body, known as the National Agency in Control of AIDS (NACA), followed by the state and local government agencies: “I believe this agency (State Agency in control of AIDs) was the first conscious effort, because we kept trying other measures without coordination of activities” (011, p.4). The state operational plan developed by all stakeholders was another strategy identified by participants; the plan provides direction on how to implement the 4 prongs as well as identifies the role and activities of different stakeholders. To coordinate the activities of the various implementing partners in the state, the integrated or the harmonized work plan was developed by the state; the plan identifies and monitors the activities of each implementing partner.

> These robust plans actually incorporate the entire plan from different partners into one comprehensive plan for the state. The plan reports on each partner’s contribution and activities within expected time frames. It also permits effective coordination and monitoring of both MTCT and other aspects of HIV related issues in the state”. (012, p.4)

Participants also revealed that an effective strategy used by the state included the integration of PMTCT strategies into all areas in which maternal and child health services are offered.

> PMTCT service is provided at all levels of health facilities in the state. Any health facility that offers ant natal care also offers PMTCT services. A process of integrating PMTCT into the health care system is to ensure that services are provided across the state for every pregnant woman, irrespective of where they are. (06, p.3)

Another participant revealed the use of research as a strategy: “With the poor coverage in prevention of mother-to-child HIV transmission in the state, we embarked on needs assessments of maternal and child health facilities with technical assistance from Family Health International 360” (021, p.4).

Some participants in this establishment also identified the prongs as an effective strategy: “The prongs are essential tools for meeting global targets, as they provide the yardstick for evaluating implementation success” (06, p.5). One participant clearly indicated how the state adopted the four prongs in line with global standards as well as the strategies utilized by Cross River State to implement each prong. Each of the four prongs represents a stage the program services targets. For prong one, it is responsibility of the Ministry of Education and Civil Society Organizations. One participant alleged that:

> The prevention of infection among people of reproductive age is the first prong. The Ministry of Education is contributing to that because they have the family life and reproductive health education programs in schools. For out-of-school young people in the reproductive age, we have some Civil Society Organizations that work with young people. (06, p.5)

The Ministry of Health is responsible for the implementation of the second prong, which is provision of family planning services to HIV positive pregnant women.

> The family planning unit attends to people and makes provision for family planning commodities and facilities so [that] the women come during the counselling session; family planning counselling is part of the services they receive at the health facility. That’s how through the Ministry of Health we have addressed prong two, providing family planning services and then creating awareness through the media. Women are also encouraged to go for family planning irrespective of their status, with emphasis on women who are positive. (06, p.5)

All service providers are directly involved in PMTCT, which is prong three. According to one participant, the PMTCT continuum of care services includes adequate antenatal, intra-partum, and postpartum/postnatal health services to mothers and infants. Implementing partners

in collaboration with the health ministry build health workers' capacity for the attainment of this goal, even though there are reduced human resources.

> For prong three, it's a direct service by the service providers, which involves doctors, nurses, midwives, community extension workers, and others. Implementation partners have trained many health care workers to build their capacity on effective measures to address the issues of PMTCT. I do know that we are trying although we are very few in the field. (06 p.6)

She further highlighted the unique role of support groups in providing care and support for the last prong:

> Provision of care and support to HIV-positive mothers, their infants, families and community is the last prong. We have support groups in health facilities and community base support groups, where the women come together, share their experiences, share their ideas and learn more. One or two health care providers are often present to give talks or educate them on some issue that they may have common challenges [with]. They also counsel and provide information that will help, or [offer] referral, depending on the case scenario. (06, p.6)

Although most participants identified strategies used, one participant had limited knowledge of strategies used for PMTCT in the state. She admitted learning about prevention of MTCT in HIV strategies only from presentations during management meetings. She recalled, "The much I know about prevention of mother-to-child HIV transmission strategies is what I learnt from management meetings" (02, p.3). She further revealed that "they have been training nurses in prevention of mother-to-child HIV transmission services and I also learnt that after needs assessment research, some health facilities are now providing PMTCT services in the state" (02, p.3).

***Knowledge of barriers to PMTCT uptake***: Knowledge of barriers to PMTCT uptake also emerged as a sub-theme among participants in this establishment. Participants shared the barriers to uptake to include the cultural beliefs of the people and to lack of human resources. One participant asserted that many people still prefer traditional birth attendants to health care

professionals attending them due to cultural beliefs or fears and misconceptions surrounding health care system delivery. She further talked about her experience following interactions with some pregnant women:

> I had interacted with some women that delivered outside the health facility after due registration. They keep saying that they are scared of delivering in the facility because the traditional birth attendants told them, if they do, they will die, because their birth canal has been sealed with a key and that traditional birth attendants alone possess the power to [loosen] the women in labour (06, p.6)

She further remarked that this belief hindered pregnant women from delivering in the health facility even though antenatal registration is free for pregnant women and children 0 to 5years:

> Currently the state government is providing free maternal and child health services for pregnant women and children from 0 to 5years, so under normal circumstances, you would expect that services uptake should increase, and women should patronize the health facilities. But in practice, we have been encouraging ante-natal attendance, but our delivery register records less than 10% antenatal registration (06, p.7)

Limited human resources, especially medical doctors and trained nurses and midwives, challenge the attainment of health goals in reference to PMTCT in the state. A nurse leader asserted that about 90% of those providing care to pregnant women in the community are community health extension workers. She further identified the role of non-governmental organizations providing human resource support in the community.

**5.1.2 Theme 2: Marginal involvement of nurses in knowledge creation:** Marginal involvement of nurses in knowledge creation also emerged as a theme and described the extent of nurses' involvement in generating new knowledge (research). This theme has three sub-themes: minimal participation in knowledge creation, challenges/barriers associated with knowledge creation, and solutions envisioned increasing nurses' contributions to knowledge creation.

***Minimal participation in knowledge creation:*** Participants were generally aware of the benefits of knowledge creation through research.

> I know the value of locally generated evidence. What we are using in practice today is research evidence generated elsewhere. We don't even examine if and how the evidence could be applied to our setting most times. If we can generate our evidence in line with our setting, and culture, we would not be bearing this high disease burden. (017, p.4)

None of the nurse's leaders in this embedded unit had been involved in an independent research study (apart from official or school projects). But all have been involved in state and federal government-initiated research projects because of their official positions in their respective organizations. However, these nurse leaders were often unaware where the research studies were conceptualized.

> I am not among those who plan these researches; they draw up the proposal and send it to us in the state, and we help in monitoring the data collected. I am not involved in any independent or individual research, apart from that which has to do with my official capacity. (023, p.6)

Nurses serve mostly as data collectors or as supervisors of data collected in their various research projects. For example, one nurse-leader recalled, "I supervised data collection during the 2012 facility needs assessment in the state" (06, p.8). Another stated:

> Actually I have been involved in most of the state researches such as the national HIV/AIDs reproductive health survey (NHRAS), I supervised the state team since the research actually took place at the state level, it was imperative for people at the state level to do the grass root supervision. (012, p.5)

Another added that "In an individual capacity my research involvement is limited to my school projects and helping a particular group in data collection during their maternal morbidity and mortality study" (02, p.4). In the same vein, a non-nurse leader who had been involved in research in an individual capacity affirms nurses' limited involvement in research studies apart from school projects.

> You know madam; I have worked with nurses for many years. I have never seen any nurse, I repeat any nurse in any health care facility initiating a research study that can catch the authority's interest, and will say, 'this study is worth supporting;' apart from school projects like you are doing. (021, p.10)

***Challenges/barriers associated with knowledge creation:*** Challenges associated with knowledge creation are linked to overt causes such as lack of research knowledge and lack of research grants. Poor research knowledge is attributed to inadequate educational preparation. As one participant noted, “during my training days, research was not included in our curriculum” (023, p.10). In addition, almost all participants acknowledged lack of funding as a barrier. For instance, one participant noted that, “the government has never provided us with research grants to motivate us” (06, p.12). Interestingly, none of these nurses had ever submitted a research proposal for funding to their establishment or any external agency.

***Envisioning solutions to improve nurses' contribution in knowledge creation:*** Health care leaders generally acknowledge the need to empower nurses' research potential. This theme describes some of the research empowerment strategies identified by participants, such as inculcating research into educational curricula. In the words of a non-nurse leader, “In my opinion, if you want nurses to be involved in research, go back to their curriculum and work from there” (011, p.9). But this suggestion would benefit only those newly coming into the nursing profession. A nurse leader asserted for the need to build nurses' research capacity through workshops and in-house seminars, as classroom education did not provide enough skill to conduct research. “The formal classroom education we acquire, is like let me pass my examinations and go, but if we organize some in-house training or in-house capacity building, that will actually get people involved in research” (012, p.7). Another nurse leader suggested the use of grants earmarked specifically for nurses, tagged “nurses' research grants,” that would motivate nurses to actively engage in research activities.

**5.1.3 Theme 3: Limited nurses' involvement in MTCT policy decision making:** Limited nurses' involvement in MTCT policy decision making also emerged as a major theme, with four

sub-themes, among these groups of participants. The sub-themes include nominal participation of nurses in policy decision making, challenges/barriers to nurses' contributions in decision-making fora, and the solutions envisioned to improve nurses' contributions to decision making, and going with the flow.

***Nominal participation of nurses in policy decision making****:* Most of the nurses in this study acknowledged non-meaningful involvement in MTCT decision-making fora. As one participant stated, "nurses implement policies, we do not formulate policies" (06, p.9). However, a few nurses who were heads of units admitted to active engagement in some decision-making fora at the state level, as well as to being part of their establishment's management meetings. Nevertheless, none of these nurse leaders were involved in MTCT policy development. But all the non-nurses who participated in the study were actively involved. Nurses' input was only solicited during emergency situations. For example, one nurse recalled:

> Last week the xx [name of administrator] called me from Lagos and asked if this and that is on the ground. 'What should she do?' I told her to wait, that I would get back to her in a moment. After liaising with other nursing leaders in the area, we came to a solution and immediately I gave her feedback on the issue. (02, p.4)

In addition, nurse leaders complained that marginalization of nursing continued to exist, in spite of progress with regards to their relationship with those in positions of power. Such marginalization manifested itself in many ways including the lack of nurses' representation in policy fora as indicated in the following participant narrative: "can you ever imagine a health care policy without a medical doctor? If there is any, I mean the whole committee [would query it]. But nurses can be absent and no eyebrow will be raised" (02, p.8). Another nurse leader in this embedded unit acknowledged limited involvement in higher level policy formulation, but acknowledged involvement in workplace policy development that guide the daily running of the agency. She recalled:

> Well, I wouldn't say am heavily involved in policy development, but being a leader, I am not involved [at a ] very high policy level. But I am associated with making small policies that regulate the day-to-day activity of this agency. Policy that affects the work itself, you can call it lower level policies. (012, p.6)

She also revealed that "for the first time I was invited to a committee that would be [wanting to adapt] the national health policy in Cross River State, after 25 years of service." She went on to note that she was "actually not surprised at being invited because for the first time it is a nurse leader [who] is chairing this committee" (012, p.7). In the same vein, another leader described her involvement in the same activity:

> I am coordinating the different sub-groups to domesticate the national health policy in the state, all this time Cross River State has been using the national health policy for implementation, but we want to have the state health policy emanating from the national policy and this also includes HIV policies. (017 p.5)

One of the participants (a non-nurse) was involved in policy formulation including that associated with PMTCT at the local and national levels. He believed, however, that policy formulation was not a role for nurses. "It is enough that nurses are involved in implementing PMTCT policy. What contributions can they make in the federal level in policy formulation? The Heads of key units in PMTCT are represented in policy formulation"(021, p.11). In general, none of the nurse leaders in this embedded unit was involved in PMTCT policy formulation. One of them disclosed that she was not because the program was not housed in the nursing department.

***Challenges/barriers to nurses 'contribution in decision-making fora:*** Participants identified factors hindering nurses' involvement in policy formulation to include a lack of valuing of the nursing profession, a lack of nurses in key policy positions, a lack of invitations to policy meetings and the absence of a nursing directorate at the federal level.

The lack of value placed on the nursing profession and to nurses' contributions in major decision making hinders the demands for their input from stakeholders and the general public.

> The nursing profession in Cross River State and Nigeria generally is undermined, people don't value the nursing profession, because if they [did], in major health decision making, definitely they would want input from nurses, and involve them in decision-making [fora] in the state. (012, p.11)

This lack of value also hinders taking up nursing as a profession, producing a negative impact on the health care system as evidenced by the limited numbers of nurses in secondary and primary health care facilities in the state. A nurse leader stated emphatically that: "I am a nurse but I can't allow any of my children to read nursing and be part of this marginalization" (012, p.11). Policy formulation is also perceived as a higher level of thinking for which nurses lack the potential or skills to attain. In the words of one non-nurse, "If that is what your research topic seeks, they are not and will not be involved in policy formulation; it is a higher level of thinking. (021, p.5)

Some participants complained about the absence of nursing representatives in key decision-making positions involving policy formulation and advocated for nurses to be present when major health care decisions are to be made. One nurse leader bemoaned the lack of invitations extended to nurse leaders to be involved in policy formulation, that they were not occupying strategic posts. "You know, health care leaders are those involved in policy formulation; you cannot be in such an arena if you are not invited and it is only directors or program coordinators [who] are usually invited" (06, p.12).

Another participant lamented the absence of a directorate (which has now been established as of 2014) and the lack of core leaders at the federal level that led to few nursing and midwifery representatives at the decision-making table. This lack has prevented some health programs from being housed in nursing departments.

> Nursing does not have a directorate and so when there are health programs [they] is hijacked by other professionals to their departments. For an example, the Midwife Service

> Scheme (MSS), a program on mobilizing midwives in the community, this program is not housed in departments that regulate and monitor the activities of midwives. (02, p.8)

As she asked, “Which department is more competent to handle the affairs of midwives apart from this department?"

Nurse leaders reported on nurses' marginalization and asserted that nurses remained the forgotten voice in many decision-making fora. Some noted that occasionally some core decisions were taken even in the absence of the department that would be affected. Such decisions may be taken outside management meetings. A participant cited an example of being called to categorize the salary scale of nurses and midwives when the health facility was privatized. She felt dazed and questioned: “you mean you talk on issues involving nurses and midwives and you people do not think of involving them from the start, you just call on me to know their salary scale?” (02, p.9)

Although it is important to maintain consistency in the way the voice of nursing is integrated into everyday decision making in organizations, one nurse leader acknowledged that the politics of health care systems often come into play, especially in programs funded by international organizations or with internationally recognized programs. For instance, she recalled:

> When it is a program funded by an international organization or international interest, such programs are not handled by nurses although most times they are the implementers of these programs; they are hijacked by doctors who dominate the health care system. (02, p.7)

***Envisioning solutions to improving nurses’ contribution to policy decision making:***

Participants identified measures to effectively bring nurses on board in the policy formulation arena. These measures included developing curricula that integrate policy courses into higher educational programs, and group advocacy. For example, some nurse leaders suggested starting from the training school with a curriculum that is policy sensitive. “This will adequately prepare nurses and sensitize them towards health care system policy” (02, p.7). Another added that “higher educational degrees will widen horizons, enhance competence and eliminate inferiority

complexes when interacting with other professionals" (017, p.9). A nurse leader, who saw the need for group advocacy as a way out, stated: "It is time we start advocating for ourselves as a group" (02, p.8).

**5.1.4 Theme 4: Going with the flow:** The sub-theme of "going with the flow" also emerged with two further sub-themes: difficulty rocking the boat, and bowing to professional pressure in knowledge creation. These sub-themes illuminate nurses' complacency towards policy decision making and to their engagement in knowledge creation.

***Difficulty rocking the boat*:** The study found that nurses working directly in PMTCT in HIV were reluctant to make waves. They went along with their situation as evident in their acceptance of their non-involvement in PMTCT decision-making as a normal procedure or the status quo. For instance, one nurse stated: "To be precise, we look at how to overcome implementation constraints and not to formulate policy, that role is reserved for Directors, the Permanent Secretary and the Commissioner" (06, p.10). In the same vein a nurse leader clearly pointed out that "involvement in policy or non-involvement is not an issue; nurses' priority is their salary, and only very few feel the pains of marginalization from policy formulation" (012, p.7). According to these leaders "this has been the status quo and change is difficult as nurses fail to realize or seek a position in the health care policy arena" (014, p.10). In addition, another nurse leader justified nursing's position in relation to other professions. "From the inception of the health care system, doctors were the head and nurses were in the background. And it is not every issue [for which] nurses' consent was sought" (02, p.11). Similarly, another participant stated:

> I am not involved in policy formulation and none of us in this unit is involved although we work in HIV/ PMTCT program. We are just told what to do, how to do things, and while we do, there may be some challenges, and the Director brings people who are experienced in that particular area to be part of our meeting. We share ideas, we ask

> questions, clarifications are made, and based on that, most of the time recommendations are made (06p.13).

Some nurse's leaders generally accept their present situation for fear of intimidation "Let them run the system the way they like; I do what I can. You know if you raise an alarm you can be transferred to where your voice will never be heard" (012, p.10).

***Bowing to professional pressure:*** This theme refers to the complacency the nurses demonstrated in terms of their meaningful engagement in knowledge creation. Nurse leaders in this unit relegate research to those in academia. "Well, though research is a good thing I have never seen it as a direct nursing responsibility especially at the bedside. The people in [academia] are directly involved in that" (021, p.10). In the same vein, another nurse said, "Well, research is a 'no-go' area for me, I am not involved in any PMTCT research or any other" (02, p.10). Another study participant added: "our employers have never stressed the need for research, and with a [heavy] workload we don't even think of research" (012, p.8). Furthermore, another participant indicated that "research has been a difficult subject right from school days and most of us lack research skills; you will see most of us collecting data for others that is all we can do" (06, p. 3).

## 5.2 Embedded Unit 2: Nursing Organizations

This embedded unit consist of two sub units: The National Association of Nigerian Nurses and Midwifes (NANNM) and the West African College of Nursing (WACN). The within-unit analysis of these organizations revealed three main sub-themes: 1) intimate knowledge of health care, with a further sub-theme of mobilizing local strategies, 2) marginal involvement in knowledge creation, and 3) limited involvement of nurses in MTCT policy decision making

**5.2.1 Theme 1: Intimate knowledge of health care:** Participants in this unit identified HIV and MTCT of HIV as a problem peculiar to developing countries, which, compounded with poverty, prevents the utilization of adequate interventions. This idea is supported by the following quote, "I know HIV had been a global issue before now, but today it is the problem of the developing countries" (05, p.1). Referring to a sheet he prepared for the interview he elaborated:

> Take a look at this fact sheet. What is the global prevalence–about 35 million people globally, but more than 90% of people infected are in developing countries, and two-thirds of the global prevalence is in sub-Saharan Africa. You can see it is not a global issue; it may be a global concern, but [it is] more of the problem of developing countries, or call it Africa`s problem. (05, p.1)

In addition, he noted that "poverty fuelled the disease as well as hindered interventions" (05, p.2). In the same vein another participant complained about the slowness of interventions to curb HIV as a public health issue in spite of high prevalence, and that it is only recently the impact of the gravity of HIV on women and children has been readily acknowledged. Yet, another participant noted that "if it were men delivering children and watching them die off because of HIV, something would have been done a long time ago" (024, p.3).

***Mobilizing local strategies:*** Many participants in this unit demonstrated limited knowledge of global and state strategies to prevent PMTCT, but stressed that in line with the

philosophy of their association, they had engaged in the fight to prevent MTCT of HIV by providing updates on nationally recognized standards workshops:

> We believe in promoting activities that lead to positive changes in our community and health care system, so we organize workshops and seminars to sensitize the nurses. With resource persons in prevention of mother-to-child HIV transmission units, we build nurses' capacity in line with nationally recommended standards. (05, p.4)

Another participant also added that building nurses' capacity for PMTCT services is an activity that her organization initiates. "We mobilize nurses from rural settings and ensure that they benefit from such training" (02, p.3).

**5.2.2 Theme 2: Marginal involvement in knowledge creation:** This theme refers to the extent of a participant's involvement in knowledge creation. The theme has three sub-themes: minimal participation in knowledge creation, the challenges/barriers associated with knowledge creation, and envisioning solutions to improve nurses' involvement in knowledge creation.

***Minimal participation in knowledge creation:*** Among the two participants in this embedded unit, one asserted that research is a necessity for the growth of the profession and that she has been having meaningful research engagement, both independently and in collaboration with others, although she has never been involved in any research targeting HIV or in eliminating mother-to-child HIV transmission. She stated that "we can't do without research if our profession [is to] advance, but I am not involved in any HIV research" (024, p.7). The second participant had limited engagement in research apart from his PhD thesis, which is not related to HIV. "I am not involved in research apart from my PhD thesis and it is not pertaining to HIV" (05, p.5).

***Challenges/Barriers associated with knowledge creation:*** Barriers to knowledge creation include lack of funding, lack of value and interest for nursing research, lack of time, and inadequate skills for grant writing. Participants pointed out that there were major research

barriers to funding. For example, one participant noted that “the biggest barrier to my involvement in research has to do with funding” (024, p.9). There is also little value placed on research. “Apart from that research is not an immediate need, according to Maslow’s hierarchy of needs you know, and I don’t look at it as the next level of needs; for me there are other pressing needs” (05, p.7). Similarly, another participant noted that “there is a general lack of interest because there is no reward attached to research activities” (05, p.8). This participant also noted the lack of time needed to carry nursing work. He stressed that “nurses in CRS still have a lot of things to gamble with, and research is not considered as pivotal or as a means to achieve things. I would say we do not place value on research activities” (05, p.8).

Another participant reported on the lack of research skills and educational preparation which limited the extent of her research involvement. Referring to her grant writing skill, she recalled: “I tried once; it did not work, but I know I lack the skills to even join the competition. I would benefit from mentorship in this aspect.” (024, p.9) She complained about the high level of competition associated with grant applications and lamented that she has never benefitted from a research grant award.

***Envisioning solutions to improving nurses' involvement in knowledge creation*:**

Participants generally acknowledged the need to build nursing research capacity through workshops to provide funding to motivate nurses into action as well as to find research mentors. Building capacity should be followed up with funding. “A research workshop followed with research funding is the only measure that would involve nurses in research,” one participant argued (05, p7). He recalled that he had conducted research workshops many times for nurses with little or no success, since it was not accompanied by research funding. The participant also asserted that to actively engage nurses in research a novice needs to pair with an expert in the

field: “You know, I can mentor some young ones, but there are times I need mentors myself” (024, p.6). Another nurse leader stated:

> In every sphere, clinical, education wherever, we need influential nursing leaders who can represent our interests whether in research or policy, either in getting grants for research or making sure nursing is represented in policy arenas. That [should] be their role (05, p.7)

Another emphasized that “It is necessary to make basic university education mandatory as a minimum educational qualification for all nurses either in clinical or community service areas” (024, p.13).

**5.2.3 Limited involvement of nurses in MTCT policy decision making:** The limited involvement of nurses in MTCT policy decision making also emerged as a dominant theme in this sub-unit, but it also provoked three sub-themes: nominal participation of nurses in policy decision making, challenges/barriers to nurses' contributions in decision-making fora, and envisioning solutions to improve nurses' contributions in decision making. These sub-themes reveal the extent of nurses’ contribution to policy decision making in the context of MTCT.

***Nominal participation of nurses in policy decision making:*** Nursing leaders in this unit agreed that nurses had limited involvement in any health care system policy formulation forum.

> I am not involved in policy development and I can’t really say nurses are, because most times, these policies are developed right from the top at the Federal Ministry at national headquarters. They are expected to be implemented at the state level. So those involved in implementing HIV programs just tell us, we have this national policy on this or whatever, organize a workshop, and bring in a non-governmental organization and all that. But the inputs of stakeholders who are really involved in practice or leadership of professional groups are not sought out. (05, p.11)

He asserted that at the state level, “it is not a regular practice to have nurses involved in policy formulation” (05, p.11), although he agreed that “all stakeholders are needed in the implementation of policies, but not all are involved in policy formulation” (05, p.12).

***Challenges/barriers to nurses' contributions in decision-making fora***: Participants identified various factors as challenges and barriers to the contributions of nurses in decision making, such as the failure to value nurses' contributions, the marginalization of nurses, a lack of nurses occupying managerial positions, and their general non-involvement in health system politics. Participants asserted that most stakeholders placed little or no value on what nurses had to contribute, resulting in their marginalization in the health care system: "Some professional groups (nurses) are marginalized in the health care system, their opinion does not matter and other professionals think that they have nothing to offer in policy formulation" (05, p.12). This problem is made more difficult because top managerial positions are usually relegated to certain professions and denied to others, like the nursing profession. This factor acts as a barrier as only senior managers are invited to the table to think about policy: "You know those at the top are invited for policy formulation and how many of those positions do nurses occupy?" asked one participant (05, p.12). Another contended that since nurses are not interested in health care system politics, it is easy to eliminate them from what he termed "inner caucus meetings" (024, p.15).

***Envisioning solutions to improve nurses' contribution in decision making:*** Participants in this embedded unit identified ways to change the current situation of nurses to make them more actively involved in MTCT policy decisions. These included promoting inter-professional harmony and educational advancement for nurses to increase political engagement as well as capacity building. Participants responded that steps should be taken to create awareness of the need for inter-professional harmony in the health care system, where input from all stakeholders is sought and valued. Participants also emphasized the need for educational advancement to instill competence and self-confidence: "Going into a forum where everyone is educationally advanced can be quite intimidating for someone with a diploma, and she (the nurse) might not be able to

contribute intellectually" (05, p.12). Participants also saw the need for nurses to be involved in health care system politics. "You cannot really take away politics from policies, the two go together," one participant contended (05, p.12). As politics infiltrates all aspects of health care system, group advocacy through the government commissioner for health was recommended. To at least one participant, "the best way is to use our association and advocate to the state government through the Commissioner of Health, which is an area of concern to me as a leader" (024, p.10). Another participant added that before this option is implemented, nurses' capacity in policy development should be built to prevent what she called "flaws" that illuminate a paucity of knowledge in the field.

### 5.3 Embedded Unit 3: HIV/AIDS Support Organizations

This unit consists of the two sub-units of Family Health International (FHI) 360 and Saving One Million Lives (SOML), both of which are implementing partners working in Cross River State to enhance PMTCT coverage. The within-unit analysis revealed three main themes: intimate knowledge of the impact of HIV, the marginal involvement of nurses in knowledge creation, and the limited involvement nurses have in PMTCT policy decision making.

**5.3.1 Theme 1: Intimate knowledge of HIV influence:** As in other embedded units, the in-depth understanding of the impact of HIV emerged as a major theme but also developed three sub-themes: knowledge of local HIV trends, knowledge of local strategies, and the centrality of nursing work. These sub-themes demonstrated the extent of participants' awareness, their ameliorating strategies, and the unique role that nurses play in PMTCT.

***Knowledge of local HIV trends:*** The prevalence of HIV in the CSR has received global and national attention. The implementing partners in this unit asserted that they were attracted to help in this country because of its rate of high HIV infections: "Nigeria's HIV burden circles

around 12+1 states and the combination of these states' prevalence constitutes 70% of the country's burden– a strong indicator for immediate intervention if the global target of PMTCT of HIV by 2015 is to be achieved" (07, p.1). Another participant ranked the HIV burden of the Cross River State as very heavy, and further specified that "on a zonal basis, the CRS occupies the third position with Akwa Ibom leading, closely followed by Rivers State" (026, p.2). He also provided statistics on HIV-positive pregnant women in the state, estimating the number to be about 12,027 persons, and without appropriate interventions to prevent MTCT of HIV, a third of these pregnancies will result in 4,009 infant HIV infections. As he stated, "Cross River State is one of the states marked for PMTCT service saturation … to ensure that services are provided across the state to every pregnant woman, irrespective of where they are" (07, p.2).

***Knowledge of local strategies:*** Study participants in this embedded unit asserted that PMTCT itself is a strategy targeting the spread of HIV. To effectively curb the spread of HIV in mothers and children in Cross River State, one of the strategies first utilized was to support the state government in conducting its health care system needs assessment, necessary since previous PMTCT interventions by the Cross River State government had yielded little success. One participant provided statistics related to the 2011 Cross River State report:

> Take a look at the 2011 Cross River State HIV report. Only about 12.6% of pregnant women attending antenatal clinics received HIV testing and counselling services, 5.2% of infected pregnant women received antiretroviral drugs, and only 4.7% of HIV-exposed infants received antiretroviral antibiotics. (07, p.2)

With the poor coverage in the state it became imperative to work with collaborating partners to identify influencing issues and to address them. For instance, one of the implementing partners (participant) noted that, "we supported the state government to conduct a health facility needs assessment by providing technical assistance" (07, p.3). The result of this needs

assessment revealed an uneven distribution in services provided, and the limited knowledge of health care workers regarding PMTCT services.

> Most of the facilities in the state were providing antenatal services, without any knowledge or very minimum knowledge about the prevention of mother-to-child HIV transmission services, and these facilities are skewed in distribution toward urban and more developed areas of the state. (07, p.5)

After the needs assessment and results, implementing partners decided to expand PMTCT services to primary health care facilities as a strategy to enhance coverage.

> So FHI 360 decided to embark on an ambitious project known as the 'scale-up rapid activator plan,' which entailed scaling-up prevention of mother-to-child HIV transmission services to about 380 primary health care centres, including in the private sectors and in faith-based organizations and also [to institute] comprehensive retroviral services in selected facilities. Hence this became the first conscious engagement in prevention of mother-to-child HIV transmission in the state with FHI 360 support. (07, p.3)

This strategy of expanding PMTCT services entailed activation of new PMTCT sites to enhance the incorporation of services into existing facilities, many of which were not providing PMTCT services previously. These necessitated training health personnel in PMTCT, providing commodities including drugs, tools, jobs, aids, and instituting standard operating procedures (SOP) and national guidelines. Once the site was ready, it became fully activated to provide PMTCT services (07, p.5). Activated sites need manpower for effective management, which leads to building capacity in health workers (nurses and other health workers) as another way to enhance coverage.

> With a huge capacity deficiency, both in the knowledgebase and in the number of health workers, we depended most on nurses who managed most primary health care facilities. So for all activated sites, there are trained nurses and a lower cadre of health care workers that are also trained in PMTCT services to manage such sites. (07, p.5)

***Integral nursing roles in the prevention of mother-to-child HIV transmission:*** The participants in this unit admitted that nurses played an essential role in advancing health care

goals “With limited medical doctors in the state, nurses become the main stakeholders we rely on in the State AIDS and sexually transmitted diseases infection control program [with which the PMTCT program is affiliated]; they manage almost all primary health care facilities in the state” (026, p.4). This participant further added that “without the nursing workforce our effort would be meaningless; they are the backbones and foot soldiers of the HIV programs” (026, p.4). Another partner asserted that nurses are not only needed in the AIDS and STD control program, but at all levels in the health care system. HIV implementing organizations rely on nurses for success in implementing the PMTCT program: “So when we talk about leading the PMTCT response, at any level of the health system, through implementation or community mobilizations, we depend on nurses' leadership or the system is comatose without them” (07, p.4). Partners enumerated on nurses' unique role in activating sites, and in mentoring and sustaining PMTCT in HIV programs. They stated that “it is imperative that we have a doctor or nurse heading the health facility before activating a site; really, nurses are those we depend on because we don’t have sufficient doctors” (07, p.4).

As already noted, activation of a site entails equipping a health facility with all the necessary human and material resources for effective provision of PMTCT services. Nurses who are trained in such services also help in training other nurses: “It is like the peer-to-peer review, such that we bring nurses from other places to support the activation of other facilities that are being scaled up. So throughout the process, nurses are our major stakeholders” (07, p.6). Some participants realized that nurses are in a unique position to undertake health care research. “No HIV/AIDS research activities are complete without nurses' input, from my own perspective” (026, p. 9). Another added that the sustainability of the PMTCT programs depend on having

trained nurses for continuity: “When our organizational activities cease in the state, we know that there are trained personnel for continuity without interruption of services” (07, p.7).

### 5.3.2 Theme 2: Marginal involvement of nurse’s involvement in knowledge creation:

Three sub-themes have also emerged from this theme: nurse's minimal participation in knowledge creation, the challenges/barriers associated with knowledge creation, and envisioning solutions to improve the active involvement of nurses in knowledge creation.

***Nurse’s minimal participation in knowledge creation:*** The production of knowledge through research has been identified as an integral component to the success of PMTCT programs**:** “the ability to provide strong evidence-based research, to improve programs and scalable interventions that can address current barriers to effective PMTCT programs depend on research studies” (07, p.7). In Cross River State, the needs assessment research study has helped implementing partners to identify barriers to PMTCT programs in the state and has recommended interventions that can improve their uptake. “The needs assessment research provided the way forward for our interventions, the success we are making is due to that study” (07, p.8). All leaders (all of whom were non-nurses) in this embedded unit were actively involved in research, both in their official capacity and on an individual basis. Study participants believed that nurses coordinated and contributed to the success of HIV/AIDS research in the state but only on a limited basis: “Though they do not initiate any study … we need them to supervise, collect data or validate collected data” (07, p.8). One validated the role of nurses working directly with him: “I have nurses working directly with me, under my supervision helping in data collection” (07, p.9). He further noted that from his perspective in the Minister of Health's office, “they (nurses) are not involved in independent research studies” (07, p.9). Another added that:

> I have worked with many nurses, but [only] directly with about five in our organization. I think they are not very enthusiastic about the research component, though I wouldn't want to generalize that to all nurses, but I have seen others in the same environment being involved in research. (026, p.7)

***Challenges/barriers to knowledge creation in nursing:*** Participants in this unit attributed nurses' lack of involvement in research to lack of interest and poor awareness of the benefits of being engaged in research. One administrator participant stated that "I think it may be an issue of lack of interest in research. I have seen other professionals conceptualizing and initiating research studies in this organization, but this is not the issue with nurses." (07, p.10) Another further asserted that the lack of interest emanated from poor awareness on the usefulness of research to the well-being of individuals and society as a whole.

***Envisioning solutions to improve active involvement of nurses in knowledge creation*:** Participants talked about their previous experiences with strategies to actively engage people in Nigerian society. Activities associated with financial benefit and societal honour had good results. Therefore, some participants believed that using research publications as a criterion for employment and promotion would reinforce the value of research: "We value any activity that comes with monetary reward or honour, [thus,] if research becomes the criteria for promotion or employment, people will on their own prepare themselves by building their research capacity, and value research seminars or workshops" (026, p.9). Some also suggested creating awareness about research and its benefits, building research capacity among nurses to prepare them for research-related tasks as well as providing incentives for those already into research.

### 5.3.3 Theme 3: Limited nurse's involvement in PMTCT policy decision making:

Limited nurse's involvement in health care policy decision making with respect to PMTCT policies in particular emerged as a theme in this unit as well. The same three sub-themes emerged from the discussions with participants from HIV/AIDS support organizations: nominal

participation of nurses in policy decision making, challenges/barriers to nurses' contributions in decision making areas, and envisioning solutions to improving nurses' contribution in decision making.

***Nominal participation of nurses in policy decisions:*** Policies targeting the PMTCT take place at different levels of the health care system: “You know there are different levels of policy formulation, at the global level, the national level and the state level” (07 p11). The engagement of the participants in this unit in PMTCT policies has been at the facility and state levels.

> My level of involvement in PMTCT is at the state and facility level. At the facility level I am involved through my engagement with facility stakeholders in their decision making at that level, at the state level; currently, I’m looking at harmonizing an HIV plan, which is trying to develop health policy on Human Resource Organization in Cross River. (07 p.11)

Participants also recalled their involvement in developing and implementing policies. For example, one non-nurse stated: “I am involved in both PMTCT policy development and implementation with major stakeholder’s/ key actors in the field” (07, p.12). Similarly, a non-nurse participant acknowledged nurses’ limited involvement in policy formulation. “We don’t really skew to nurses, every member of the health team matters; we try as much as possible to galvanize inputs, opinions of different shades from every member of the health team to generate policies” (07, p.12). He further revealed that though he thought nurses were essential to attaining health care delivery goals, he did not believe that they were needed in developing human resource policy in the state. He said that “although we cannot do without the nursing workforce, if we must attain our set goals, they are not among the key actors we need in developing human resource policy or PMTCT policies in this state” (07, p.12). He revealed the extent of nurse’s involvement in policies:

> Occasionally during the review meetings on implementation challenges [nurses] are as free as every other member of the health community to make their input; they make their

> input as individuals not as nurses, so they are involved because every member of the health community is actually brought in to enhance collaboration. (07, p.13)

Similarly, another non-nurse participant asserted that nurses had an integral role in implementing PMTCT of HIV policies, but that they had limited involvement in policy formulation: “I know we need nurses in implementing most policies in the country, but at that level (policy formulation) they are not usually needed” (026, p.10).

***Challenges/barriers to nurses’ contribution in decision-making fora:*** One participant, who felt that the involvement of nurses at the level of policy implementation was enough, implied that he did not value nurses' contributions at the level of policy forming. “I am not seeing any barrier; it is enough that nurses are implementing policies” (07, p.13). However, another felt that nurses lacked awareness of the importance of their contribution to policy formulation and did not have anything to support them:

> Nurses handle programs across the state and country; they become the first responders to crises in the communities, but sometimes they are handicapped because there is no procedure to empower them in the policy arena and they do not realize themselves the importance of their policy contribution to the community in which they serve. (026, p.10)

***Envisioning solutions to improve nurses' involvement in MTCT decision-making fora:*** The study revealed that one of the best way to facilitate nurse' involvement in policy is to create awareness through the use of the nursing association. As one participant stated, “our association has a lot to do when it comes to policy. It can enlighten nurses and empower them into policy arenas” (026, p.10).

### 5.4: Embedded Unit 4: Health Care Institutions

This unit is comprised of four sub-units: the tertiary facility, the University of Calabar Teaching Hospital (UCTH); the secondary health facilities (General Hospital, Calabar and General Hospital, Ogoja); and the primary health facilities involving six sub sub-units, the

primary health centers at Obudu and Ogoja in the Northern Senatorial District, at Ikom and Obubra in the Central Senatorial district, and in the Calabar Municipality and Calabar South in the Southern Senatorial District. The within-unit analysis of nurses and non-nurses revealed four main themes: intimate knowledge of the impact of HIV, the marginal involvement of nurses' involvement in knowledge creation, the limited nurses' involvement in developing PMTCT policy, and decision making and going with the flow.

**5.4.1 Theme 1: Intimate knowledge of health care:** Intimate knowledge of the impact of HIV also has four sub-units: knowledge of local HIV trends, knowledge of local strategies, integral role of implementing partners, and knowledge of barriers to MTCT uptake. These sub-themes provided a comprehensive view on the extent of nurses' knowledge of the impact of HIV.

***Knowledge of local/global HIV trends:*** Unlike stakeholders from other units, who associated the burden of HIV to its high prevalence in the state, the majority of stakeholders in this unit associated prevalence to the number of cases they had witnessed in their health care facilities and in their respective local government areas. Some associated the high prevalence in their local government areas to the number of cases in the health care setting. In the words of one participant: “The scourge of HIV is so obvious in this tertiary institution, due to referrals from private hospitals and primary and secondary facilities. On a daily basis we admit many cases of HIV, including pregnant women and children.” (04, p.1) Participants also talked about the high number of infected babies. “We have witnessed lots of deliveries with infected babies, because most women do not come to the hospital on time. We [give] most of them the rapid test and most often their babies also test positive.” (029, p.4) Another participant added that “there is no day we do not have one HIV case in the ward and there is no clinic day that two or more pregnant women would not be screened positive” (018, p.2).

Participants also demonstrated knowledge of the high HIV presence in their respective local government areas: “With an HIV prevalence of 7.1% of the population and over 800 pregnant women infected with HIV annually, something must be done if we [want to] preserve our future” (014, p.2). Another added: “We are one of the worst hit local government areas with high HIV prevalence, which has weakened our health system” (030, p.2). A co-ordinator in the municipality also reported that “Calabar municipality bears the highest burden of HIV in the state with a prevalence of 10.4% and an estimated 1139 HIV positive pregnant women; you can imagine the consequences without appropriate intervention” (022, p.3).

Participants also asserted that there was a high prevalence of HIV in the community: “I doubt if there is any clan in this our community that you would not have at least 2 to 3 people living with HIV/AIDS” (030, p.2). Community members associated many deaths in the community to HIV and many babies of the deceased were HIV-positive. A participant further related that the suspicions placed on orphans has distorted communal relationships: “Children used to be raised communally, whether you [had] parents or not, but in recent times, most families refuse to take or care for babies whose mothers have died, fearing the child may be HIV-positive” (022, p.3).

***Knowledge of local strategies:*** Strategies utilized for PMTCT differ according to different health facilities. For participants in the tertiary and secondary facilities, strategies to enhance coverage for PMTCT includes integration of PMTCT into maternal and child health services, using the national PMTCT guidelines to direct activities in line with the four prongs which makes antenatal care and involving family members as the first points of entry to all PMTCT services. One participant reported that “the prevention of mother-to-child HIV transmission section has been incorporated in our antenatal department, and we have staff specially trained to offer these

services" (04, p.3). All health facilities also use antenatal clinics as the entry points: "The antenatal clinic is the first point of contact and we make sure that we counsel and test as many as consent to testing" (019, p.2). "Then depending on their status we progress to CD4 (Cluster of differentiation 4) evaluation," another participant added (020, p.4).

Study participants elaborated on their activities, which tallied with the four prongs. Generally, participants in the clinical setting used the national guidelines to help with PMTCT implementation: "The national flow chart guides all our activities from the entry point, which is providing the antenatal clinic, counselling and testing, initiating antiretroviral therapy, providing delivery care of positive babies, and [trying to ensure] compliance and [teaching of] family planning" (014, p.5). Another strategy that was used to enhance PMTCT services also included the involvement of one or two family members to ensure compliance to treatment: "to ensure compliance we tried as much as possible to involve at least one family member where the client give consent and they help to remind the client on drug [regime]" (025, p.6).

Participants in the primary health care setting used many of the same strategies as in the tertiary and secondary health care facilities. But they also integrated the services of community and church traditional birth attendants into the formal health sectors and mobilized community support as a strategy to enhance PMTCT coverage. Participants in this setting maintained that the PMTCT focus was directly on ways of increasing service uptake: "Primarily our effort is directed towards increasing [the uptake of services] among pregnant women in our various communities, therefore nurses go beyond the health facilities out to communities to encourage women to utilize hospital health care services" (018, p.5).

Since community members have a greater preference for traditional birth attendants, participants revealed that they "liaise with community leaders to identify all traditional birth

attendants in the community, and then enlighten them on the need to screen their clients for HIV, and teach them as well how to protect themselves from HIV" (030, p.4). Another participant added that "nurses are also assigned to traditional birth attendants and visit with them on their clinic days to use the opportunity to screen pregnant women after due consent" (015, p.5). In the same vein another participant reiterated that "traditional birth attendants are allocated to health facilities according to their home address and closeness to the facilities so that nurses can monitor their register" (020, p.4).

Another strategy to enhance PMTCT coverage is through the formation of community and peer support groups. These enhance PMTCT coverage: "This [support] involves the village heads and community members who volunteer to ensure the PMTCT services in their community, and they encourage all pregnant women to be screened" (014, p.5).

***Integral role of implementing partners:*** The support received from implementing partners also emerged as a theme from this embedded unit. Though there are many implementing partners in the state, most participants acknowledged the support provided by the Family Health International (FHI) 360 and USAID. The support provided comes in the form of capacity building, the activation of PMTCT sites, and the provision of material resources, and community mobilization. From the tertiary and secondary facilities, support involved training of nurses and other health care workers to be competent in providing PMTCT services: "Cross River State generally has received great support from USAID and FHI 360; they helped in activating our PMTCT site and trained nurses to work at the site" (014, p.6). Another added: "In PMTC in HIV services, we acknowledge the unique contribution of FHI 360 in the form of training of health personnel and in the provision of materials" (04, p.5). Another participant added that "although nurses are knowledgeable about some HIV services, they needed confidence on how to counsel,

provide confidentiality and treatment, ensure compliance and conduct general care for HIV-positive women, whether pregnant or not" (019, p.6).

One beneficiary of PMTCT training stated that "I was among the first people to be in the Training-the-Trainer workshop and I have helped to train many others. As well as [I have] helped in the activation of new PMTCT sites" (019, p.7). In the same vein, another added that "we were about 14 nurses from different local government areas trained by FHI 360 at Ugep. Another participant noted that "FHI 360 has trained many health workers in the state" (025, p.6). In general, participants attributed PMTCT success to the lead implementing partner in the state: "A lot of progress has been recorded in this facility with the number of HIV patients; including pregnant and non-pregnant women receiving treatment and we attribute much of our success to the lead implementing partners FHI 360" (028, p.6). In the primary health facilities, in addition to the training of health workers, participants also acknowledged the implementing partner's contribution in activating new PMTCT sites in the local government area:

> FHI 360 has activated most of the health facilities in Calabar South or let me say across the state. In Calabar South, last year they activated 11 PMTCT sites and this year they will do more; apart from these sites within the LGA, they have also activated private sectors, besides government sectors". (014 p.6)

Participants also acknowledged support provided by the partners for community mobilization to enhance utilization of PMTCT services: "FHI 360 has been a great support in the formation of community groups in this local government area," one participant noted (015, p.6). Another added that "from FHI 360 support, most communities have village health committees. This involves the village heads and community members who volunteer to ensure the uptake of PMTCT services in the community; they encourage all pregnant women to be screened" (020, p.7).

***Knowledge of barriers to PMTCT uptake:*** Knowledge pertaining to barriers in PMTCT uptake also emerged as a sub-theme in this embedded unit. These barriers include poor service uptake, late antenatal booking among pregnant women, poor compliance to treatment, lack of spouse or family members' consent to treatment, and superstition associated with HIV. Even though some areas noted increased antenatal registration, some women did not turn up at delivery or else made use of traditional birth attendants–another barrier identified by participants. Misconceptions about HIV still abound in villages as some pregnant women refuse to comply with treatment after testing positive: “You know up till now many people don’t believe in the existence of HIV as a disease, some feel it is from witches” (013, p.3). Another participant added that “as soon as some women are told they are positive, they stop coming to the hospital and turn to their churches or traditional birth attendants, and how to track these women is a problem” (029, p.4).

Poor compliance to treatment is often associated with lack of consent from family members or else fear of spouses. As one participant stated “some clients hide [the fact that they need] to take their antiretroviral drugs because they feel their spouse will throw them out of their home” (08, p.6). Almost all coordinators identified poor support of their respective health facilities: “Most pregnant women register with us, but deliver at home or with the traditional birth attendants; therefore, there are challenges of screening the babies” (09, p.7).

**5.4.2 Theme 2: Marginal involvement of nurses in knowledge creation:** Marginal involvement of nurses in knowledge creation also emerged as a theme, along with three sub-themes: minimal participation in knowledge creation, challenges/barriers associated with knowledge creation, and envisioning solutions. These sub-themes explained the extent of nurses'

involvement in research, the challenges/barriers encountered, as well as the envisioned solutions to improve the creation of knowledge n in the context of PMTCT in Cross River State.

***Minimal participation of nurses in knowledge creation:*** In general, participants in this embedded unit were aware of the worth of research: "I am aware of the usefulness of research even in respect of HIV" (028, p.7). Another added that "We value research in this hospital you know; we were the first to report on the incidence of HIV-positive status of the husband and not the pregnant wife" (04, p.6). Another asserted that research was important to society. She noted that "using research evidence to improve the quality of live is our unique contribution to our society" (01, p.4). In spite of awareness of the importance of research, the majority of participants were not involved in an independent research study apart from research associated with their official responsibilities. "Though I have not been involved in any personal research studies, I have been involved in state-initiated research" (014, p.7). The involvement of nursing leaders in research is especially important when such research is conducted in health facilities, and most primary health care leaders have been involved in state-initiated research. "There can't be any research activity in the state completed without the involvement of primary health care coordinators, unless they are not using primary health care facilities" (025, p.6). However, some nurses attributed helping to collect data for some research groups as primary research involvement. "Once, our unit head asks me to help a group in gathering some data in our unit, that was how I got involved in research, although I never knew what they were using the data for" (019, p.7). In the same way, another added: "I was involved in an international research [project] once, where the international partner insisted on a multi-collaborative approach [and wanted to include] a midwife from the hospital. This was a requirement, and I helped them in collecting data" (029, p.8). She had no knowledge about the final version of the study. For most

participants the extent of their research involvement was limited to school projects and in their official capacity to collect or validate collected data:

> Apart from my school projects I have not been involved in research, but as a primary health care coordinator in my local government area, I am involved in supervising data collection in all my facilities; in that way I am involved in research study. (025 p.6)

Corroborating this, another participant added that:

> I supervised data collection, because that is a very critical area; you may conduct your research but if you don't have good data, it comes to nothing. So I supervise data collection, what I am going to do now is data validation. The data has been collected, I have to validate it, make sure they are sending me the correct data for further use in research. (014 p.8)

In addition, another participant remarked that "though I have not been involved in any personal research studies, I have been involved in all state-initiated research. I coordinate data collection and validate the collected data to be sure it is correct" (021, p.6). Two nurse leaders stated that they had made a conscious effort to be involved with some research groups, but they were relegated to data collection.

> I volunteered to work with a certain group in the hospital that was involved in research, but failed to achieve what I wanted because my duties were limited only to data collection, and I was not carried along during every stage of the study. (027, p.5)

Overall, in this embedded unit, only one nurse leader and one non-nurse leader were involved in independently initiated research studies. However, their area of research interest was not associated with HIV or PMTCT.

***Challenges/barriers associated with knowledge creation:*** Though many nurse leaders agreed that research has been an area in which the nursing workforce has lagged, they also affirmed that a lot of barriers hinder engagement in research. These barriers have been categorized into the three major groups of individual, institutional, and systemic, all of which have hindered active participation in the PMTCT research activities.

*Individual barriers***:** These barriers involve personal limitations to undertaking research activities, including lack of knowledge and skill, fears about the process and lack of confidence, lack of time and few mentors to help. Many leaders complained about inadequate knowledge on how to conduct research: "The truth is I lack the knowledge and skill to indulge in research; in our day, research was not an issue and was not in our curriculum" (020, p.6). Another participant added that "I have the passion, but lack the skill; I know what I can achieve with good research skills" (027, p.4). In the same vein another asserted that the lack of an educational background to undertake research creates a lack of confidence: "I have attended many research workshops, but I still lack the confidence to initiate any study, and I think my lack of confidence stems from not having had a university education" (015, p.8). Some participants complained of lack of time because of being short staffed in their various settings: "Even if I decided to build up my research capacity, I doubt the possibility because of time constraints" (025, p.6). Another leader viewed research as a post- retirement activity: "I may think of research when I retire from government services, as I shall have more time to myself then" (014, p.6).

However, one nurse leader asserted that research is of limited value to health care decision making and to quality of care, therefore she had little interest in research studies or in making a contribution:

> I am not interested in research; people are interested in what is of value and use to them. Research does not inform our decisions here, politics directs decision making, so I don't have an interest in what will not be useful. (020, p.6)

A non-nurse leader in this unit asserted that "Nurses play an essential role in this system, but their research skills are not yet sharpened or they generally lack research interest" (028, p.8).

The lack of research mentors hindered those who did not have confidence in their research abilities. “If I had someone who could guide me through each stage of the research process, I would like to conduct research” (027, p.8).

*Institutional Barriers:* This barrier involves that created by training institutions and their employers. Participants asserted that the stringent criteria for BNSc admission have deterred them from commencing their degree program: “I have made efforts for the past 7 years to gain admission into the BNSc program and I cannot, and with my retirement in two years any research is not on my agenda” (021, p.8).

For those who have the ability to initiate an independent research study, they contended that their institution has never budgeted for research nor provided any research grants. Some nurse leaders also asserted that preferential treatment was given to medical doctors. “Our hospital has been providing research grants for medical doctors for the past10 years; it is only this year that they have thrown it open to other professionals” (04, p.7). Some participants revealed that their health facility has never provided a research grant; therefore, [they feel that] research is not a valued activity: “I don’t see our employer valuing research or even showing appreciation by providing a research grant no matter how small it is” (014, p.6). Leaders in the clinical setting also complained about that lack of y resources for research, such as access to a resource library and internet facilities. In the same vein, a frontline nurse agreed that research contributions are not valued: “Our employers and leaders have no value for research or they would have found a way to motivate us” (03, p.6).

*Systemic Barriers:* This barrier refers to the lack of government support for research. One participant asserted that research activities are capital intensive: “No one goes into a research study unless you have adequate funds and the local government does not fund research, so where do you

get the money from?" (014, p.7). Other participants attributed no government research funding as a sign of the low value placed on research studies: "The government in general does not value research studies or else they would have funded [them]" (025, p.6). Another added: "When you spend your money and indulge in individual research, the government does not value your contribution; you are not even appreciated, and so [why do you bother?]" (013, p.6).

***Envisioning solutions to improve knowledge creation:*** Empowering knowledge creation entails measures that can be utilized to overcome barriers and to actively engage nurses in knowledge production through research pertaining to PMTCT of HIV in Cross River State. Individual, institutional, and systemic measures to facilitate overcoming these barriers are grouped below.

*Envisioning solutions to individual barriers:* Participants revealed that with limited knowledge pertaining to research, nurses would benefit from research workshops. Some leaders asserted that such efforts should be focused on the younger generation of nurses.

> There is no need to waste time with us because most of us will be retiring soon. Every effort should be targeted towards the generic nurses and other younger registered nurses, so as to build their research capacity in school. (018, p.7)

There is a need for research mentors to provide practical experience after workshops: "Outside of the research workshop, I think we need research mentors because seminars and workshops have been organized in time past with little success" (014, p.7). Another stressed the need to attach research novices to experienced researchers to facilitate the transitional process:

> What would really help people like me is if am paired with someone who knows research in the field, as we work side by side. I could learn from what she is doing, not only classroom lectures, it will not work for me. (027, p.8)

Mentors are also needed to provide mentorship in writing funding proposals: "This is not my personal need alone; I believe I speak the mind of many, for we need a research mentor to work closely with us" (027, p.8). Another added that "I believe nurses would benefit from someone

who demonstrates how to find research funds and how to prepare a good research proposal" (028, p.9).

Participants also acknowledged the need for a university education to equip nurses for research activities. Education provides the knowledge and builds confidence in individuals so that they can collaborate with other professionals in the system. One study participant stated: "You are unconsciously intimidated when you are among doctors and professors; you wonder what I could say to be meaningful, you feel out of place because of your low educational level, so educational upgrading is the way out" (029, p.8). Another added that "I need educational advancement to sharpen my research skills" (013, p.7). Participants also identified using research as criteria for promotion to motivate those in the practice area: "If you do not use research as criteria for promotion, with a heavy workload we would never create time for it, taking myself as an example" (014, p.9).

*Envisioning solutions to institutional barriers:* Facilitators include suggested measures to overcome educational and funding challenges. Participants asserted that it was necessary to remove stringent admission criteria, which hindered experienced nurses from obtaining admission into university. It was noted that it is difficult for many to go back and finish secondary (high) school courses before admission: "If they want us to have a degree and contribute meaningfully, let them lower their admission criteria and bring us in" (021, p.9).

Institutional funding was also advocated to facilitate nurses' involvement in research; such funding should be earmarked specifically for nurses. Providing an environment conducive for research engagement was also advocated for by some leaders: "Even though we do not have enough time, if we had internet facilities at our disposal, it could motivate many" (029, p.10). The need for leaders with research vision to encourage and motivate nurses was recommended as

well as having institutions place value on meaningful research contribution by using involvement in research as a criterion for promotion for bedside nurses.

*Envisioning solutions to systemic barriers:* Participants asserted that government funding of research would help individuals and groups engage in research studies. Research should also be used as part of the criteria for employment of potential nurse employees.

### 5.4.3 Theme 3: Limited involvement of nurses in MTCT policy decision making:

Limited involvement of nurses in PMTCT policy decision-making fora also emerged as a major theme. Three sub-themes within this theme are nominal participation of nurses in policy decision making, challenges/barriers to nurses' contributions in decision-making fora, and envisioning solutions to improve nurses' contributions in decision making in the context of MTCT.

***Nominal participation of nurses in policy decision making:*** Though all leaders were directly involved in implementing policies pertaining to PMTCT, none of them had any meaningful involvement in the actual policy formulation process. Two nurse leaders expressed moderate involvement in policy through their hospital management board meetings but admitted that they were not involved in any formulation of PMTCT policies. Indeed, the majority agreed that they were not involved in any form of policy formulation, even with those policies that were not associated with PMTCT. Nurse leaders were generally aware of how health care policies, including PMTCT, were made: “Formulation of policies is always a flow from top to bottom; what is decided at the national is what the state does” (014, p.11). Another participant affirmed that “the majority of our policies in Nigeria come from the federal government like the federal ministry; they make these polices and send them down to the state ministry” (018, p.9).

Participants in policy development are invited from all states of the federation to the

Federal Capital territory in Abuja. One participant noted that "I am not aware of any nurse being involved at that level of policy" (014, p.11). After the policy is made, it is then sent to the various states, who use workshops to educate participants on how to implement the policy. "When it comes to us at the local government level, [the state ministry organizes a workshop] and they show us how [a policy] will be implemented; in essence we are at the implementing end of it" (014, p.11).

Another added that "like the PMTCT policy, we were shown how to implement the national patient PMTCT flow chart, which is used in our different PMTCT sites" (025, p.7). At the state level, the PMTCT task team committee looked at implementation challenges: "As a focal person we have committee meetings from time to time, which look at challenges encountered during implementation at the facility levels and recommend measures to overcome such challenges" (015, p.7). However, a nurse leader asserted that though she is not directly involved in policy formulation, data used for policy formulation is generated within the state: "Policy is a two-way process, because information generated in the states is used to inform state policy. So I am indirectly involved because they use data generated by me, even though 'I am not invited as an individual" (020, p.9). What became increasingly obvious was how some leaders assumed that their superiors were involved in policy formulation: "I am not involved in policy, it is for my superior (name withheld) not for us; though I am a focal person for prevention of mother-to-child HIV transmission in our facility, we only do what we are told to do" (015, p.7). However, the superior presumed that focal persons directly involved in the prevention of mother-to-child HIV transmission thematic areas were involved in policy formulation: "That aspect [policy formulation] is for focal persons directly involved in that area" (019, p.8). In the same vein another added that: "I have never been invited to any policy issue

pertaining to PMTCT; we may have an idea, but nobody asks for it or calls for my input. They bring their ideas and impose them on us; maybe the facilitator is invited as (name of position withheld), I have never been invited" (013, p.7).

Although not associated directly with PMTCT alone, nurse leaders in the primary health care setting generally acknowledged their active involvement in policies related to budgeting for the various health facilities: "When it comes to the budget for my department, that one they don't bring from above and I am fully involved" (014, p.11). Another also affirmed that "I am not involved in policy formulation apart from budgeting for the health facilities in my jurisdiction" (025, p.11).

***Challenges/barriers to nurses 'contribution in decision making*:** Factors militating against nurse' contributions in decision-making fora include lack of nurses in higher positions, few nurses being invited, poor educational status, and lack of advocates. In general, study participants asserted that they were not invited to any PMTCT policy formulation fora. "I have never been invited to any PMTCT policy forum" (030, p.10). Not being invited is attributed to nurses not occupying managerial positions, a pre-requisite to being involved in policy making. As one participant noted, "in this local government headquarters no nurse is serving as an administrator or political head in any of the units. So how can we be involved in policy when we can't occupy such posts?" (030, p.10). Another participant reiterated that there are strategic positions of authority that nurses do not occupy, which automatically excludes them from policy fora: "The highest post that nurses can attain is primary health care coordinators; none of us have ever occupied political posts such as head of local government administrator, Counsellors or Secretary of Council [Nurses] are not involved in politics" (014, p.12).

The organizational structure of the establishment keeps nurses and some health professionals on the periphery: “Nurses do not occupy senior management positions in this establishment; we do not have nurses among boards of management and house committees. These committees are dominated by certain professions, and we operate at a low level” (04, p.9).

Some health care institutions allow only degree holders into their management meetings, and nursing heads without degree are not invited: “My predecessor was not invited to management meetings because she did not have a degree” (04, p.9). Participants also asserted that poor educational backgrounds predisposed nurses to lack confidence and fuelled their inability to fight for their legitimate rights: “Our powerlessness can be traced back to our educational status; when we have nothing to offer in such fora; we are [barred from participating] in future fora” (014, p.12).

***Envisioning solutions to improve nurse’s contributions in decision making:*** Suggested measures to actively involve nurses in policy formulation include promoting higher educational qualifications, having nurse leaders who can advocate for nurses, having more nurses occupying managerial positions, having nurses who can mentor others actively involved in the community, and getting more involved in the health care system politics. “We need nurses to take the lead in political campaigns, so that we vote for them, [and so that we do not always have to vote] for others. Let's join the political system,” forming a retired nurses' association to mentor nurses, sensitize nurses on policy issues to create awareness, and use nurses' associations to provide nurses with a voice in the policy arena (014, p.13).

**5.4.4 Theme 4: ‘Going with the Flow’:** This theme refers to the laidback attitude of nurses with regard to nurses’ meaningful involvement in knowledge creation. Going with the flow emerged among stakeholders in this unit with the two sub-themes of bowing to professional

pressure and difficulty in rocking the boat. These sub-themes reveal the complacency or self-satisfied attitude of nurses towards policy decision making and their limited engagement in knowledge creation.

***Bowing to Professional Pressure:*** Nurse leaders in general tend not to push against the course of events that influences their involvement in research development. They generally follow the routine procedures of nursing practice (going along with basic norms) while excluding research from their required responsibilities: "Well, research is a no go area for me, I am not involved in any PMTCT research or any other" (09, p.5). Another added: "I am not involved in research; I know that the international PMTCT task teams are involved in research" (015, p.4). Some participants associated research with activities of those in educational settings: "Well, bedside nursing is not associated with research; it is for those in schools and not for me" (013, p.5). However, for most leaders it seems collection and validation of collected data is their most comfortable zone in research: "Apart from collection and validation of collected data, I can't be involved in any other role because I don't have the skills" (030, p.6). However, it was amazing that a nurse leader questioned the relevance of research as a criterion to attain any executive post, like that of a Chairman of the Council, and felt that emphasis on research engagement should be reduced: "How many Chairmen of the Council use research studies to attain that post. If this is not a requirement, why should we stress ourselves for nothing?" (022, p.6).

***Difficulty in rocking the boat:*** This sub-theme refers to a general complacent attitude that exists among some nursing leaders in relation to not actively advocating for nurses to be involved in policy formulation pertaining to MTCT of HIV. The findings reveal nurses' awareness of their expected role in policy, yet they remain hesitant to rock the boat fearing negative consequences of their actions: "We all know what they are doing is wrong by eliminating us (nurses) from making

major decisions, but what can we do, nobody wants to be the sacrificial lamb and lose their job" (014, p.14). These nurses accept their plight of being at the implementing end of policy without any resistance. For example, one participant stated: "When [the management] wants us to know anything on how to implement a new policy, they use workshops; that is okay, as long as we receive our salary and keep body and soul" (030, p.12).

In some health facilities, nurse leaders alleged that they were not qualified to be involved in policy formulation of any kind: "Policy formulation of any kind is for Commissioners and Permanent Secretaries and we hardly have any nurses as Commissioners and Permanent Secretaries" (025, p.11). On the other hand, some nurses felt that they generally do not have the potential to make credible contributions in policy arenas: "We don't have what it takes to make such contributions" (01, p.8). Another added that "involvement or non-involvement in policy is not my problem. I don't even desire it; if they want my contribution they will ask for it" (015p.11).

### 5.5 Summary

In summary, this chapter has presented the within-unit analysis of the four embedded units that make up the case study of Cross River State. It has detailed the main patterns of unique and multiple issues that were discovered in the stories of the 30 participants interviewed. The data obtained illuminated their knowledge of PMTCT strategies as well as nurses' contribution in research and policy development from all settings. Four major themes emerged: intimate knowledge of the impact of HIV**,** marginal involvement of nurses in knowledge creation, the limited involvement of nurses in PMTCT policy decision making, and going with the flow. Most participants had an in-depth understanding of the impact of HIV on society and the health facilities. They demonstrated good knowledge about the various strategies in line with the four prongs.

Although limited numbers of study participants were involved in knowledge creation through research, none of the nurse participants had been involved in research related to the elimination of mother-to-child HIV transmission. Nurses generally helped in supervising, collecting, or validating collected data in their official capacity. General research barriers included individual or personal constraints, or institutional and systemic constraints.

Envisioning solutions to knowledge creation included improving access to adequate research funding, building capacity, mentoring, upgrading education, reducing stringent admission criteria for experienced nurses, and using research as a criterion for employment and promotion.

Similarly, none of the nursing leaders were involved in PMTCT policy decision making. However, they acknowledged their responsibility in implementing PMTCT policies. Devaluing the contribution of nurses, the politics of the health care system, the lack of nurses in higher positions leading to their not being invited to policy making sessions, poor educational status, and lack of advocates hinder nurses from decision-making fora or policy development. Higher educational qualifications, advocacy, mentoring and active political engagement are recommended as the way forward. Chapter six, which follows, will present the across-unit intersecting themes as well as the non-intersecting themes from the various embedded units.

# CHAPTER 6

## FINDINGS PART 2: ACROSS UNIT ANALYSIS

This chapter will present the four major themes that were generated from the cross-unit analysis of the four embedded units of the case study of Cross River State: a) intimate knowledge of healthcare, b) marginal involvement in knowledge creation, c) limited nurses' involvement in MTCT policy decision making, and d) going with the flow. While the within-unit analysis in chapter five presented sub-themes or patterns of the findings according to each of the four embedded units, this across-unit analysis seeks to provide higher level insights from the data by comparing the perspectives of the embedded units. The chapter begins with an overview of the major themes in Table 4 below. The table illustrates the relationships among the various dimensions of the major themes and the four embedded units examined in this study. Then a comprehensive description of the themes' similarities and differences across the various units, which includes document reviews, are presented. The chapter will conclude with a summary of the main case.

**Table 4:** The major and sub-themes in the embedded units

| Major Themes/Sub-themes | Unit 1: Health Est. | Unit 2: Nursing Org. | Unit 3: HIV Supp. Org. | Unit 4: Health Institutions |
|---|---|---|---|---|
| 1.**Intimate Knowledge of Healthcare**<br>• Knowledge of local/global HIV trends.<br>• Knowledge of local strategies<br>• Knowledge of barriers to MTCT uptake<br>• Mobilizing local strategies<br>• Integral nursing role<br>• Integral role of implementing partners | <br>X<br>X<br>X | <br>X<br><br><br>X | <br>X<br>X<br><br><br>X | <br>X<br>X<br>X<br><br><br>X |
| 2. **Marginal involvement in knowledge creation**<br>• Minimal participation in knowledge creation<br>• Challenges/barriers associated with knowledge creation.<br>• Envisioning solutions to knowledge creation | <br>X<br>X<br><br>X | <br>X<br>X<br><br>X | <br>X<br>X<br><br>X | <br>X<br>X<br><br>X |
| 3. **Limited nurse's involvement in MTCT policy decision making**<br>• Nominal participation of nurses in policy decision making<br>• Challenges/barriers to nurses' contributions in decision-making fora<br>• Envisioning solutions to nurses' contributions in decision making | <br><br><br>X<br><br>X<br><br>X | <br><br><br>X<br><br>X<br><br>X | <br><br><br>X<br><br>X<br><br>X | <br><br><br>X<br><br>X<br><br>X |
| 4. **Going with the flow**<br>• Difficulty in rocking the boat<br>• Bowing to professional pressure | <br>X<br>X | | | <br>X<br>X |

**TABLE 4 KEY:**

UNIT 1 = Health Est.: Health Establishment

UNIT 2 = Nursing Org: Nursing Organizations

UNIT 3 = HIV Supp. Org: HIV Support Organizations

UNIT 4 = Health Institutions: Health Institutions

## 6.1 Across-Unit Analysis

Across-unit (across-case) analysis of the four embedded units in the main case, Cross River State, revealed four major themes: 1) intimate knowledge of healthcare, 2) marginal involvement in knowledge creation, 3) limited nurses' involvement in MTCT policy decision making, and 4) going with the flow. These themes present the similarities and differences pertaining to knowledge of HIV strategies and the extent of nurses' involvement in research and policy as well as their response to the course of events in their workplaces, including their complacent attitude toward knowledge creation and the policy formulation process in the context of MTCT. This chapter is organized around these themes and in the ensuing discussion. The description of these themes is complemented with the study data obtained from a document review of resources of the embedded units. The combined analysis provides a comprehensive picture of nurses' involvement in research and policy formulation in the context of MTCT of HIV in Nigeria.

**6.1.1 Theme 1: Intimate knowledge of healthcare:** This theme was most prominent in unit four, where it generated four sub-themes, followed by unit one, which had three sub-themes. In total, intimate knowledge of healthcare was a recurring theme in all four embedded units and has been broken down into 6 sub-themes: knowledge of local/global HIV trends, knowledge of local strategies, knowledge of barriers to MTCT uptake, mobilizing local strategies, integral nursing role, and integral role of implementing partners. These sub-themes demonstrated the extent of the study participants' knowledge of the impact of HIV on the health care system.

***Knowledge of local/global HIV trends:*** This sub-theme was evident across the various units and depicts similarities and differences in the participants' knowledge of local and global HIV trends. Participants in unit 1 (health establishments such as the state Ministry of Health and

the State Agency in Control of AIDs) were directly involved in coordinating the response and acknowledged the high prevalence of HIV in the country and state among the most vulnerable mothers and children. Those in unit 2 (nursing associations) attributed HIV and MTCT as a problem peculiar to developing countries, particularly Sub-Saharan Africa, that is influenced by poverty, which often hinders effective interventions. However, it was obvious in these units that until the state sentinel reports were published, many were not aware of the high prevalence of HIV and little thought was given to its impact on society: “I believe we all came alive to the HIV scourge after the last sentinel report” (06, p.2). Participants also acknowledged Nigeria’s contribution to global HIV prevalence: “Nigeria contributes the highest burden of mother-to-child transmission of HIV globally and is known to be among the 10 countries with the poorest maternal and child health indices” (021, p.2).

Most leaders in this setting also demonstrated awareness about the Cross River State's contribution to the national HIV prevalence. The trend towards a high rate of paediatric HIV infection was also evident: “We need to avert four thousand new paediatric HIV infections in this state” (021, p.1). Knowledge on factors exacerbating the spread of HIV were identified: "you know poverty, myth and misconception about HIV is what is escalating mother-to-child HIV transmission and hindering appropriate interventions” (011, p.8).

Participants in unit 3 also acknowledged the trends in the high rate of HIV infection in the country and state and were aware of the potential high rates of paediatric infection. In addition, participants in this unit acknowledged that the country /state prevalence has attracted international aid organizations and that Cross River State is one of the 12 + 1 states in Nigeria marked for PMTCT in HIV service saturation. Study participants in this unit were also aware of the high numbers of HIV-positive pregnant women in the state: “We have about 12,027 pregnant

women with HIV and without appropriate interventions a third of these pregnancies will result in 4,009 infant HIV infections" (05, p.5).

Participants in unit 4 were aware of the trends toward high HIV infection rates in the state, and especially in the health care system because of repeated HIV admissions, limited material resources, and overcrowded wards coupled with reduced manpower. “It is no news that on every clinic day, we will have a new [HIV-positive pregnant woman] – that is sure because at least two or more would test positive; we are always prepared” (013, p.2). Participants also demonstrated their knowledge of the high HIV prevalence in their respective local government areas: “We are one of the worst hit local government areas with high HIV prevalence, which has weakened our health care system” (030, p.2). Another added that “with an HIV prevalence of 7.1% and over 800 pregnant women infected with HIV annually, something must be done if we [are to] preserve our future” (014, p.2). Leaders in this unit also demonstrated awareness about the extent of maternal and infant mortality associated with HIV.

***Knowledge of local strategies:*** This sub-theme was evident in three of the units and it refers to an in-depth understanding of the ways health care leaders attain the set goal of eliminating mother-to-child transmission to the point where it is no longer a public health issue in Cross River State. Strategies identified were grouped into three areas: national, state, and institutional. Participants in unit 1 demonstrated knowledge of the national, state, and institutional strategies to PMTCT efforts. At the national level leaders in this unit identified the unique role of the National HIV coordinating agency (NACA). At the state level participants identified the role of the State Agency in Control of AIDS(SACA) in developing the harmonized work plan that entails re-strategizing and coordinating activities of all stakeholders, including implementing partners, as the first conscious strategy in line with the global plan to eliminate

MTCT: “You know HIV activities were fragmented, and no one could be held accountable for anything, therefore it was SACA that came in to coordinate and monitor various stakeholder activities” (012, p.4). The leaders added that another strategy utilized by the SACA entailed formation of technical working groups: “We have about seven technical working groups” (011, p.6). These groups provide technical support, helping to accelerate PMTCT services and strengthen state ownership and its leadership towards the expansion of PMTCT services within the states. Under the leadership of the Ministry of Health and SACA, the technical working groups and the stakeholder produced the operational plan for the elimination of MTCT. The plan is said to be a comprehensive PMTCT plan for the state as it integrates the recommended four-pronged strategy and includes key interventions to be implemented as a component of maternal, neonatal, and child health services. Participants in this unit identified the integration of PMTCT into all maternal and child health services.

The use of research as a strategy was also identified: “With poor uptake in PMTCT services, we conducted the state's facility needs assessment in 2013” (021, p.4). Participants in this unit were also knowledgeable about the state's adoption of the global four-pronged approach and the strategies to achieve each prong.

Participants in unit 2 did not identify any PMTCT strategy used in the state. Similar to those in unit 1, unit 3 participants were aware of the strategies utilized both by the state and health care institutions. The strategies identified by leaders in this setting include using research to identify the health system challenges in order to administer appropriate intervention: “We [FHI 360] provided technical assistance to the state to conduct a state-wide rapid health facility assessment” (021, p.7). This assessment provided the opportunity to identify facilities providing antenatal care services but not PMTCT of HIV services. Another strategy was the expansion of

PMTCT services, which entailed activation of new PMTCT sites in all facilities offering antenatal services in the state: “To increase access to treatment it became imperative to integrate prevention of mother-to-child HIV transmission services into existing maternal health care services” (06, p.5). Another strategy identified included training health care workers on how to provide appropriate PMTCT services in line with the four prongs. Leaders also asserted that due to the high patronage of traditional birth attendants by pregnant women, it was necessary to encourage partnerships between formal health care services and traditional birth attendants.

Study participants in unit 4 were knowledgeable about strategies utilized in the clinical setting, the practical approaches to ensure effective implementation of PMTCT services in their respective health facilities. These clinical leaders identified strategies that included using antenatal clinics as the entry point of HIV screening, health education on PMTCT, HIV counselling and testing, administering of antiretroviral drugs, using a national flow chart to direct all PMTCT services, caring for HIV-exposed infants, building capacity, liaising with traditional birth attendants for effective integration of PMTCT services, mobilizing the community, and involving significant others to ensure compliance. For example, one nurse stated that: “The antenatal clinic is the first point of entry for service delivery and care of HIV positive babies” (010, p.5). PMTCT activities usually commenced with health education to all women: “At the antenatal clinic we provide health education and then progress to HIV counselling and testing” (019, p.7). These leaders maintained that, depending on the number of cluster of differentiation 4 testing, the eligible clients were placed on antiretroviral drugs.

Family planning services were also provided to HIV-positive women after delivery: “To ensure comprehensive coverage of each prong, we used the national PMTCT flow chart” (018, p.6). This flow chart provided guidelines to specific interventions from the antenatal clinic to

delivery and subsequent care. As clearly stated by a nurse leader: “This national flow chart is used in all health care settings that provide PMTCT services and our activity is the same, from screening to prescription of antiretroviral to eligible mothers and babies” (01, p.4).

Many were familiar with the national standards of care provided to HIV-exposed infants. The activities packaged for these children included antiretroviral prophylaxis, routine immunization, and growth monitoring and support. Antiretroviral prophylaxis (co-trimoxazole) starts at 6 weeks, and is coupled with early diagnosis testing for HIV infection at 6 weeks where virological tests are available. These measures are followed by virological tests for children at 18 months of age.

Nurse leaders also attested to the fact that almost all workers in the antenatal units had received PMTCT training as a strategy to ensure quality of care. Integration of traditional birth attendants into the formal health system was the identified strategy common to all, and the clinical leaders liaised directly with these attendants to enable effective integration. All traditional birth attendants in their respective communities were identified and trained on how to screen for HIV in their patients and how to keep themselves safe.

Participants also identified community mobilization methods through the formation of village and community committees to ensure effective screening of all pregnant women, another strategy to enhance PMTCT coverage in Cross River State. Participants also acknowledged the role of family members in ensuring compliance to treatment: “We tried as much as possible to ensure that we co-opt one or two family members into the care of those affected to ensure compliance to treatment” (025, p.7).

***Knowledge of barriers to MTCT uptake:*** This sub-theme emerged from units 1 and 4, revealing participants' awareness of various factors hindering the attainment of the desired

amount of PMTCT coverage by the state. Hindering factors were evident in both the interviews and the document review data, and were manifested in cultural beliefs, inadequate human resources, poor patronage of health facilities, poor compliance to treatment, myths and misconceptions surrounding HIV, and lack of community support.

In unit 1 most nurses and non-nurse's leaders had been involved in the state-wide needs assessment of health facilities undertaken in 2013 where the factors hindering MTCT uptake were identified to include a broad mix of socio-cultural factors from health care consumers as well as health care system constraints. The document review data showed that the state provided free medical services to mothers and children 0 to 5years in primary and secondary health care facilities. However, the study participants acknowledged that in spite of these free services, pregnant women preferred traditional birth attendants and the support of their churches for delivery. This poor attendance at formal health care facilities had increased maternal and infant mortality and led to poor coverage of PMTCT services.

Myths and misconceptions surrounding HIV, as well as poor understanding about the ways HIV is transmitted, was acknowledged as a barrier to PMTCT uptake. Leaders revealed that most pregnant women stopped using government facilities as soon as they are diagnosed as HIV-positive. Inadequate numbers of health workers were also a challenge identified by both nursing and non-nursing leaders: "Some health facilities are headed by community health extension workers and community members know them by their uniform and rate their competence; hence, they would not patronize such a facility for delivery" (06, p.8).

A non-nurse leader asserted that the attitude of health workers was also a major challenge to service uptake, because traditional birth attendants were more accommodating than health care workers. Some leaders affirmed that there was a gross disparity between antenatal registration

and utilization of health facilities during deliveries: “Pregnant women use government facilities for antenatal care, and deliver in the churches or with traditional birth attendants” (011, p.7). This disparity prevents continuity of PMTCT services for mothers and babies as well as hinders early infant diagnosis of babies delivered by HIV-positive women. In the words of a nurse leader; “We are yet to break the clutch of traditional beliefs that predicts and supports conditions for safe delivery with traditional birth attendants; it remains a major challenge for PMTCT coverage until it is done” (06, p.8).

The study participants in unit 4 were also aware of barriers to MTCT uptake. Just as participants in unit 1 stated, poor services uptake was an issue, in spite of sensitizing the various communities to the need for HIV screening among pregnant women. Participants also reported that less than a quarter of those who received antenatal care delivered in health facilities. Participants in this unit attributed poor patronage of health facilities to patients' orbits of influence, such as cultural beliefs, and the influence of peers and family members on the choice of the delivery place. Another barrier to MTCT uptake was the lack of consent from spouses and family members to HIV treatment. Participants revealed that compliance to treatment was a difficult issue especially when the husband was not in agreement: “We find it hard to trace women to their homes within the community especially when women deny consent of disclosure to her husband” (03, p.5). Another barrier had to do with the excess workload with very limited numbers of trained nurses: “The whole of [name] local government area has only 5 trained nurses and 3 of us are retiring [in 2015]” (014, p.7). The excess workload is said to hinder the quality of services and the attention that clients desire from the few workers: “You know pregnant women in labour usually pack up and live with traditional birth attendants until they deliver, we do not have time” (014, p.7).

Participants also revealed that when most pregnant women come to the hospital in labour and the rapid test reveals their HIV status to be positive, it makes it impossible to follow the recommended standard of treatment, especially for those with a cluster of differentiation more than 350.

But merging PMTCT into maternal and child health services is said to reduce working space. Participants noted that they had limited space for counselling services, which became an additional workload stress. Stigmatization and discrimination of HIV-positive women in health facilities was also identified as a challenge: "It is a common practice to hear fellow health workers calling to come and take your client; she is referring to my client because she is HIV-positive" (019, p.9). Participants revealed that occasionally they ran out of material for providing care and sometimes even the antiretroviral drugs, making it very frustrating for both the care providers and the mothers. Participants suggested that employing more trained nurses and midwives along with other cadres of health workers, as well as having community-based midwives to help pregnant women in their various localities, might relieve some of the work burden. Another challenge was that associated with poor community support resulting in the vandalizing of health facilities: "Whatever happens to the facility does not bother the community members, since they don't feel the health facility is for them and their own" (06, p.8).

***Mobilizing local strategies:*** This sub-theme only emerged in unit 2 made up of nursing associations. A document review revealed that nursing associations have the mandate to undertake activities that would contribute to attaining the highest possible standards of health for peoples in various regions. The aims and objectives of nursing associations include promoting activities that improve the well-being of all. These activities include planning and implementing continuing education programs for nursing personnel. Participants acknowledged the unique role

of nursing leaders to keep nurses abreast of any emerging conditions. Through seminars and workshops, nurses' capacity is built in line with national standards.

***Integral nursing role:*** This sub-theme emerged only in unit 3, demonstrating awareness of the unique role of the nursing workforce in ameliorating and sustaining PMTCT services. Unit 3 is made up of implementing partners who have the distinctive role of supporting the Nigerian government to successfully implement the nationally adopted PMTCT strategies in order to attain the goal of eliminating MTCT in the state. These partners provide technical assistance to help improve coordination across the health systems using locally driven solutions. They work closely with nursing leaders to ensure activation of PMTCT sites as well as sustainability of the programs. Therefore, it was obvious that the integral role of nurses in successfully actualizing this mission was evident as a sub-theme among participants in this unit. According to them nurses serve a distinctive role when it comes to an HIV response: "Nurses are integral to all HIV and PMTCT responses in the state" (011, p.4). The implementing partners asserted that with few medical doctors in the state, success in eliminating MTCT depends more on nurses' proficiency since they are trained to extend their services to those that would have been provided by doctors. Documents on the facilities revealed that at least one PMTCT trained nurse or midwife must be present in any activated health facility to coordinate activities and to provide standard PMTCT services. One implementing partner conceded that without the nursing workforce, the activation of many PMTCT sites in the state would not have been possible:

> After conducting a facility base needs assessment, we discovered a gross human resource deficiency, especially with medical doctors; hence we leaned on the nurses and trained them at most primary health care facilities. Presently, we have nurses as heads at some of these sites" (07, p.5).

Another participant confirmed that "as long as we have a PMTCT trained nurse or midwife in the facility, we are sure quality care will be provided, including management of antiretroviral

antibiotics" (07, p.5). From the document review in one facility, the nursing role did not involve managing antiretroviral medications for HIV-positive clients, but it was noted that many were lost through referrals. Nurses also provided support in mentoring other nurses in PMTCT services as well as in activating new sites. Implementing partners asserted that for sustainability of PMTCT services, they rely on the nursing workforce.

***Integral role of implementing partners:*** This sub-theme emerged in unit 4 and emphasized the vital role of local and international partners in the plans and activities to eliminate MTCT in Cross River State. Based on their individual experiences, all the participants appreciated the unique support provided by implementing partners, especially Family Health International (FHI) 360, as the lead implementing partner in the state. They generally attributed advancement in PMTCT services in the state to the efforts of these partners. Participants acknowledged their role in providing the state with technical assistance during the facility base-needs assessment research: "This state remains deeply indebted to FHI 360, the lead PEPFAR implementing partner in Cross River State for their great support" (021, p.4). Participants also acknowledged their role in ensuring the step-by-step implementation of the Cross River State Operational Plan 2013-2015 to eliminate MTCT: "To prevent duplication of efforts, partners had specific measurable contributions; some partner's roles were to help the state mobilize financial resources to ensure the implementation of the operational plan" (012, p.5). Document reviews of facilities also outlined the role of each implementing partner, and their specific activities to cover all HIV-related thematic areas.

Most participants in the clinical areas also acknowledged the support provided by implementing partners through the activation of MTCT sites in various local government areas as well as in training health workers to provide competent services. The support of implementing

partners for activated sites also includes providing national standard operating procedures with clearly defined roles and responsibilities for health workers. A clinical leader also identified the key training areas provided, necessary to build competence in PMTCT services: “We were trained to provide HIV counselling and testing to all, infant feeding counselling in the context of HIV, early infant diagnosis for positive women, and how to monitor and evaluate provided services” (025, p.6). A clinical leader stated that "though we are not on track to attain the national target in PMTCT coverage, our success so far is tied to the efforts of the implementing partners” (018, p.9). Participants also acknowledged the contributions of the implementing partners to community mobilization and the formation of community committees to enhance use of the formal health system.

**6.1.2 Theme 2**: **Marginal involvement in knowledge creation:** This theme emerged with three sub-themes: minimal participation in knowledge creation, challenges/barriers associated with knowledge creation, and envisioning solutions to improve knowledge creation. These sub-themes demonstrated the extent of nurses’ contributions to knowledge creation, the associated challenges as well as the envisioned solutions to actively engage nurses in creating knowledge. Across the different units, there were similarities and differences in participants' perceptions pertaining to each sub-theme, which will be discussed below.

***Minimal participation in knowledge creation:*** This sub-theme emerged throughout units 1 to 4. In unit 1, though participants were generally aware of the importance of research in solving both population and health system challenges, they were not involved in research studies themselves. Document reviews from the units illuminated the need for health care system research to be focused in the area of disease burden. Such studies will help to set and improve the standard of services and bring about positive changes in the health needs of individuals,

families, and communities. Documents also advocated for the need for multidisciplinary and multi-sectoral approaches to ameliorate the prevalence of MTCT in the state. However, in spite of these documented facts, none of nurse leaders in this unit were involved in independent research studies. Most nurses noted that their research engagement stopped with their school projects. “Well, the last time I engaged in research study was when I carried out my school project, that is what I can say was directly my responsibility (06, p.12). In general, it was noted that all the leaders were involved in state-initiated studies such as the health facility needs assessment, but in different capacities. For nurses, their roles in the government-initiated projects were that of data collection and the validation of collected data. In the words of one nurse leader: “I don’t know how to do more than what I am doing (data collection)” (025, p.8). Issues about nurses' involvement in other research processes apart from collecting data attracted negative comments from a non-nurse participant: “You seem to overrate nurses research potential,” and concluded by saying that “we work with them and we know their abilities” (07, p.9).

In unit 2, however, one of the nurse leaders was involved in an independent research study although it was not associated with HIV. The document review revealed the integral role of research within the nursing associations' aims and objectives that stipulated the need for members to participate in research with nurses and other health team members, disseminate specialized knowledge nationally and internationally through research reports and publications, as well as utilize research findings for evidence-based practice and education.

In unit 3 participants were non-nurses who were actively involved in independent research activities, although only one in the area of MTCT. However, they asserted nurses had limited involvement in knowledge creation: “They are not very enthusiastic about research, unlike other members of staff: "I cannot generalize that, but it is a common occurrence” (026, p.

8). However, the success of most facility-based HIV research depends on nurses because they help to supervise, collect data, or validate collected data.

In unit 4 where most study participants were nurses, there was minimal engagement in research. As in other units their participation was limited to data collection and validation of collected data. For most nurse leaders, apart from government-initiated research studies, involvement in research dates back to their school project, and the knowledge from school projects had never migrated to research studies after school years. According to the perception of one nurse leader, school projects do not prepare students for real life research or to solve real life problems: “It is just to do something and pass or finish school” (012, p.9). Document reviews in this unit also revealed that research is required to review and improve standards of nursing practice. However, the exercise remains just paper work, as one nurse leader stated: “Yes that is what was written but we are yet to meet that condition" (025, p.13) However two study participants, one nurse and one non-nurse, were involved in an independent research study, although it too was not associated with HIV.

***Challenges/barriers associated with knowledge creation:*** This sub-theme cuts across all units and discusses major challenges/barriers that hinder nurses’ active involvement in knowledge creation through research. These barriers vary from individual or personal constraint to institutional and systemic barriers and will be presented as they were identified in the various units.

In unit 1, major barriers to nurses non-involvement in knowledge creation is attributed to individual (lack of research knowledge) and systemic (lack of research funding) barriers. However, most participants in this unit affirmed that research was not an integral part of their school curricula in their days as students. In unit 2, participants identified individual and

systemic barriers as major constraints to their non-engagement in research. Individual barriers included a lack of value placed on nursing research, lack of interest in research, lack of skills in grant writing, lack of financial resources and time, as well as a lack of research mentors: “We don’t have research guides or research mentors, especially nurses' mentors; you see this is a big problem” (024, p.9). Systemic barriers included lack of government funding for research.

However non-nurses in unit 3 attributed nurses' non-involvement in knowledge creation to individual barriers such as lack of interest and poor awareness of the benefits of research engagement. In unit 4, the majority of participants attributed a lack of financial resources as a major barrier to active research engagement: “Every step of the research process is capital intensive and as a civil servant, research is not possible without funding” (014, p.10). Institutional barriers for them included the stringent criteria for the BNSc, which hindered experienced nurses from gaining admission to university, a lack of facilities or resources for research, and a lack of employers who valued research. They also complained that most institutional research grants were earmarked for only medical doctors.

Systemic barriers included a lack of government support for research. Apart from the above, participants added that in general, governments tend not to utilize research results even when they are available. Government apathy towards research is highly pronounced and manifested by a lack of research resources such as electronic libraries and internet facilities in government establishments. This is summarized in the words of one leader: “You invest in what you value. The Nigerian government places little value on research except, that recommended by international communities such as the needs assessment study.” (05, p.10)

***Envisioning solutions to improve knowledge creation:*** This sub-theme cut across all units, and highlights suggested solutions to identified barriers in the various units. Envisioning

solutions to improve the creation of knowledge are grouped as individual, institutional, and systemic.

*Envisioning solutions to individual barriers**:*** In unit 1, suggested solutions included upgrading educational standards to overcome fear, and gain confidence and expertise. Some participants asserted that efforts to empower individuals should be focused on the younger generation of nurses: “They are still in the race; we are retiring soon” (018, p.6). Building nurses' capacity through workshops and in-house seminars, as well as providing grants earmarked for nurses alone” was also seen as a possible solution: "If there was grant meant for nurses alone, it would really motivate us and if such grants would come with a tag “Nurses research grant” it would also show how nurses' contributions in research are valued” (011, p.13). Similarly, unit 2 participants also affirmed the need to build nurses' research capacity; however, such efforts must be closely followed with adequate research funding. Pairing up novices with research experts was also envisioned. Participants in this unit also added that the first degree should be the foundation for all nurses.

In unit 3 building nurses' research capacity suggested using research as one criterion for employment and promotions. Participants also envisaged the need to create awareness and incentives should be provided for those that are already into research. In unit 4, participants agreed with the above suggestions but also identified the need for mentors in finding and writing grants: “We need somebody to build our skills in how to prepare a good proposal in order to attract funding” (024, p.11). This measure was seen as particularly important as no participants had ever received a research grant either locally or internationally. The need for leaders with research vision was also identified; they could influence other nurses to actively engage in research especially in the area of disease burden.

*Envisioning solutions to institutional barriers:* Suggestions under this category were mentioned only by the study participants in unit 4. For example, some participants asserted that there should be admission quotas for experienced nurses who seek university admission and that some admission criteria, seen as too stringent, should be lowered. This would encourage many nurses and prevent them from reading secondary (high) school courses in preparation for "an admission they are not even sure of" (04, p.8). Creating a stimulating research environment with computers and internet access would encourage many nurses: "You know during break period you can find one or two things from the internet which can spur your interest or provoke thought on issues" (027, p.7). To encourage nurses or other professionals who are not actively engaged in research, there should be institutional research offered. However, they agreed that it was necessary to still have some grants specifically for nurses some professionals have a research advantage over others. Health care institutions should also create more awareness about research and its benefits as well as provide incentives for those that are already into research activities.

*Envisioning solution to systemic barriers:* Systemic solutions are measures that can be used by governments to actively engage health professionals like nurses in research. In units 1, 2, and 4, participants stressed the need for government to adequately fund research studies. One study participant stated that "every year, the government makes a budget. The health sector had 6% of the budget in 2014; what percentage will be allocated to health research and what will be made available in practical terms?" (05, p.10) A government approach to facilitating research activities should include an increase in the budgetary allocation for research and the creation of awareness for the need for research evidence that can address health problems. In the words of one participant, "the government has to focus on creating an effective mechanism to fund healthcare and health care research" (026, p.14) It was also suggested

that adequate funding of the health care system will enhance the creation of a stimulating research environment.

**6.1.3 Theme 3: Limited nurses' involvement in MTCT policy decision making:** The theme of the nurses' limited involvement in MTCT policy decision making also emerged in all the units, leading to three sub-themes: the nominal participation of nurses in policy decision making, the challenges/ barriers to nurses' contributions in decision-making fora, and envisioning solutions to improve nurses' contributions in decision making. These sub-themes illuminate the extent of nurse's involvement in decision making, the barriers as well as the proposed solutions to supporting their active engagement. The similarities and differences in participant's perceptions across the different units will be discussed below.

***Nominal participation of nurses in policy decision making:*** This sub-theme emerged in all the various units and refers to the insignificant contributions of nurses in the policy arena**.** Document reviews on policy making in unit 1 revealed a multi-sectoral, multidisciplinary approach to policy formulation in the state. In the various units each department had some specific role in planning, policy-making, and administration of health care delivery services. In decision making fora, heads of the various departments conveyed the opinion of their respective units in such fora. However, in PMTCT policy formulation, none of the nursing leaders were involved in any policy formulation at the state level, although a few had participated in their facilities' management meetings. In general, nursing leaders agreed that they played an integral role in the implementation of PMTCT policy. However, one non-nurse leader felt that no matter how nurses help in implementing policy, they should never interfere with PMTCT policy formulation. In his words "nurses lack the potential to be in such arena" asking "what do you think they can contribute?" (021, p.7).

In unit 2, similar thoughts were obtained from participants as one study participant affirmed that: “There is no major health care decision-making forum to which nurses are invited; this has been a problem at the state and national levels” (05, p.10). In unit 3, however, a non-nurse commented that “we’re not skewed to nurses, when it comes to policy formulation, but we know they really help in implementing PMTCT policies” (07, p.9). However, all non-nurses in this unit were actively involved in PMTCT policy formulation processes in the state and nationally.

In unit 4, a documents review also revealed that strategic heads and heads of units of PMTCT programs are those involved in PMTCT policy formulation. Nursing leaders noted that whenever there was a new state policy introduced, a sensitization workshop was the forum used to inform them and to provide directives on how to implement such policies. With a top-to-bottom policy flow pattern in the state, nurses were of the opinion that their superiors were involved in policy formulation, while their superiors felt that nurses directly under the PMTCT thematic area, called PMTCT focal persons, were involved in formulating PMTCT policies. However, it was obvious that nursing participants were implementing PMTCT policies and none were involved in policy formulation.

***Challenges/ barriers to nurses' contributions in decision-making fora:*** This sub-theme was also evident among all units. Generally, all identified barriers could be grouped into two categories: individual and systemic. Individual barriers refer to the specific personal characteristics that limit a nurse’s ability to be involved in policy formulation, such as lack of awareness and poor educational background. Systemic barriers manifest themselves as problems within organizational structure, system politics, and marginalization of some professions from strategic managerial positions. In unit 1, nursing participants identified the lack of value felt for

the nursing profession, the lack of nurses in key policy positions, few invitations to policy meetings, and bemoaned the absence of a nursing directorate at the federal level. The lack of value placed on nurses' contributions was obvious as participants related that even in issues directly affecting nurses, decisions were taken for them. The lack of nursing leaders in key policy positions and the absence of a nursing directorate prevented nursing departments from coordinating programs, even those directly related to nurses and midwives: "Even programs that should be managed by nursing are hijacked, like the midwife services scheme" (02, p.9). This situation also favoured the allocation of health programs, especially those from international organizations or internationally recognized programs such as the PMTCT program, to other departments rather than nursing. Participants noted that the lack of invitations to policy fora was a regular practice: "Could you imagine a policy forum in the health care system without a medical doctor, but no eyebrow will raise [if nurses are not invited]" (02, p.8).

In unit 2, the marginalization of nurses and their non-involvement in health system politics were added to barriers already identified in unit 1. Study participants noted the dominance of medical doctors in most strategic positions, marginalizing nursing and other professionals from some health care positions. They further added that the non-involvement of nurses in politics was an issue that contributed to their non-involvement in policy making: "You cannot separate policy from politics and nurses do not like politics so how will they be involved in policy" (05, p.10). In unit 3, however, between the two non-nurses, one perceived nurses' non-involvement in policy as a normal occurrence, while the other asserted that nurses have poor awareness of the need to contribute to policy making and they are not empowered to try. In unit 4 participants identified barriers similar to those in units 1 and 2 but also added that the lack of degree education as well as organizational structure keep nurses and some health professionals

on the periphery. Invitations to policy fora are based on nursing leaders having a university degree but most of them have diplomas as their highest educational qualification. The organizational structure also limits nurses from occupying positions in the health care system, because other professions are, perhaps inadvertently, more encouraged into those positions. Participants lamented that "no one questions why the implementer's opinions are not sought or why a particular profession dominates the policy arena, when the health care system is a conglomeration of different professionals working to attain the same health goals" (014, p.16).

Non-involvement in politics was also an issue raised in this unit. A nurse leader questioned: "Have you ever seen a nurse as Chairman of Council or Commissioner for Health? They are all political post that nurses cannot occupy due to their non-involvement in politics" (014, p.12). Health system politics also hinder some professions from being members of some house committees, (committee of the insiders or funders) and board members. From document reviews, no nurse was a member of any of these committees. These committees are different from management meetings that involve all heads of departments, but they are nevertheless systemic barriers hindering nurses' involvement in policy decision-making fora.

***Envisioning solutions to improve nurses' contributions in decision making:*** This sub-theme also emerged in all the units and depicts measures to actively engage nurses in policy decision making. Envisioning solutions refers to measures to overcome individual and systemic constraints that hinder nurse's active involvement in policy formulation. In unit 1, participants believed that adding policy courses to the nursing curriculum would help. "A curriculum that is policy friendly will help nurses to learn how, where, and when policy is formulated and implemented" (012, p.10). Group advocacy was also envisaged as a way forward. As one

participant stated, “we can do very very little as individuals, but as a group we are strong” (02, p.8).

In unit 2, participants felt that one solution would be to encourage inter-professional harmony to enhance respect and increase the value of inter-professional contributions. They also suggested advancing the education of nurses to encourage their proficiency in policy formulation, foster political engagement, and encourage the nursing leadership to highlight nursing values. In unit 3, one solution was to create awareness using nursing associations. In unit 4, organizing policy workshops for experienced nurses to create awareness and enlighten them on how to navigate policy arena was another proposed solution.

Group advocacy efforts through nursing associations were also mentioned, as well as active participation in health system politics: “Nurses should not wait to vote for others, let them also participate in campaigns and be the ones to be voted for” (022 p.10). Participants in this unit believed that policy mentors, like retired nurses or nurse leaders, who by virtue of their years of service and experience, could help younger nurses navigate the policy arena. It was noted that most nurses retire as soon as they are able to understand health system politics; they do not serve long enough to mentor others or pass down their experiences.

Organizational restructuring that promoted merit was recommended as well: “Let all strategic positions be awarded on merit” (014, p.12). Merit here infers to years of service as well as educational qualifications. Taking service into account might help to prevent the domineering attitude of a particular profession maintaining the posts for themselves: “It is a common practice to see fresh graduates from school (names withheld) heading departments that they know nothing about, in order to maintain professional status over such departments” (014, p.13). Participants

revealed that in such circumstances, other staff have to direct the new graduates on what to do, "but he is the head anyhow and partakes in decision making" (014, p.13).

**6.1.4 Theme 4: Going with the flow:** The theme "going with flow" also emerged as a theme among study participants in units 1 and 4, with many nurse leaders both in the administrative and clinical setting. This theme highlighted the general apathy in nurses' attitudes towards knowledge creation and policy decision making. This theme has two sub-themes: difficulty rocking the boat and bowing to professional pressure.

***Difficulty rocking the boat:*** This sub-theme refers to nurses' reluctance to do something to change their circumstance in terms of their nominal engagement in policy development. They seem to be hesitant to blow the whistle or question the reason for nurses' exclusion from policy-making arenas. This situation was particularly evident in health establishments like the Ministry of Health (unit 1) and health care institutions such as hospitals and primary health care settings (unit 4) where nurses are represented in large numbers and should have a voice in decision-making. However, this is not the case, as evident in the words of a nurse leader in the study: "We all know what they are doing is wrong by eliminating [nurses] from making major decisions, but what can we do, nobody wants to be the sacrificial lamb and lose their job (014, p.14). A non-nurse leader affirmed the irrelevance of nurses' contributions to major policy projects: "There are issues you can involve nurses in but not in serious matters; they cannot be sent to the prevention of mother-to-child HIV transmission policy forum in Abuja" (021, p.11). Accepting their imposed status (their mandatory elimination from policy fora), however, led some nurses to relegate policy development only to commissioners and permanent secretaries. Nurses therefore eliminated themselves from policy arenas, as well as assumed that they could not attain such position: "policy formulation is not for nurses". For example, in articulating

where nurses fit in the policy development and implementation continuum, one nurse suggested that “policy involvement or no policy involvement, it wasn’t an issue to our past heads; it would not be an issue in my time” (02, p.14).

***Bowing to professional pressure:*** This sub-theme refers to nurses' complacency about meaningful engagement in knowledge creation. Similar to the “Difficulty rocking the boot” sub-theme, this sub-theme was more common in units 1 and 4, with their high representation of nurses in various levels of healthcare. Nurses in these units did not assume research culture as their primary responsibility. They remained satisfied with their role in data collection or validation of collected data. Research remained a dreaded area to some, and others attached a minimal importance to research activities as it did not count towards attaining a more fulfilling political post like local government Chairman.

## 6.2 Summary

The cross-case analysis of the four embedded units in the main case, Cross River State, revealed how four major themes are manifested in different and similar ways among participants in the various health care and professional organizations that participated in the study. These themes are intimate knowledge of healthcare, marginal involvement in knowledge creation, limited nurses’ involvement in MTCT policy decision making, and going with the flow. Though intimate knowledge of health care was a primary theme among all units, the knowledge of participants varied from setting to setting. For example, while the sub-theme "knowledge of local/global HIV trends" was prominent in all units, the sub-theme “knowledge of local strategies” was absent in unit 2 dominated by nursing associations. The sub-theme "knowledge of barriers to MTCT uptake" was only prominent among unit 1 and 4 participants who were mostly HIV coordinators as well as

implementers of PMTCT strategies, and therefore could identify implementation barriers. The sub-theme "mobilizing local strategies" only emerged in unit 2 nursing associations, whose roles include building nursing capacity to meet health conditions. The sub-theme "the integral nursing role" was came out in unit 3 participants who were implementing partners directly involved in helping the state to attain its goal of eliminating mother-to-child transmission of HIV. The last sub -theme, "the integral role of implementing partners" only emerged from among unit 4 participants who were mostly frontline caregivers, therefore able to identify the distinctive role of implementing partners in building capacities and aiding implementation of PMTCT strategies in the state.

The themes "marginal involvement in knowledge creation" and "limited nurses' involvement in MTCT policy decision making," and their respective sub-themes, came out in all the sub-units. However, the barriers and envisioning solutions had similarities and differences among the various units. "Going with the flow" was a prominent theme in units 1and 4 that were dominated by nurse leaders from administrative and clinical settings. Similarities and differences between themes and sub-themes emanating from the various units have been discussed. The next and final chapter of this study will provide a discussion of the findings and will place them within the context of the existing literature. A promising model to actively engage nurses in research and policy will also be provided.

# CHAPTER 7

# DISCUSSION AND IMPLICATIONS

This study has assessed nurses' involvement in health care research and policy development in the context of mother-to-child transmission of HIV (MTCT) in Cross River State (CRS), Nigeria. Through a single case study approach, informed by critical social and power theories, the experiences of nurse leaders in four embedded units were examined. The embedded units were: CRS Health Establishments, HIV/AIDS Support Organizations, Health Care Institutions and Nursing Associations. This chapter begins with an overview of study findings followed by a discussion that situates the four major findings within the existing literature to highlight the unique contributions of this particular study to nursing and health care literature. This is followed by a proposed Tree Animation Nursing (TAN) model as one way to actively engage nurses in knowledge productivity and decision making. The action component of PAR in changing participants into researchers is presented. Implications of study findings for nursing research, education, and practice will be presented next, followed by limitations of the study. The chapter ends with concluding remarks of key lessons learned from the study.

## 7.1 Overview of Study Findings

The findings from the study revealed four major themes: 1) intimate knowledge of healthcare, 2) marginal involvement in knowledge creation, 3) limited nurses' involvement in MTCT policy decision making and 4) going with the flow. Intimate knowledge of healthcare as the first theme corroborates with my research objective of assessing nurses' knowledge on current global strategies. Study participants demonstrated good knowledge about local/global HIV trends, strategies to ameliorate MTCT, barriers to MTCT uptake, processes of mobilizing local strategies, as well as the integral nursing and the implementing partner's role. The second

and third themes (marginal and limited involvement in knowledge creation and MTCT policy decision making) validate the second and third objectives, which described nurses' contribution to research and policies and identified issues that encouraged or impeded nurses' research and policy development involvement. In examining the extent of nurses' involvement in research (knowledge creation), the study revealed very minimal participation in knowledge creation, with nurses mostly involved in data collection and validation of collected data, which did not translate into publications. Identified challenges/barriers to knowledge creation varied from individual to individual, and personal constraints to institutional and systemic barriers were highlighted. Individual barriers included lack of knowledge and skill, fear, lack of confidence, lack of money, and lack of time and research mentors. Institutional barriers included a lack of institutional value for research, lack of motivation, lack of research grants, lack of sponsorship for higher education and stringent admissions criteria to degree nursing programs. Systemic barriers included lack of government money for research and lack of a stimulating research environment. Envisioning solutions to improving knowledge creation include increasing funding, building capacity, mentoring, earmarking research grants, increasing budgetary allocations to research, creating research awareness, creating a stimulating research environment with computers and internet access, using research as a criterion for promotion, and providing incentives. In exploring the extent of nurses' involvement in policy development, findings revealed nominal (insignificant) participation of nurses in policy decision making; participants affirmed active involvement in PMTCT policy implementation but no involvement in formulation. Challenges/barriers to nurses' contribution in decision-making fora were grouped into individual and health system constraints. Envisioning solutions to improve nurse' contributions in decision making (policy formulation) includes educational upgrading, integration of policy courses into the curriculum,

mentoring, group advocacy, involvement in politics, and organizational restructuring. The last theme, "going with the flow," however, revealed a generally complacent attitude of nurses towards involvement in knowledge creation and policy development.

### 7.2 Situating Findings within Existing Literature

Major findings will be discussed under the following sub-headings namely; awareness of PMTCT strategies, nurse's involvement in knowledge creation, nurses and PMTCT policy fora and nurse's diffidence. These findings will be compared and contrasted with existing literatures in the fiel**d.**

**7. 2.1 Awareness of PMTCT Strategies:** The extent of participant's knowledge on the various strategies used to ameliorate the impact of HIV are discussed under the following sub-titles: 1) Insight on local/global HIV trends, 2) Understanding of local strategies, 3) Empowerment strategies utilized, 4) Sources of knowledge, 5) Identified barriers to MTCT uptake, 6) Cross River State nurse's role in PMTCT and 7) Integral role of implementing partners.

*Insight on local/global HIV trends:* The environment and the context in which stakeholders serve provide a unique opportunity for an in-depth understanding of the impact of HIV on the health care facilities as well as its sway on the general population. This is due to the fact that nurses in this setting provide people-centred care in their various communities. They head most primary health care facilities and are aware of the impact of emergent disease on the individuals in the community as well as the various health facilities in which they served. This finding is consistent with Ndikom and Onibokun (2007) who affirmed that nurse's knowledge is developed as a result of experiences they acquired during the provision of health care services in a given environment. Similarly, the Federal Ministry of Health in Nigeria (2010) reported that

stakeholders were aware of the magnitude of HIV prevalence, especially among the most vulnerable population (women and children) due to its high prevalence in the antenatal clinics. The Nigerian Federal Ministry of Health (2009) also affirmed that the unique role of the health sector included coordinating and taking the lead in responses to HIV. This implies that health care system stakeholders (including nurses) are fully aware of the HIV situation in their local context. Therefore, having good knowledge or in-depth understanding of the prevalence and influence of HIV on individuals, families, communities and the nation as a whole, is a prerequisite to nurses' leadership in any HIV response.

The National Strategic Health Development Plan Framework on HIV also stressed the need for health sectors to coordinate the activities of all other stakeholders involved with ameliorating the impact of HIV in Nigeria (FMOH, 2010). This responsibility imposed the need for full awareness of the prevailing health conditions of the populace by health care stakeholders. They are also saddled with the responsibility to create awareness and build capacities of other stakeholders. ICAP (2013) affirmed that nurses are knowledgeable about the burden associated with HIV in Sub-Saharan Africa and well-equipped to provide essential health services in these areas. They become a critical component of population health outcomes and no health system is able to meet the needs of populations without them.

Nurses' in-depth understanding of the impact of HIV on a weak health care system is very vital and is similar to the beliefs of El-Jardali and Lavis (2011) who asserted that chronic disease such as HIV places greater impact on the health system, and saps its limited human and material resources. Osain (2011) also affirmed that with chronic and emergent diseases, the Nigerian health care system is weakened further and this is exacerbated by a dearth of resources, including drug and medical supplies, inadequate infrastructure, and a deplorable quality of care. In addition,

Agboghoroma, Sagay , and Ikechebelu (2013) asserted that the PMTCT program in Nigeria is endangered, with many challenges hindering the attainment of set goals even after its decentralization from tertiary to secondary and primary health care facilities. Challenges therefore include weak health systems, and human resource limitations, particularly in rural areas, and low utilization of maternal and child health care services.

*Understanding of local strategies***:** Nigerian nurses generally have good knowledge of PMTCT strategies. This position is true because with limited numbers of medical doctors, they are able to head most activated PMTCT sites and are solely responsible for the implementation of PMTCT strategies. Therefore, without their understanding of PMTCT strategies, the 32% PMTCT coverage made in Nigeria would never have been realised. This finding is consistent with ICAP (2013) who affirmed that creating a HIV free generation will not be possible without nurses, since they understand the community they serve and are able to adapt recommended strategies to their local setting. Nurses also have been at the forefront of the concept of task shifting, i.e., shifting responsibilities from physicians to nurses, in HIV care and treatment, therefore they are very knowledgeable about recommended HIV strategies and implementation (Ogbolu et al.,2013). The authors also noted that nurses/midwives train and supervise lay workers on how to implement PMTCT strategies, indicating that they are well-versed in PMTCT strategies. Agboghoroma et al. (2013) also reported that after training, most health care workers are knowledgeable about basic information and skills necessary to deliver core PMTCT services in an integrated manner.

This is analogous to Omowaleola (2013), who remarked that to achieve any HIV and other health-related millennium development goals, Nigerian nurses and midwives must play a crucial role. Ndikom and Onibokun (2007) found that Nigerian nurses have moderate knowledge

of PMTCT strategies such as with the use of antiretroviral drugs, voluntary counselling and testing, caesarean section, and infant feeding options, among others. However, the authors remarked that such knowledge does not necessarily translate into practice. Although this study did not examine the actual practice of PMTCT, it was evident that nursing leaders could identify their roles in line with strategies utilized. By contrast, some authors such as Balogun and Odeyemi, (2010), and Mnyani and McIntyre, (2012) are of the opinion that, even though nurses have knowledge of PMTCT strategies, specific gaps exist in key PMTCT practices provided by them in areas of maternal intrapartum treatment and breastfeeding in the context of HIV, due to insufficient education, practical experiences, and coaching support needed to implement evidence-based practices.

The identification of the prongs as a strategy in this study were similar to Agboghoroma et al. (2013), who affirmed that WHO's four-prong strategies set the prerequisite for the development of the Nigerian national implementation guidelines. Activities needed to attain each component of the four prongs include: HIV Information, counselling and testing, Antiretroviral (ARV) treatment or prophylaxis, infant feeding counselling and follow-up, referral services, establishment of new PMTCT sites, and communication activities and research. NACA (2014) also indicated that the unified efforts of government in coordinating and training health care providers should be based on the components of each prong. The prongs are a tested and proven recommended strategy, that when implemented appropriately have the capability of enhancing the attainment of the Nigerian goal to eliminate mother to child HIV transmission. Analogous to this study is Campion (2015) who identified strategies to include measures to ensure adherence to antiretroviral drugs. Similarly Ogbolu et al. (2013) revealed that in preventing MTCT of HIV, the role of Nigerian nurses encompasses all the aspect of the four prongs from the preconception

period (in providing health education on reproductive health including safe sex practices, HIV counselling, and testing and treatment), through the prenatal, perinatal, and postnatal period (infant feeding counselling, providing antiretroviral therapy to HIV-positive mothers, and antiretroviral prophylactics to exposed infants). The nurses' roles further involve providing gynaecological and family planning services (Ogbolu et al.,2013).

Research as a PMTCT strategy identified in this study is similar to other studies that revealed how necessary research is to overcome implementation constraints (Sturke et al.,2014; Agboghoroma et al.,2013). Agboghoroma et al. (2013) also incorporated capacity building in PMTCT as an essential strategy to ensure uniform, standard and high quality PMTCT services across the country.

*Empowerment strategies utilized:* Building nurse's capacity on adapted global and national strategies forms the unique role of nursing association. Moreover, apart from PMTCT implementing partners, it has been the associations that frequently keep nurses abreast of current issues in the health care system. It is obvious that the expansion of PMTCT services cannot be achieved by one professional group alone, but through a unified effort of all stakeholders working hand in hand with professional associations in fortifying and mobilizing its members through locally available strategies (WHO, 2015c). Empowerment through capacity building was also consistent with the Cross River State's PMTCT operational plan that health stakeholder potential must be enhanced to effectively implement, monitor, and coordinate the scaling up of the PMTCT plan (Cross River State Government and FHI 360, 2013). The building of nursing capacity in this regard is, however, the responsibility of state government as well as nursing associations to produce highly competent, service-oriented experts in clinical and functional areas of specialization. It is also their responsibility to keep every professional abreast of current

issues affecting the health care system. These are consistent with findings reported by PEPFAR (2012) that at the organizational level of clinical service delivery sites, there is a need to mobilize local resources to build capacity of health personnel. The area of focus should also be on the development of the capacity for antenatal care, labour and delivery, standard operating procedures for service delivery, quality management systems, and systems for referrals and linkages. Such organizational capacity building should extend to nursing and medical schools and health in-service training programs/centers for hospital staff in order to meet the on-going training needs for PMTCT providers in the country over time. ICAP (2015) also supports the fact that Nursing and midwifery associations must help to build capacity among their members from curriculum development to in-service levels.

***So**urces of knowledge:* Workshops and seminars constitute the main sources of knowledge of adopted strategies by nurses, indicating nurse's leaders' limited involvement and participation in most health care system planning. The fora (workshops/ seminars) therefore become nurse's first point of communication on emergent issues which they are expected to implement. This shows health stakeholders underutilization/undermining of nurse's contribution in planning and execution of major health care programs. The stakeholder's relegation of nurses further portrays nurses as being incompetent in health care planning, but only recognised during execution of planned programs. This finding is contrary to the findings of WHO (2010b), which asserted that stakeholders at the global, regional, national and grass-root levels must participate in the planning and implementation of any health care system strategy for its success. It is also contrary to Agboghoroma, et al. (2013) who asserts that medical doctors, midwives, and nurses working in maternity and child health units must be core members of PMTCT committees in the health facilities and must meet regularly to ensure that PMTCT services are rendered as provided in the

guidelines. Willens, Cripps, Wilson, Wolff and Rothman (2011) added that involvement of all stakeholders has the potential mitigate the impact of the infection, improve outcomes as well as empower individuals to achieve socially and economically productive lives. Such plans should clearly identify its purpose, generate a vision of how the organization wishes to be in the future, and also define the roadmap and activities required to change the organization's current situation to the desired future situation. Studies show that in order to successfully implement a strategy, participatory planning is required with all stakeholders contributing their expertise to develop a broad consensus on planned initiatives with the goal of attaining workable, efficient, and sustainable solutions (Porter and Lee, 2013; Stanleigh, 2014; CAP-NET, 2008). These findings are in line with Wilson, Whitaker and Whitford (2012) who noted that in spite of immense and significant roles that nurse play in the health care system, they are seldom considered equal partners in multidisciplinary health care teams; therefore, they are often underutilised across the health continuum. This is quite apparent in this study where nurses identified PMTCT strategies utilized in their respective implementation, but were not integral to the planning of the strategies.

*Identified barriers to PMTCT uptake:* Identified barriers emanate from: a) health care system; b) health care consumers; c) health care providers and d) lack of community ownership. The hindering factors emanating from the health care system is secondary to integration of PMTCT into existing maternal and child health services. It is however obvious that the lack of involvement of related stakeholders (such as nurses) in planning for integration, mask the identification of integration challenges. Therefore, the system acts as a barrier to its programs uptake. Identified health care limiting factors are consistent with the report of Gourday *et al*. (2013) that poor staffing and service accessibility has remained a major hindrance to high coverage. Limited space for confidential counselling services, excess workload for the limited

number of health care workers, and limited material resources for providing care is consistent with (Abboghoroma et al.,2013; Byamugisha et al.,2010). Although the Cross River State Ministry of Health and FHI 360 (2013) during the State-wide Rapid Health Facility Assessment had identified a limited number of health workers to provide PMTCT services in 2013, this condition has remained the same in most health facilities, as this study has revealed. Community health extension workers were the only cadre of health personnel providing care (not PMTCT). This situation has compromised quality of care and poor uptake of PMTCT services. The lack of equipment in health care facilities was also evident in the Cross River State needs facility assessment, which identified the need for funding to improve materials and supplies in order to improve quality of PMTCT service/uptake (Cross River State Ministry of Health and FHI 360, 2013). The challenge associated with limited counselling space as a result of integration of PMTCT into existing health care services was not a challenge identified by the facility assessment study of 2013 (Cross River State Ministry of Health and FHI 360 2013). This corroborates the opinion of Byamugisha et al. (2010) that limited space for male involvement in PMTCT services followed integration of PMTCT into existing maternal and child health services. The human resources challenge is similar to other reports (Abboghoroma et al.,2013; Suthar, Hoos, Beqiri, Lorenz-Dehne, McClure and Duncombe, 2012) where shortages of staff and excess workload were a hindrance to the desired PMTCT outcome. This informs the need to understand the effects of service integration on maternal and child health outcomes. Integration should involve the collaboration of HIV programs' coordinators and maternal and child health coordinators to enhance positive outcomes (Suthar, et al.,2012; Tudor Car et al.,2011).

The factors emanating from health care consumers are related to poor uptake of health care services. This is true because although health facilities are built for community members,

these communities were not sufficiently mobilized to identify their priorities, resources, needs and solutions to promote their effective participation. This finding is consistent with Gourday *et al*. (2013) who affirmed that individuals and their communities continue to plague the advancement of PMTCT programmes in Africa. The ascription of HIV to witchcraft and rejection of further services as soon as a person is diagnosed as HIV-positive is similar to Tenkorang (2012) who asserted that while knowledge about HIV exists in most sub-Saharan African countries, there are widespread beliefs in myths which often contradict and undermine preventive efforts. The author further contended that myths and misconceptions abound among rural communities with low socio economic status and poor knowledge about HIV and its mode of transmission. This is, however, contrary to PEPFAR (2015) who did not acknowledge witchcraft surrounding the transmission of HIV. Health care leaders agree that with appropriate pre- and post-test HIV counselling by experienced health care workers, HIV misconceptions could be overcome and a high patronage of health services anticipated. Stigmatization and discrimination as a challenge in utilizing PMTCT services is similar to Moses *et al*. (2009) and Olugbenga-Bello et al. (2013) who identified these factors as a major sociocultural barrier hindering the acceptance of voluntary HIV counselling and testing as well as the uptake of PMTCT services. Nyblade et al. (2009) further revealed that fear of stigma induces people to postpone or reject immediate care, and encourages them to seek care from far- distant health care facilities in order to ensure confidentiality.

Orbits of influence hindering PMTCT uptake is similar to a report by NACA (2014) that in expanding PMTCT services there is a need to target segmented audiences in society. The concern is that some women lack the full support of partners, families, and communities as well as religious leaders in seeking PMTCT services due to associated HIV-related stigma as well as

gender inequalities in health care decision-making. Gourlay et al. (2013) also submitted that general uncertainty about modern medicine exists among family and community members, and strong roles of elders and their beliefs often influence decisions to use traditional healers and medicine. Byamugisha et al. (2010) also asserted that a husband's consent is paramount to success especially in a patriarchal society like Nigeria. The authors further added that significant others such as parents, relations, neighbours, and churches influence the uptake of PMTCT services. Studies affirm that greater involvement of male partners and other significant family members is needed during PMTCT counselling sessions, to guard against ejection from homes, stigma, and discrimination if tested HIV-positive (Moses et al.,2009; Mnyani and McIntyre, 2012). Similarly, NACA (2014) also confirmed the lack the support for pregnant women by partners, families, communities, and religious leaders, attributed to HIV-related stigma and gender inequalities, when they are making health care decisions.

The hindering factors emanating from health care providers may be associated with inadequate preparation of health care workers for HIV expanded roles. Obviously, health care workers are products of different communities and maybe be plagued with fears and uncertainty surrounding HIV. This finding is consistent with Gourlay et al. (2013) who observed that client-staff interactions, including negative staff attitudes, was a major barrier to high PMTCT coverage and staff attitudes need to be changed to enhance coverage. Similarly, Varga and Brookes (2008) noted that the discriminatory attitudes of health care workers towards people living with HIV and AIDS generate a negative attitude towards patronizing the health facility. Deressa et al. (2014) also acknowledged that nurses' poor attitudes towards clients hinder, to a certain degree, the uptake of PMTCT services. Barry et al. (2012) remarked that the patient-provider relationship has a strong effect on uptake of all PMTCT interventions. Similarly, Creek et al. (2009), Hossain and Susan

(2010), and Olugbenga-Bello et al. (2013) confirmed that a discriminatory attitude of health workers negatively affects the decision-making process of those living with HIV.

Discriminatory attitudes also exist among health care workers as HIV-positive patients are assigned to certain nurses. This may be attributed to poor educational background on HIV management and care which precipitates fear of HIV susceptibility. This finding is similar to Asuquo et al. (2013) and Hossain and Susan (2010) who asserted that high levels of unreasonable fear about HIV and AIDS exist among health care providers and some caregivers do not want to be involved in HIV care. Raisler (2005) also noted that health workers are members of a society; therefore, they share the fears and prejudices of the general population toward persons living with HIV/AIDS.

Community members' poor attitude towards primary health facilities is attributed to lack of ownership (owning up) by the community members and their non-involvement in the conceptualization and execution of community health facilities. Therefore, community members may not be aware of the purpose and type of services rendered as well as cost of such services. This corresponds with Reid (2015), who noted that in spite of numerous attempts at reorganization of primary health care over the past 30 years in Nigeria, community members still lack a clear vision about its purpose and coordinated approach to primary health care. This has in turn hindered uptake and increased morbidity and mortality rates**.** Incidences of facilities being vandalized has become an issue, as well as a lack of concern about the management of these facilities. This finding is, however, contrary to the main purpose of primary health care facilities, which is to provide essential care to individuals and families in the community with their full participation and ownership (Lucas and Gilles, 2013). Whelan (2010) also asserted that the success of community health facilities depends on the stakeholders including patients who utilize the facility. The key

component of primary health care, known as sustainability (community participation and ownership), is lacking if community members fail to assume full responsibility for the health facility provided to meet their health needs. According to World Vision International (2012), community interventions in line with the four prongs of PMTCT are planned to increase community demand for health services and the supply of such services must be in harmony with international stipulated guidelines. It also recognized that the support of the community is also a necessity for the success of such a facility (Federal Ministry of Health 2010; World Vision international, 2012). However, Gulland (2015) who asserted that the key feature that changed the HIV scenario in countries with a previously high prevalence like South Africa and Cuba was the empowerment of community members, including women, who demanded treatment and preventive services and were not nonchalant about activities of health facilities.

*Cross River State nurse's role in PMTCT:* Cross River State nurses play integral role in PMTCT activities in the state. They form the largest bulk of health care workers and with the concept of task shifting; they become heads of most PMTCT activated sites in the state. In the various levels of health care system (Primary, secondary and tertiary), nurses serve as focal persons and primary implementers of recommended PMTCT strategies. This finding corroborates with studies which affirms the unique role of nurses in implementing recommended strategies and ameliorating the HIV burden (Barron et al.,2013; Mnyani and McIntyre, 2012). ICAP (2013) reported that nurses play significant roles in the effective prevention, care, treatment, and support for the mother-baby-dad and their families and they also fostering the amalgamation of all four prongs. Likewise, Mnyani and McIntyre (2012) reported that provision of PMTCT services by competent and motivated nurses is the bedrock of service uptake and treatment adherence by patients. Similarly, many authors have affirmed that nurses have an integral role to play in PMTCT

programs, including task shifting, which has led to significant change in PMTCT coverage in South Africa (Barron et al.,2013; PEPFAR, 2012; Peltzer et al.,2011). Cohen *et al*. (2009) also noted that with nurse-driven task shifting, there was increased uptake in the community-supported PMTCT treatment programme in rural Lesotho. In Nigeria, there is a reported synergy between nurses, traditional birth attendants, faith-based organizations, and lay health workers who rely on nurses for training on how to enhance PMTCT coverage (Balogun and Odeyemi, 2010; Ogbulu et al.,2013). ICAP (2013) revealed that to achieve the goals of the global HIV response, the support of nurses and midwives is mandatory and there should be a re-positioning of the nursing profession, so that nurses are situated at the center of both health services and the health system. Additionally, Deressa et al. (2014) remarked that without nurses' support, the scaling-up PMTCT services will never be successful. These findings are comparable to reports of the Canadian Association of Nurses in AIDS Care (2014) that found that nurses have some unique nursing qualities, which enhance their abilities to support individuals, families, and communities by virtue of their specific skills and knowledge about HIV /AIDS. This knowledge includes the impact of the social determinants of health on those living with HIV/AIDS; knowledge about maternal and child health, and the impact of stigma and providing care in line with the principles of cultural safety. Gimbel-Sherr et al. (2007) observed that expanding nursing roles include managing antiretroviral therapies could lead to rapid identification of a patient's HIV status, prompt identification of antiretroviral eligible patients, fewer losses to follow-up, and ultimately, a more rational use of limited staff time with higher-level clinical providers. Kredo et al. (2013) noted the essential role of nurses and emphasized that support provided by nurses following decentralization of services, including task shifting, enhances positive PMTCT services outcome.

*Integral role of Implementing Partners:* The support provided by implementing partners became obvious, without which the whole concept of PMTCT would have remained a mirage to many low and middle income countries. In Cross River State, FHI 360 led a group of partners to support the Nigerian government in its efforts to attain the goal of eliminating mother-to-child transmission of HIV. This finding is similar to Miller (2014) who affirmed that implementing partners in Nigeria build the capacity of stakeholders in state and local governments to deliver quality services for PMTCT through a combination of facility and community initiatives. Agboghoroma, Sagay, and Ikechebelu (2013) also noted that core partners' duties involved the harmonization of contributions and plans in line with the Nigerian national strategic plan. This finding corresponds with Abel (2014) who opined that FHI 360 has led a consortium of partners to support the Nigerian Government's effort to eliminate MTCT of HIV by 2015, and that their roles include building the capacity of state and local government stakeholders to deliver quality services. This opinion is also supported by the Cross River State Ministry of Health that acknowledged the technical assistance provided by FHI 360 during the state rapid assessment study as well as its role in building the capacity of stakeholders to enhance quality services for PMTCT through consolidation of facility and community initiatives (Cross River State Ministry of Health and FHI 360, 2013). Although the roles of implementing agencies are acknowledged, no study has yet evaluated their services in Cross River State.

### 7.2.2 Nurse's involvement in knowledge creation

Nurse's involvement in knowledge creation will be discussed under two sub-headings namely: (1) Nurses research perception and involvement in knowledge creation and (2) Identified barriers to knowledge creation /Facilitators.

*Nurses research perception and involvement in knowledge creation:* Nurses' acknowledgement of research as a panacea to tackle existing challenges in the health care system

as well as improve the quality of care (which may be alien to nursing educational foundation), makes research a mandatory requirement before graduation. Also, continuous improvement on traditional nursing practice due to research, as well as the ability of research to inform treatment of emergent disease conditions, helps in creating awareness of the importance of research. This finding is similar to that of Edwards, Chapman and Davis (2002) who affirmed that adequate educational preparation of nurses enhances their ability to develop a research affirmative culture, which could be seen across all domains of nursing. Similarly, Asuquo et al. (2013) and Ofi et al. (2008) noted that Nigerian nurses have a positive stance on the essence and the usefulness of research to the country.

With nurse's intimate knowledge of the impact of HIV on the healthcare system and PMTCT strategies, it would have been expected that nurses would involve themselves in research to ameliorate the impact of HIV. However, this study reveals limited involvement of nurses in either individual or group-initiated research studies. Moreover, none of the nursing leaders were involved in any HIV or MTCT-related research in the study setting. Their limited involvement (as data collectors) may be attributed to lack of knowledge/skills on how to initiate or conduct a research study as well as a general lack of interest. This agrees with earlier studies that Nigerian nurses are consumers, but not producers of research (Asuquo et al.,2013; *Edet*, Ella and Essienumoh, 2011; Fajemilehin *2009* and Ofi et al. 2008). This is also consistent with Asuquo et al. (2013) who affirmed that nurses help in gathering data or validating collected data for government-initiated projects, non-governmental organizations, and physician- and non-physician-led projects. Very few nurses have worked as principal or co-investigators in similar studies. The data generated by nurses are used by other professionals to build careers and develop scientifically generated evidence (Ofi et al.,2008). This result is analogous to studies in

Nigeria that asserted that nurses in their respective fields generate lot of data in their everyday caring processes and other services, but fail to utilized these generated data for research study themselves (Asuquo et al.,2012; Fajemilehin, 2009*)*.Similar findings about nurses non-involvement in research is also evident in other low-income countries and in some developed countries *(*Edward et al.,2009; Glied and Lurie,2012; Segrot, McIvor and Green, 2006).

As evidenced in this study most nurses collected data without any knowledge of the end product or what the data was to be used for, and thus their research contributions remain hidden as none of their efforts resulted in self- or group-published articles. The general non-challant attitude towards research results and dissemination of such findings may indicate lack of awareness of their rights and privileges as well as inability to demand for their right of inclusion in research works. This is similar to the findings of Edward et al. (2009) who affirmed that nurses' contribution in collecting data is rarely recognized in reports and publications of research findings in low- and middle-income countries. Even when their role as data collectors may be supported, their role as principal investigators may be thwarted by entrenched views about the relevance of nursing research. Roxburgh (2006), in identifying the extent of nurses' research involvement, revealed that nurses are either the focus of research (research conducted on nurses), or act as data collectors for others. Therefore, their participation does not include designing and management of the research project. This is also comparable to Ofi et al. (2008) who asserted that degrees of research participation by Nigerian nurses varies, with majority passive observers or passive data collectors, becoming passive consumers of research reports; very few are active producers of nursing research themselves. Edwards et al. (2002) also affirmed that full participation in research, and dissemination and utilization of research evidence remains a challenge for many nurses. In the same vein, Ogbolu et al. (2013) stressed that if Nigerian

implementers (nurses) generated evidence through research, the burden of MTCT of HIV would have been reduced. The authors added that PMTCT guidelines developed internationally have been implemented without research studies exploring the applicability of this evidence within the practice settings in Nigeria.

The International Council of Nurses (ICN) adopted nursing research as a tool to advance nursing knowledge and to improve the quality of nursing practice; every registered nurse is expected to participate in activities (such as research) that contribute to the ongoing development of the profession's body of knowledge (ICN, 2010). Amazingly, nurses in the study setting relegate research involvement to the background, which limits their ability to effectively attain health care goals: "Research is not for me," stated one participant (02, p.5). This stance however revealed poor perception of their research ability in comparison to other stakeholders who are preferred better than themselves in knowledge generation. This perception promotes the achievement of other stakeholders while nurse's contribution remains invisible. According to Habermas (1978) empirical-analytic science has an absolute aim of controlling nature and the social environment through prediction but its ultimate aim is to control others. Therefore, nurse's inability to engage in research keeps them in subordinate position or a state of powerlessness where they are controlled by those engaged in knowledge creation.

According to Gaventa and Pettit, (2011), knowledge and power are inextricably intertwined and countering power involves using and producing knowledge in a way that creates awareness and consciousness on issues that affect one's life. Knowledge therefore becomes a resource; it determines what is conceived as important, as possible, for whom and by whom. Through access to knowledge and participation in its production, use, and dissemination, actors can expand their boundaries and become visible where they were previously unnoticed.

Similarly, Foucault (1980, p.86) affirmed that “Power is inseparable from knowledge and knowledge has a direct link to power*”.* Research is therefore a tool to enhance individual confidence and advertise nursing contributions and expertise within and beyond professional boundaries. This becomes a critical tool to make professional contributions visible beyond the bedside.

The non-involvement of nurses in research in the study setting paralleled their non-involvement in policy development. Many studies have upheld the fact that research is an essential source of knowledge since it informs pathways and policies for accomplishing millennium developmental goals, including the elimination of mother-to-child HIV transmission (Edward et al., 2009; Loewenson, et al., 2010). Edward et al. (2009) declared that nurses' research contributions are a necessity since they are pioneering community health programs such as PMTCT in remote settings. Their full engagement in research will direct policy formulations and recommendations that will enhance service delivery to meet desired health goals. Additionally, strong nursing research capacity often extends to the policy environment, where nursing expertise is required to effectively inform and guide local, national, and international policy (Ager and Zarowsky, 2015; Edward et al.,2009). According to the World Health Assembly (2011), to achieve optimal physical, emotional, psychological, and social well-being of individuals, families, and societies there is a need to harness the knowledge and expertise of nursing and midwifery researchers, especially in a disease burdened area such as Nigeria.

*Identified barriers to knowledge creation/ Facilitators* This study also identified some major impediments to nurses' involvement in research; which according to Habermas (1978) the process of emancipation should involve analyzing the system to unravel the prevailing dominant system, revealing the contradictions embedded in domination, as well as potential for

emancipation to bring about change. Therefore, the identified barriers and respective facilitators will be discussed under three sub-headings: individual barriers/facilitators, institutional barriers/facilitators, and systemic barriers/ facilitators.

*Individual barriers/facilitators*: The individual barriers identified in this study are comparable to those found in other studies on Nigeria which identify lack of knowledge, skills, and time as a major limitation to nurses' involvement in research (Asuquo et al.,2013; Edet, Ella and Essienumoh, 2011; Fajemilehin, 2009*;* Ofi et al.*,2008)*. However, Fajemilehin (2009) remarked that the issue about lack of time should not be used as a barrier to research, for if nurses possess the needed research knowledge and skills, then they can create time for research if perceived as a necessity. However, Miller and Brimicombe (2004) stated that research engagement induces many cognitive and affective challenges, which are manifested as lack of confidence or low self-esteem, and hinder many from engaging in individual or group research initiatives.

The lack of a university education to prepare nurses adequately for research activities was apparent. Study indicates that most nurses especially in clinical areas did not have university education. This corresponds to other studies which showed that a nurse's formal educational preparation in research methods is fundamental to developing research knowledge and skills (Edward et al.,2009; Roxburgh, 2006). Therefore, without a university education as a background most nurses lack the skills and confidence to engage in research.

This study also identified lack of funding as a major barrier to research. The Federal and local governments hardly budget for research activities and nurses lack the knowledge of funding sources coupled with inadequate skills to compete for international grants. Edward et al. (2009) and Weber et al. (2005) asserted that nurses in low- and middle-income countries could only

identify limited national research funding options available to them, which therefore determined the low rates of success in applying to existing funders. Apart from the inability to fund their studies, nurses lacked the skills to write competitive grants. However, Edward et al. (2009) discovered that *"*when research funding is scarce, shifting resources away from well-established and prolific biomedical research groups and into more formative nurse-led research teams presents a high-risk scenario for administrators*"* (p.90), and many considers nurses' contributions in research as irrelevant. Ager and Zarowsky (2015) also affirmed the fact that research funding has been an issue to novice nurse researchers because funders give preference to those with track records.

The facilitators to individual constraints identified in this study included adequately funded research studies, building research capacity through obtaining higher degrees, especially for young nurses, mentoring, and using workshops and conferences to build capacity. These finding are consistent with those of Asuquo et al. (2013) and Edward et al. (2009) who argued that in order to be successful, research funding and capacity building should go together. These identified solutions to individual research barriers were similar to other evidence from Nigeria and other low -and middle-income countries, which found that diploma programs for registered nursing and midwives do not adequately prepare nurses for significant engagement with research methods. To build research capacity requires obtaining a higher educational qualification (Asuquo et al.,2013; Edward et al.,2009). Gaventa and Cornwall (2001) also acknowledged that knowledge obtained through research eliminates fear, empowers and enhances self-confidence in the individual as well as promotes consciousness of issues that affect individual lives. Building research capacity is a necessity to enhance quality of care, increase the equity of healthcare provision, and enhance professional development (Edward et al.,2009; Priest et al.,2007; Nchinda, 2012). For nurses and

for those in other professions, graduate education will better prepare them to conduct research; a lack of "graduate training contributes to inadequate requisite knowledge and skills to initiate research, compete for funding and develop effective knowledge translation strategies" (Edward et al.,2009, p .91)". Velho (2004) asserted that building capacity should incorporate measures that enhance an international and multidisciplinary collaboration between academic institutions and health care facilities. Priest et al. (2007) added that such collaboration should be encouraged at every step of the research process. They further advocated for mentoring among researchers with different levels of research experience as well as placing experienced researchers with novices: "Neophytes and mid-career researchers need access to quality collaborative opportunities at each stage of the research process; their involvement should be tailored to individual needs and interests, with adequate support and training provided" (p.584). Edward et al. (2009 p.91) revealed that lack of a "strong tradition in nursing research" has created a paucity of nursing research mentors and a lack of guidance from local mentors. Having senior nursing research mentors provides an avenue to discuss and establish ways to balance research, teaching, practice, and provides leadership in essential research areas to meet health needs and negotiate policy processes.

*Institutional barriers/Facilitators:* Various institutions in which nurses serve can promote or hinder research engagement depending on their preferences as revealed in this study**.** Without a research stimulating environment, many individuals relegate research to the background. The identified institutional barriers were similar to the findings in a report from the American Association of Colleges of Nursing (2013)"

> The research enterprise can thrive only when certain prerequisites are in place, including a culture supportive of research and scholarship; strong mentoring in the intellectual work of the discipline; educational programs to ensure an adequately sized and appropriately educated research workforce; and provision of necessary infrastructure and funding mechanisms to support coherent programs of research. (p.3)

Without these basic necessities in place, efforts to attain health care goals involving nurses will remain unsuccessful. This is a significant factor given that research activities demand financial resources and if more nurses were aware of funding sources and able to access funding; it would enhance research activities in developing countries such as Nigeria. Inadequate funding in the health sector and the lack of funding for research in the health care system have been reported to impact negatively on Nigerian nurses' ability to actively engage in research activities (Asuquo et al.,2013; Etowa et al.,2010; John, 2009). The stringent admissions criterion in the Nigerian universities for nursing programs is a factor that has encouraged migration of nurses into other programs and professions. This finding contradicts other studies in developed countries, which identify the limited number of university nursing programs as the reason for nurses' migration into other professions (Jairath, 2007; Weber et al.,2005).

The identified institutional facilitators were similar to those found in Rafferty et al. (2003) who asserted that basic research infrastructure such as computers and databases, is a necessity for any research endeavour. In the same vein Segrott, McIvor and Green (2006) identified providing supportive infrastructures, training, funding, and networking. Asuquo et al. (2013) also asserted that if adequate electronic access to information resources (such as a visual library, computer networking and informatics, information and communication technology) is provided, and that nurses have the appropriate skills needed to use these electronic tools effectively, the proportion of nurses engaging in research will increase.

Studies in Nigeria show that adequate research funding can motivate involvement in research activities (Asuquo et al.,2013; Edet et al.,2011*;* Fajemilehin, 2009; Ofi et al.,2008*).* However, Edward et al. (2009) revealed that there is a need to provide clear criteria from research funding agencies to eliminate protocols and bias associated with resource distribution

that favour biomedical scientists and doctors more than nurses. Creating awareness on sources of funding from both private and international funding agencies for health research is needed. This study also identified that having earmarked research grants for nurses would help to break down institutional barriers. This is similar to Edward et al. (2009) who advocated for a nurse-targeted fund to facilitate engagement of nurses in research, especially in low- and middle-income countries where nurses' ability to compete for research grants is limited. Another facilitator identified in this study is using research involvement as a criterion for promotion or future employment. This appears to be a criterion for academic nurses, as this condition has not been the basis for promotion of those in the practice area. Similarly, Roxburgh (2006) suggested that research should be prioritized for both nurses at the academic and practice setting to ensure all nurses at all levels, are prepared to initiate, access, and interpret research findings.

*Systemic barriers/Facilitators:* This barrier exists due to insufficient government budget for research and general lack of research stimulating environment**.** The systemic barriers identified were similar to Asuquo et al. (2013) who also believed that nurses suffered from a lack of government funding for research and a lack of a stimulating research environment. Ramsay (2001, pg.1) identified "the 10/90 gap" as representing the striking discrepancy between research funding (10%) and the world's health problems (90%), and this discrepancy exists in Nigeria hindering adequate research funding (FMOH, 2009). A disparity also exists in some institutions, with the limited allocation of research funds going to those health professionals who are seemingly entitled to research grants, while others are apparently not. This finding is similar to Edward et al. (2009) who affirmed that the biomedical orientation of funding agencies relegates nursing research initiatives to the background and supports funds for studies initiated by medical doctors rather than nurses. Ramsay (2001) noted that governments in most developing countries

lack the enthusiasm to fund research and they fail to see research as a key to development. This lack of research stimulation environment was also found by Asuquo et al.,2013; Ofi et al.,2008*)* who asserted that lack of government-funded internet facilities hindered nurses' participation in health care research.

The **s**ystemic facilitators identified are similar to those of the FMOH (2010) who affirmed the need to increase budgetary allocation to research as a means of addressing disease burden in the country. Ramsay (2001) also stressed the need for adequate research funding as the measure to eliminating health problems.

These facilitators (individual, institutional and systemic) equip individuals with transformative capacity, which, according to Gaventa (2003), is the power of an individual to make a difference to a pre-existing state of affairs or course of events. Gaventa and Barrett (2010) and Gidden (1984) asserted that utilizing the identified recommended solutions for research provides the ability to identify and resist all forms of power manipulations. According to Gaventa and Cornwall (2001), countering power involves producing knowledge in a way that enhances awareness and promotes consciousness of issues that affect individual lives.

### 7.2.3 Nurses and PMTCT Policy fora

This study revealed a salient elimination of nurses from PMTCT policy arena while they remain the main implementers of policies. The findings emanating from this sub-title will be discussed under the following sub-headings: nurse's contributions to policy decision making, identified barriers to nurses' contributions in decision-making fora, and identified facilitators to decision making forum.

*Nurse's contributions to policy decision making***:** This study revealed very limited nurses' involvement in decision making in the health care system in general; none was found in PMTCT policy formulation. However, nursing leaders were actively involved in implementing PMTCT policies in their respective practice settings. The lack of involvement in policy decision making may be attributed to non-recognition of their contribution, or perception of their contribution as irrelevant. However, nurses remain silent and accept their non-involvement as the *status quo*. A similar situation was reported in Richter et al. (2012) who affirmed that nurses were mainly involved in the implementation of HIV/AIDs policies and not policy formulation. The authors added that a general top-down approach exists pertaining to nurses' policy formulation and implementation involvement. The top-down, bottom-up or the in-between approach recommended by WHO (2006) is disregarded in this study setting, therefore implementation challenges identified by nurses were not taken into consideration. This finding was similar to Gilson et al. (2006) who asserted that nurses were not given the opportunity to provide feedback on how policy impacted on them.

The lack of nurses' involvement in health policy development is a familiar situation in developing countries (Asuquo et al., 2013; Ditlopo, Blaauw, Penn-Kekana and Rispel, 2014; Phaladze, 2003). A similar incidence is also reported in developed countries although the situation is improving at a faster pace there (Abood, 2007; Barclay, 2010; PAHO, 2004). In countries like Canada and the United States nurses provide their input in policy formulations (Mathews, 2012; Vandenhouten et al.,2011). But sub-optimal participation is obvious in resource-limited countries (Asuquo et al.,2013; Ditlopo et al.,2014). Richter et al. (2012) affirmed that though nurses were at the forefront of HIV prevention and care in many countries, they had limited involvement in policy decisions and development. The authors further revealed that policies were imposed on nurses:

“They were either not allowed to participate in policy development or policies were imposed from the top down” (p.3). Leavitt (2009) affirmed a similar situation and further declared that nurses are frequently absent in health policy fora compared to other health professionals. This was obvious in the 2008 WHO human resources annual report where nursing specialists constituted less than 1% of the committee (Davis, 2012).

Court (2006) asserted that policies are best implemented by those who partake in its formulation; therefore, the non-involvement of nurses in policy development may adversely affect the systems’ ability to attain health related goals in the context of MTCT in HIV in Nigeria. The findings of this study was also analogous to WHO (2010b) and Wilson, Whitaker and Whitford (2012) who reported that despite nurses' contribution to the health care system, they are not often identified as key stakeholders at every level of the delivery system, that is, from policy formulation to operations. Raisler and Cohn (2005) also affirmed that nurses do not provide input into plans and policies of ministries of health and donor organizations and any success in preventing MTCT in HIV will depend on the successful integration of nurses and midwives into the scheme of things.

The Pan American Health Organization (2004) emphasized that it is essential for all health stakeholders to know that “the fundamental purpose of positioning nurses at the strategic and management levels of national and international institutions is to ensure that they contribute to policy development in health issues to the benefit of the citizenry” (p.4). Therefore, their representation at the Ministry of Health at various levels is not just for professional interest, but their contribution to policy formulation and the organization of the services reinforces the vision and the integral development of services (PAHO, 2004).

*Identified barriers to nurses' contributions in decision-making fora:* Identified barriers to nurses' active engagement in policy development are grouped into two major categories: individual

and health care system constraints. These barriers are similar to Richter et al. (2012) who reported barriers to nurse involvement in policy formulation to emanate from individual and organizational capacities. These barriers occlude nurses' perception beyond the bedside, so that how policies are generated and reformed are omitted from their primary responsibilities (Hewison, 2008).

Individual constraints identified in this study are consistent with the report from Phaladze (2003) that found most nurses felt their skills in the policy arena were substandard and they gave way to other professionals they presumed were higher than themselves. Similarly, Taft and Nanna (2008) emphasized that most nurses view health policy "as a diffuse and mysterious phenomenon" that is insignificant to their area of practice as nurses. In the same vein, Holmes and Gastaldo (2002) asserted that traditionally, most nurses have perceived themselves and have been depicted by others, as a powerless professional group without social prestige; therefore, their contributions in policy are not valued.

This study also identified low educational qualifications as a hindrance to nurses' involvement in policy. Most nurses in this setting have only their diplomas in nursing as their highest educational qualification, while most health establishments and agencies use the first degree as a criterion for invitation to policy arenas or to management meetings. Their low educational qualifications may prevent an effective contribution at the policy table or may generate general feelings of incompetence around other professionals. This finding is similar to Edward et al. (2009) who revealed that there are very few graduate-prepared nurses in the workforce in low- and middle-income countries, which hinders their engagement in research and policy development. In the same vein Boswell, Cannon, and Miller (2005) opined that nurses lack skills as well as resources to develop skills in policy participation. However, Phaladze (2003) affirmed that policy makers assume that nurses lack the expertise and competence to

participate in policy formulation; therefore, their contributions were not needed when making major health care decisions.

Additionally, to date in Nigeria, none of the schools of nursing or universities running nursing programs have included any policy courses within the diploma or first degree curricula. The lack of policy preparedness in schools produces lack of confidence and poor contributions in the policy arena. This finding is similar to Hofler (2006) who stressed that the absence of policy courses in schools predisposes nurses to have little knowledge of policy issues. Similarly, Deschaine and Schaffer (2003) also affirmed that the lack of baccalaureate and graduate education hinders the development of policy competency among nurses. Taft and Nanna (2008) affirmed that active engagement of nurses in policy could be achieved through divulging how and where health care decisions are made and what triggers the promulgation of new health policies; this awareness exposes the mystery and ambiguity associated with policy making. Studies by some authors also revealed that building capacity in health policy increases self-competence in knowledge, skills, and understanding about activities associated with health care system policy development (Byrd et.al., 2012; Rains and Carroll, 2000).

The health care system constraints limit the scope of nursing practice, which requires individual nurses to participate in policy formulation as part of their professional work and to use their power to support and impact health care policy (Abood, 2007; American Nurses Association, 2012; Barclay, 2010; National Association of Nigerian Nurses and Midwives, 2014; PAHO, 2004). Similarly, the World Health Assembly (2011) also endorsed the active engagement of nurses and midwives in the planning, development, implementation, and evaluation of health and health system policy and programming. But this study revealed health care system constraints such as lack of value placed on nurses' opinions, lack of nurses in higher

administrative positions, few invitations to the policy formulation arena, health system politics, marginalization of the nursing profession by other professionals, and lack of nursing advocates that hinder the contributions of nurses to policy making in this setting. These constraints are subtle power manifestations which are said to be omnipresent, inherent in relationships, and exercised from "innumerable points" (Foucault 1980, p.98).

The lack of value placed on nurses' opinions paves the way to the elimination of nurses from decision making on major policies even with those they are supposed to implement. According to McDonald (2010) power underlies and fuels issues pertaining to the devaluing of nurses' contributions and subordinate nurses' knowledge. The author asserted that while viewing nursing as a profession dominated by women, it is also pertinent to note that gendering processes extend beyond individual nurses to include organizations and institutions as well as bodies of knowledge. Hence the devaluing of nurses' contribution stems from cultural power arrangements. Edward et al., (2009) also affirmed that this devaluing may emanate from the structure of the health care system which places nurses in subordinate positions and this perception extends into the policy arena. Historically nursing has suffered from a poor public image that has been difficult to eradicate, and their influence in the policy arena has remained low compared to other professions (Shariff, 2015). Similarly, Benner, Tanner and Chesla (2009) affirmed that nurses' involvement in policy formulation may be affected by societal, institutional, and workplace cultures. In the study setting, institutional and workplace regulations eliminate nurses from policy formulation and society fails to question their absence: "Yes I repeat if a medical doctor is absent from any health committee, eyebrows will raise; who does that for nurses?" (02, p.8). This finding is similar to Sharif (2014) who admitted that the public image of nursing determines how society will value nurses' input and the demand for their contributions in policy decision

making. In the same vein, Wang, Chien and Twinn (2011) added that nurses' involvement in policy formulation is limited in a health system with the conventional dominance of medical doctors. Therefore, in many health settings, the intellectual devaluation of nurses' knowledge by healthcare professionals and society at large continues to exist, leading to the marginalization of the nurse's position in the health care system (Mcdonald, 2010).

The exclusion of nurses from occupying higher administrative positions is due to power dynamics that hinder some professionals from occupying key positions in the health system (Gaventa and Pettit, 2011). However, the World Health Assembly (2011) encouraged all director generals "to strengthen WHO's capacity for development and effective implementation by the appointment of professional nurses and midwives to specialist posts in the Secretariat both at headquarters and in regions" (p.2). The study also revealed that in the Cross River State health care system, no nurse has ever served as a Commissioner for Health or Permanent Secretary in the past two decades. The prevention of some professionals from being eligible for certain posts is a conscious act to eliminate some professionals from the decision-making process. Nonetheless, the World Health Assembly (2006) called for the involvement of "nurses and midwives in the development of their health systems and in the framing, planning, and implementation of health policy at all levels, including ensuring that nursing and midwifery are represented at all appropriate government levels and have real influence" (p.2). Sharif (2014), also affirmed that institutional structures exclude nursing leaders from policy formulation, promoting the top-down policy formation, where policies are developed at the national level and then sent down to implementers, permitting other health professionals, including doctors, to represent nurses in policy arenas. Similarly, Richter et al. (2012) also reported on the top-down policy approach in the six countries they studied, writing about the negative impact on health

care systems outcomes in the context of HIV. Edward et al. (2009) also affirmed that hierarchies of power exist among health disciplines that persistently present a serious barrier to nurses' involvement in policy, since most nurses do not assume key positions. In Kenya, Uganda, and Tanzania, studies show that nurses were invisible during policy planning and such fora were dominated by other health professionals, particularly doctors (Shariff and Potgieter 2012).

Catallo et al. (2014) also affirmed that "though the number of nurses far outnumbered the number of physicians, it continues to be the medical profession that has the dominant voice and therefore influence when it comes to decisions related to health policy and health system changes" (p.2). A similar situation was reported by Ditlopo et al. (2014), in that the nurses' position in the health system hierarchy hinders their input in health policy fora and may as well prevent the bottom-top policy contribution which enhances the identification of implementation challenges (Richter et al.2012). The findings are also similar to studies stating that policy decision making and power are only conferred on those in top managerial positions, thus the lower levels officers are mostly involved in implementation of decisions (Gebbie,Wakefield, Kerfoot 2000; Riley et al.,2007; Primomo, 2007). Additionally, Hudson (2002) asserted that the power dynamic is a 'turf war' which may exist within intra-professional as well as inter-professional settings. It may take the form of exclusion or inclusion in some key positions, but whatever forms it takes leads to marginalization of the majority for the benefit of a selected few.

The exclusion of nurses from some positions are obvious interplays of power. Power confers the formal authority to make decisions and to control the resources; by contrast it also demonstrates who has the less tangible aspects of symbolic power or the inability to control ideas and meaning (Gaventa and Pettit, 2011; Hardy and Phillips, 1998; Weber, 1978 ;). Furthermore, Weber (1978) affirmed that offices or positions within the bureaucracy are organized into a

hierarchical system, where some have more power than others. However, the power is associated with the position and not the individual.

Jayasuriya and Harris (2012) and Shortus, McKenzie, Kemp, Proudfoot and Harris (2007) remarked that these differences and conflicts are obvious in making roles and boundaries, especially when coupled with no shared decision making. These differences reveal issues of power and authority hindering collaboration and attainment of health care goals in the Cross River State. Ellenfsen and Hamilton (2000) identified three organizational structures that can support individuals including opportunity, power, and relative numbers. These organizational structures include information access, professional development support, resources and other learning opportunities (Laschinger, Almost and Tuer-Hode, 2003). According to Laschinger et al ( 2003) these structures coupled with flexible job activities and strong alliances with coworkers will improve professional practice and a favourable health care outcome. However, nurses, in spite of their numbers in the health care system, lack the opportunity and power to occupy some key positions. PAHO (2004) revealed that placing of nurses and midwives in key decision-making arenas positions them strategically for full participation in the definition, execution, and evaluation of health policies and health system services. It also improves the quality of care delivered.

Few invitations to the policy formulation arena is consistent with Richter *et al*. (2012) who stated that: "Frontline nurses were often not consulted prior to the implementation of a new policy and it was assumed that they would willingly agree to implement it" (p.5). This is similar to findings in African countries where nurses are excluded from health policy processes because their clinical knowledge and expertise in informing policies was not recognized (Asuquo et al.,2013; Ditlopo et al.,2014; Edward et al.,2009). This corresponds to Abood (2007) who

asserted that nurses remain in the background and wait to be added as an afterthought to the policy and legislative arenas instead of being involved in the planning and executions of health policies. Barclay (2010) reported that though many stakeholders regarded nurses as one of the most trusted sources of health information, they were noticed as having very little effect on health care reform. Phaladze (2003) also affirmed a similar situation but added that the lack of invitation is often associated with limited confidence in nurses' expertise in policy development. In the same vein, Akunja, Kaseje, Obago, Ochieng (2012) affirmed that the lack of skills in policy and politics are a major hindrance to nurses not being invited.

Akunja et al. (2012) noted that health system politics also play a role in eliminating nurses from policy development, affirming that politics regulates the placement of people in strategic positions in the health care system, even when they are not eligible. Health care politics reserve some key positions for certain professionals and automatically eliminate others from occupying certain positions, reducing their chances of being involved in policy development. Deschaine and Schaffer (2003) agreed, affirming that nursing leaders play an active role trying to educate new commissioners and board members on public health problems while they themselves are not being invited to be part of policy development. Catallo, Spalding, Haghiri-Vijeh (2014) also contended that in spite of the numerical strength of nurses, the medical profession has the dominant voice to influence most decisions related to health policy and health system changes. In the same vein, Edward et al. (2009) affirmed that the health care system is structured so that physicians are naturally nominated as the 'head of the team', which has strengthened their dominance and contributed to public perceptions that the contributions other health care workers are irrelevant. According to Ugochukwu et al. (2013), it is common for African politicians, policy-makers, and health administrators to acknowledge that the nursing profession is integral

to the success of the health sector, but they fail to back up this assertion with supportive policies that permit maximum performance of nurses' output, such as engagement in all levels of policy development. Rather, these stakeholders encourage structures that inhibit the development of potential leaders in the nursing profession for these countries. Adeoye (2014) in Nigeria also affirmed that instead of the health care system being managed as a joint venture with multi-disciplinary professionals contributing their expertise from planning to execution, the system is highly discriminatory, lopsidedly favouring the dominance of medical doctors, who occupy most key positions in the health care system. Gulland (2015) state that for Cuba only a combination of a functional health care system and political will contribute to the eradication of MTCT in HIV.

This study found that most nurses were not interested in health care system politics, therefore their non-involvement further dampened their engagement in policy development. In Nigeria, the political arena is dominated by men and this stance criss-cross into the nursing profession and influences nurses' attitude towards politics at work. This cultural believe about gender and political engagement contributes to nurses' (who are mostly female) lack of interest in politics. Similar studies have also acknowledged the limited involvement of nurses in health policy, their lack of political awareness, political participation, or political activism (Boswell, Cannon, and Miller, 2005; Catallo et al.,2014; Spenceley, Reutter and Allen, 2006). Other studies also affirmed nurses' limited political involvement (Des Jardin, 2001; Deschaine and Schaffer, 2003), noting that the lack of political knowledge extends to their non-involvement even in issues affecting the nursing profession.

Cristian (2010) affirmed that political ideologies impose an influence in the ways health care systems are organized and function. Policy makers rely on the political process to determine an acceptable course of action for individuals with contradictory proposals, demands, and values

(Carnegie and Kiger 2009). According to Hayes and Fritsch (1988), politics infers the ability to share power or the ability to influence the distribution of power among groups of people within the state. Therefore, nurses in the study setting are in a powerless state. Nonetheless, Sharif (2014) asserted that nurses in East Africa demonstrated some degree of political engagement although their participation in actual policy development was limited. Studies in the USA have also demonstrated nurses' active engagement in politics with the ultimate purpose of influencing government policies (Gesse1991; Ryan-Nicholls 2004). Still, although there are various levels of political engagement in different countries, some studies doubt the ability of nursing political movement ever influencing government policies (Chan and Cheng, 1999; Sharif, 2014). Spenceley, Reutter, and Allen, (2006) also argued that nurses are not involved in health policy, political participation, or political activism. However, it is important to note that politics and policy go hand in hand and to have an impact on health policies, nurses need to be engaged in politics, which provides the powerbase to know where and when to exert influence (Adood, 2007; Carnegie and Kiger, 2009).

The lack of nursing advocates was another identified barrier to nurses' involvement in policy formulation. This may be attributed to lack of public awareness on the impact of nurses' contribution in the policy arena. Therefore, without good information on nurse's contribution, there is the lack of nursing advocates and representation. Sharif (2014) affirmed that a positive public image of nurses determines the societal craving for nurses' input in health policy fora as well as in predicting their actual involvement or elimination. Furthermore, Sharif (2014) asserted that nurse advocates, such as directors of medical services, are a necessity. Adeoye (2014) in Nigeria revealed that if the public was aware of nurses' active involvement at every stage of the

policy cycle (development and implementation to monitoring and evaluation) then they could advocate for their input, apart from advocating for nurses during implementation.

*Identified facilitators to decision making fora:* To actively engage nurses in policy development, both individual and health care system constraints must be overcome through identified strategies such as building policy capacity, mentoring, group advocacy, and organizational restructuring.

Building policy capacity is imperative if nurses are expected to make substantial contributions in the policy arena. It is obvious that nurses' preliminary training in their various schools of nursing did not equip them significantly to engage in policy activities. However, unlike other professionals, Nigerian nurses are still struggling with the transition from hospital-based training to the university. University education in general confers some degree of self-confidence as well as places graduates on the same level such as first degree holders. However, the majority of Nigerian nurses are diploma holders, which render them less educated than other health care professionals and may make them feel under-qualified with others in policy arenas. However, even at the universities, policy courses have not yet been integrated into the curriculum at the master's degree level. This finding agrees with Malone (2005) and Priest, Seagrott, Green and Rout (2006) who asserted that until the past two decades, it was rare to find health policy content included in nursing education or practice expectations. The need to build policy capacity in nurses in low- and middle-income countries is the only avenue to actively engage nurses in policy development (Abood, 2007; Asuquo et al.,2013; Edward et al.,2009; Malone, 2005; Priest *e*t al.,2006; Segrott, McIvor and Green, 2006). Abood (2007) and Gaventa and Barrett, (2010) asserted that possessing the knowledge and skill that is needed in a particular situation is referred to as expert power, which provides nurses with considerable credibility to

speak out on health care issues. Deschaine and Schaffer (2003) also affirmed that building policy capacity provides an opportunity to understand the health policy process and the potential to influence outcomes. However, the foundation lies in baccalaureate and graduate education, which provides the platform for such competence. In a similar study in Botswana, which investigated the role of nurses in the HIV/AIDS policy process, affirmed that the reason nurses remained uninvolved in policy development was associated with a lack of confidence in their ability to competently participate. (Phaladze 2003). Sharif (2014) further affirmed that nurses need to build capacity in policy development through acquiring a university education with a curriculum that incorporates understanding of health policy. Nursing leaders also need to understand how policies came into existence, what body or bodies perpetuate it, and where the opportunity for policy change rests.

The need for policy mentors to enhance nurses' personal and professional skills in health care reforms is imperative because without mentor's nurses would never gain the skills and confidence to navigate policy arena. This is consistent with Habermas (1978) who agreed that the ruled should be given adequate opportunity to acquire the skills of discourse to enhance their participation in issues affecting them. The finding also substantiates Allen et al. (2004) who affirmed that mentoring enhances career progression, and provides the mentee with a sense of professional identity and self-competence. This finding was similar to Sharif (2014) who also agreed that supportive mentorship and role modeling enhanced knowledge and skills in policy development activities. Mentoring also provided the leadership to navigate the policy arena and such mentoring activities should be provided at every stage of the policy process, especially where the mentees experiences are limited (Abood, 2007; Edward et al.,2009). Abood (2007) added that such mentors should possess transformational leadership traits that can help mentees

to become self-advocates in their prospective settings. This finding agrees with Dollinger (2006) who affirmed that even well-educated nurses need support and encouragement to influence health policies. Starting with Florence Nightingale, there have been outstanding examples of individual nurses throughout the history of the profession who have demonstrated their capacity to shape health. Nurse leaders have done this through initiating policy proposals, changing or substantially influencing the implementation of health policy (Abood, 2007; Cohen, 1998). Therefore, the need for mentors to navigate policy arenas is an envisioned solution in line with building nurses' policy capacity. In the words of one participant: “We once had somebody who would go to any length to make sure nurses were given their right position, but when she retired, it’s like we lost out on many things” (06, p.13).

Retired nurses as policy mentors are needed because their wealth of experience can help younger nurses navigate the policy arena. Gifford et al. (2012) stated that leadership is an essential tool in motivating nurses to use research evidence in clinical practice decision-making. In the same vein, Abood (2007) and Paternoster (2011) agreed that nurses need transformational leadership that can empower them to become self-advocates in their prospective settings. Abood (2007) further emphasized that such leaders should possess inspirational motivation, idealized influence, intellectual stimulation, and individualized consideration. With the challenge of HIV especially in Sub-Saharan Africa, nursing leaders need to take the lead in motivating nurses to actively seek positions on hospital boards and committees examine measures to eliminate mother-to-child HIV transmission; in the end, these measures will improve coverage and uptake of strategies to eliminate the mother-to-child transmission of HIV.

Group advocacy is another envisioned solution to nurses’ involvement in policy formulation. This is imperative because lone voices can do little. Studies in many countries

suggest that professional nursing associations are the platforms through which nurses' voices can be heard (Benton, 2012; MacDonald, Edwards, Davies and Marck, 2012; Matthews, 2012; Vandenhouten, 2011). Similarly, Abood (2007) and Carnegie and Kiger (2009) asserted that it is essential for nurses to gain confidence in collective action to take on some form of advocacy to bring about change in the current policies, laws, or regulations that govern the larger health care system. Taft and Nanna (2008) also added that working with colleagues or professional organizations will extend an individual nurse's potential impact into larger contexts by successfully influencing policy. However, these authors observed that group advocacy has little advantage if the group seeking involvement does not know how to target decision makers responsibly. Moreover, Cook (2008) added that there is need for nurses to form tactical alliances with other organizations with similar interests and issues. Such affiliation provides synchronized efforts and empowers the united group to achieve greater outcomes, which each organization acting individually could never achieve. Such alliance in policy issues provides nurses with a stronger voice. In the same vein Gaventa and Cornwall (2011) argued that participatory /collective group action is what it takes to create group awareness and critical consciousness raising on the visible and invisible power interplays in any organization. Such interplay of power keeps nurses in silent agreement to situations of glaring inequalities. Therefore, collective group action is necessary for liberation from any oppressive health system situation.

Active engagement in politics was also identified as an envisioned remedy to navigate the policy arena: "Nurses should not wait to vote for others, we should also campaign for votes by spreading our beliefs and values to others" (020, p.10). Longest (2006) asserted that policies are embedded in politics and political interplay precedes actual decision making in policy arenas. It becomes imperative for nurses to have an understanding of politics and policy in order to engage

in the policy development processes and be agents of change to other nurses (Ferguson, 2001). In the same vein, Gaventa and Barrett (2010) contended that in any organization, what is termed democracy is not really democratic, as political manoeuvring behind-the-scenes occurs. These tactics happen in all health issues as they pass through phases of the policy process; each process is swayed by preferences and influences of factions that view the issue with diverse and competing interests, therefore each faction must understand and engage in political interplay for success (Abood,2007; Carnegie and Kiger, 2009). Carnegie and Kiger (2009) affirmed that decision makers utilize the political process to reach consensus acceptable to individuals with conflicting interests. Therefore, nurses' engagement in politics determines what nurses get., Other studies are also consistent with these study findings that nurses need political competence to navigate policy arenas (Ditlopo et al.,2014; Deschaine and Schaffer, 2003; Sharif, 2014).

The restructuring of organizations is often seen as a solution to unequal opportunities: Taft and Nanna (2008) argued that to overcome professional power differentials that hinder nurses' involvement in policy at all levels of health care system, nurses need key individuals in strategic positions. Ditlopo et al. (2014) agreed that the health hierarchy and organizational structures in South Africa should be restructured to create a supportive organization that allowed nurses to become the Chief Nursing Officer or Nursing Director in the National Department of Health, as well as a head of the human resource division. Buse, Mays and Walt (2012) also suggested the need for such organizational restructuring in New York to allow other health professionals to serve as health ministers while Shariff and Potgieter (2012) also saw the same need in Kenya, Uganda, and Tanzania.

Although these facilitators have been envisioned as a way to transform the health care system, nurses need nursing leaders who understand the complex relationship between the

underlying factors that influence the development of nurses' research capacity and their engagement in policy formulation.

### 7.2.4 Nurses Diffidence

This study revealed a generally complacent attitude of nurses pertaining to their involvement in research and policy development in the context of MTCT of HIV strategies. Nurse's hesitancy will be discussed under two sub-headings: Hesitant to rock the boat and bowing to professional pressure.

*Hesitant to rock the boat:* Nurses' general state of apathy towards their involvement or non-involvement in health care system policy formulation is way of submitting to domination and is consistent with Weber (1978) that power often ensues through coercion or submission to domination, but more frequently through authority. It also corroborates with the report that the ruled remained silent in the presence of glaring inequality, agreeing to any condition they find themselves in (Gaventa and Barrett, 2010). The apparent lack of conflict as revealed in this study is both a sign and a consequence of the deliberate use of power mechanisms to keep the ruled (nurses) in mute compliance with the situation. For example, it is not uncommon for a new medical school graduate to take on a managerial position for a particular health unit of department where they are existing very senior and qualified professional nurses. To further marginalize the nurses, they are placed in position of training and providing necessary orientation to the new "Boss" who is always the physician. Their complacent state towards non-involvement may be associated with powerlessness, imbued with fear of the unknown such as losing jobs or undue transfer to where their voices will never be heard: "Nobody wants to be a scapegoat" (014, p.13) Foucault (1980) argued that the interplay of power disguises itself and manifests itself in subtle ways. He stated that "its success is proportional to its ability to hide its

own mechanisms" (Foucault 1980, p: 86), yet the oppressed are wary of its impact on their lives and environment. In the study setting, nurses accepted the status quo and concluded that "policy formulation is not for us, we only implement" (06, p.10). Sharif (2015) affirmed that nurses often view themselves as an oppressed group in relation to other professions and in the presence of other powerful professionals they remain silent. This silence is due to a hierarchical communication pattern and internalized threat of sanction. Similarly, McDonald (2010) reported that most nurses perceived nursing through a socially constructed lens and their roles are understood to be formed or built up through the agreed-on ideologies of the health care system. These ideas are imbued with power and become the lens through which nurses understand themselves. Nurses in the study viewed their state of non-involvement in policy as natural: "This has been the status quo and change is difficult, when it comes to policy we are not there or we are just not needed" (014, p.11). This has become nurse's ideology which Habermas (1978) ascribed as the major obstacle to human liberation, therefore the way forward for such individuals is conscientization (subjective appraisal of individualized contributions towards MTCT policies) and emancipation from past history and biography which has influenced an individual's self-perception of his/her roles, as well as social expectations. In the same vein, Edward *et al*. (2002) believed that it is necessary to change nurses' ideology and re-education from sets of beliefs, values, perception that hinder the attainment of health goals and their involvement in policy formulation.

*Bowing to professional pressure:* This may be secondary to increase workload and many feel that research is not their primary responsibility, therefore develop a *laissez-faire* attitude towards research productivity. This finding is consistent with Priest et al. (2007) who affirmed that nurses questioned the need for nursing research as well as its justification in the

development of nursing research capacity. Similarly, Ofi et al. (2008) also described a similar situation in a study of nurses' opinions on research in three selected teaching hospitals in Nigeria. He found that clinical nurses relegate research productivity to those in the university. In a study of clinical nurses in Scotland, Roxburgh (2006) added that nurses relegating research to academia was peculiar to nurses in the clinical area and some were of the opinion that not all nurses should be active in research even though there is a need to ensure current practice (Roxburgh, 2006). The author also affirmed that when it comes to "doing research," most nurses are indifferent and their research involvement does not translate into design and management, but is confined to data collection for use by other researchers. Studies in Nigeria also show that a general apathy and even phobia emerged when it came to initiating a research study; the easy route is helping others in data collection (Asuquo et al.,2013; Edet et al.,2012). In 2004, the Nursing and Midwifery Council of Nigeria made research an essential component of nursing education. Research became a mandatory course in nursing diploma programs and students conduct research projects before graduation. However, after graduation from school, the workplace culture influenced nurses' values and attitudes towards research, leading to apathy towards research productivity (Edwards et al.,2002). Moreover, Ofi et al. (2008) also admitted that in Nigeria, in general, a lukewarm attitude towards research exists and is probably due to the fact that research is not used as a determinant of career progression in the Ministry of Health. However, Habermas (1978) affirms that by utilizing critical thought, self-reflection and self-knowledge, individuals whose values have been clouded can view their situations in a new perspective.

### 7.3 The Promising Model

This study has revealed that nurses' roles in research and the policy development process are typically limited to data collection and policy implementation. To actively engage nurses in productive research and policy development, a tree animation nursing model is proposed (Figure 6). This promising model has a foundational part and an additional component, which when effectively utilized, would help to overcome barriers to effectively engage nurses.

**7.3.1 Components of the promising model:** There are four major components in this model (Fig.4) University education, transformative leadership, research and policy facilitators, and research and policy barriers.

*University Education:* The foundation to active engagement in knowledge creation and decision-making fora should be built on sound educational preparation that incorporates research and policy courses. Degree education brings nurses on par with other health professionals, enhances creativity, eliminates inferiority complexes, and provides intellectual processes as well as an opportunity to obtain policy positions. Sharif (2015) affirmed the need for nurses to have a university education, but added that educational curricula should be grounded in health policy, political skills, and leadership. A study by Primomo (2007) also affirmed that nurses' political intelligence changes positively after students complete a graduate course in health systems policy. However, Taft and Nanna (2008) were of the opinion that attention should be directed towards building potential on how policy came into existence, what body or bodies perpetuate it, and where the opportunity for policy change rests. Moreover, Edward et al. (2002) affirmed that in addition to university education, nurses required an ideological shift, implying that they be re-educated in their sets of beliefs, perceptions, values, and practises. Such a shift should take place

in both educational and workplace environments. Pelc (2009) also affirmed that such educational curricula should focus on developing political competence in the field of nursing.

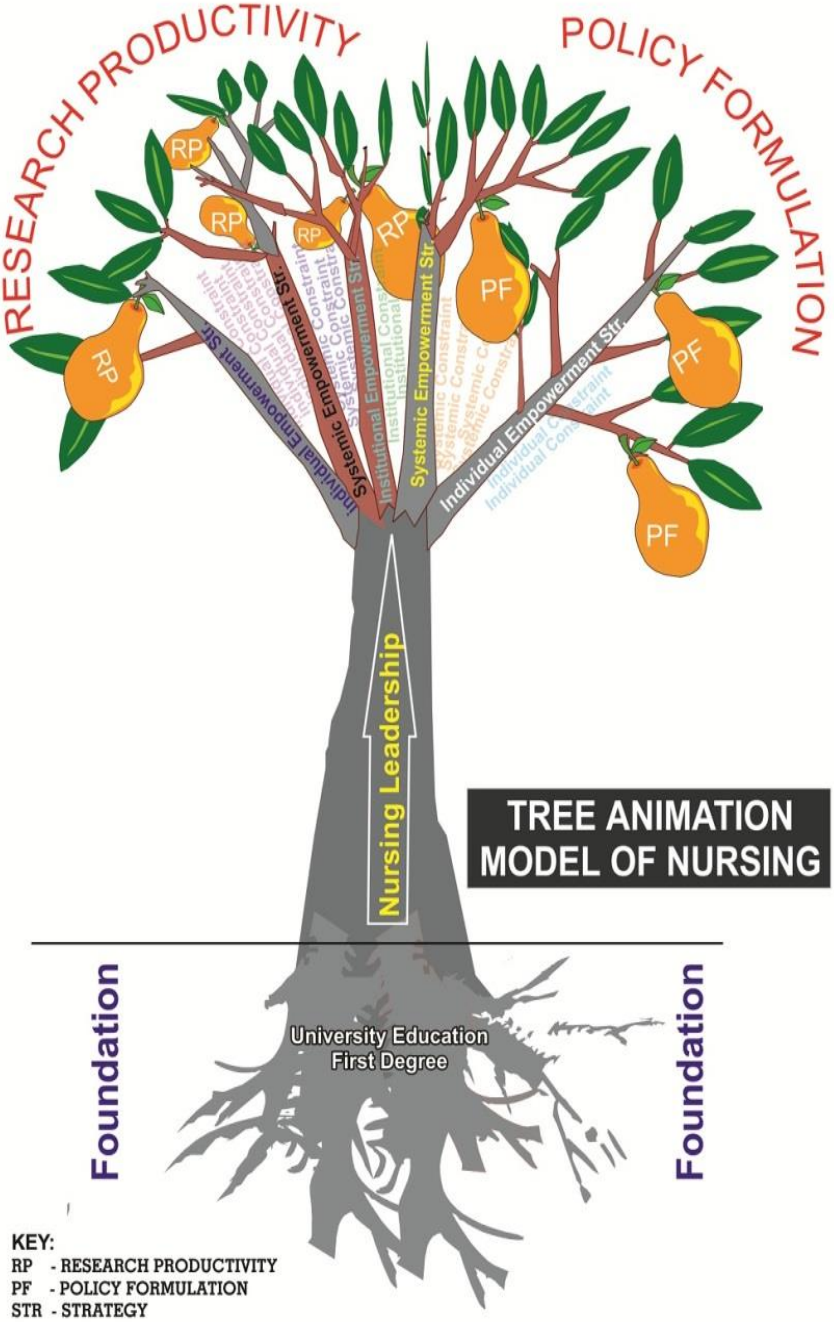


Figure 6: The Tree Animation Nursing (TAN) model

While affirming the need for university education as a foundation in building nurses' research capacity, some authors were of the opinion that present educational curricular content should be re-assessed to determine its success in imparting knowledge and skills in research conductivity (Ofi et al.,2008; Roxburgh, 2006). Additionally, building research capacity and promotion of a research positive organizational culture that can enable nurses to engage in research, as well as put research into practice, were recommended by many authors (Akerjordet, Lode and Severinsson, 2012; Edward and Mills, 2013; Kajermo et al.,2010; Mill et al.,2014; Nixon et al.,2013). Many studies also propose building nurses' capacity for policy development through education at the undergraduate and graduate levels. (Abood, 2007; Carnegie and Kiger, 2009; Catallo et al.,2014; Duncan, Thorne, Van Neste-Kenny and Tate, 2012; Vandenhouten et al.,2011). Graduate and post-graduate preparation was also recommended as a prerequisite to active engagement of nurses in low- and middle-income countries (Edward *et al.*,2009). Some authors advocated for addressing educational and research gaps as the solution for engaging nurses in policy development (Edward et al. 2009; Richter et al. 2012). But Shariff (2015) added that while building educational competence, nurses should be given the opportunity to be in policy fora to gain experience and competence. He added that basic educational preparation not only prepares nurses for work in policy fora, but also facilitates acquisition of leadership attributes. It is obvious that while university education may be the foundation, curricula should be imbued with content that could adequately prepare nurses holistically to overcome impending challenges to research, and then research evidence could be used to inform policies.

*Transformative nursing leadership*: Nursing leadership is essential to influence nurses to collective action in research productivity and policy development. Leaders should be able to identify areas of disease burden, transcend individual, institutional, and systemic barriers, build

research capacity in these areas, and then use research evidence to influence health care decision-making and policy development processes. Sundquist (2009) affirmed that encouragement, support, and inspiration were essential to a nurse's participation in health policy development. These findings are also consistent with de Savigny and Adam (2009) who asserted that leadership is a critical component for an effective healthcare outcome. Leadership thus become the panacea to break the organizational culture that limits research productivity and policy engagement among nurses (Tsai, 2011). According to WHO (2007a) better leadership is critical to achieving the millennium development goals.

Leadership provides direction to people, facilitating change and better health outcomes. Leadership within any organization should be seen as a priority, since a strong and visible leadership is important in building an organizational culture that promotes research activity and active engagement in decision making ( Segrott et al.,2006; Mccance et al.,2007).Studies also affirm that a significant correlation exists between leadership and organizational culture, which promotes involvement in research and policy (Casida and Pinto-Zipp, 2008; Schein, 2004;Tsai, 2011). Aarons, Ehrhart, Farahnak and Sklar (2014) stated that to transcend the various contexts of the health care system, leaders play a key role in supporting any organizational change. Change is obtained through the exertion of both direct and indirect influence on people, their practice environment, and their organizational infrastructures to achieve desired goals (Gifford et al.,2007).

The need for transformational leadership was consistent with Paternoster (2011) who affirmed that transformational leadership enhances intellectual stimulation and helps nurses to think critically, question the status quo and engage in activities that change practice, such as involvement in productive research and engagement in policy development. Shariff (2015) also

affirmed that transformational leadership has the potential to inspire as well as motivate nurses to pursue an ideal course of action, such as active involvement in policy development. Northouse (2001) added that transformational leadership style motivates followers to become "creative and innovative and to challenge their own beliefs and values as well as those of the leader and organization" (p.138). This leadership style is crucial for research and policy mentoring, supporting and developing future nurse policy makers (de Savigny and Adam, 2009; Edward et al.,2009; Paternoster, 2011; Shariff, 2015). Similarly, Kunaviktikul et al. (2010) also affirmed that transformational leadership facilitates nurse's participation in health policy development activity. Aarons et al. (2014) further discuss the unique attributes of a transformational leader used to induce positive change in the health care system: individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence, which incorporates a strong sense of purpose and a collective sense of mission.

Studies also affirmed the need for leaders to actively involve nurses in research in low- and middle-income countries (Asuquo et al.,2013; Edward et al.,2009). Priest et al, (2007) advocated for nursing leadership in research, and believed it was essential in every stage of the research process, and an integral component of mentoring newly educated nurses as well as those in mid-career (Gifford et al.,2012; Priest et al.,2007). Cummings et al. (2008) too supported the necessity of a good educational preparation to develop leaders. Edward et al. (2009), recognized the need for a strong educational foundation, but believed that nurse leaders were just as important to enhance the effectiveness of nurses in research productivity and policy development. Shariff (2015) identified three fundamental components to a nursing empowerment modes: foundational education, empowerment, and leadership, with four additional components of knowledge, experience, environment, and participation. The three primary components control

the additional components and ensure its workability in policy development. The nursing empowerment model suggested by Shariff echoes the proposed tree animation nursing model (TAN) here with regard to the fundamental components, but in the TAN model, university education is the only primary component since leaders also require educational preparation to enhance their effectiveness (Cummings *et al*.2008). Transformative leaders are visionary and can make available empowerment strategies to motivate nurses to active engagement in research and policy development.

*Research facilitators:* Facilitators to knowledge creation consist of three main forms: individual, institutional, and systemic. The three elements should be in play concurrently to achieve the highest level of involvement of nurses in research productivity. Individual facilitators include providing adequate funding of research studies, building individual research capacity through obtaining graduate and post-graduate education, especially for young nurses, in-service training, mentoring along with the use of workshops and conferences to build capacity, and promoting awareness on research needs.

These identified facilitators were consistent with Mccance et al. (2007) who affirmed that creating awareness and research capacity building has been highlighted internationally as a crucial element in the advancement of nursing and midwifery research and development. Building capacity will enhance the ability of individual organizations to engage in development activity. The individual facilitators were also consistent with Edward et al. (2009) who agreed that those such as capacity building, research funding, environmental support, and mentoring were the key components necessary to engage nurses in research in low- and middle-income countries. Priest et al. (2007) asserted that mentoring is critical in helping nurses develop and operationalize mature programs of research, making the specific points that: working with senior

researchers, and providing those new to research with the opportunity to discuss means of balancing research with teaching, clinical, and administrative demands were the most important factors. Segrott et al. (2006) also contended that individual capacity building and funding facilitated active research involvement, but added that capacity building must be constructed from focused objectives and strategies, but these should be flexible enough to allow for individual creativity.

Institutional facilitators involve creating research awareness, creating a stimulating research environment with computers and internet access, earmarking research grant for nurses, using research as a criterion for promotion or future employment, as well as motivating nurses by providing incentives to those involved in research. These facilitators for building institutional research capacity were consistent with Segrott et al. (2006) who agreed that individual institutions play an important role in affecting the ability to develop research capacity, since institutional perception of the importance of research determines budgetary allocation to research. The authors added that creating an atmosphere that is conducive to research activity enhances individual and group research involvement. Edward et al. (2009) believed that research funding and environmental supports were critical to nurses' engagement in research, because nurses require access to basic research infrastructure such as computers and internet services. The authors added that targeting funds for nursing research acts as a facilitator because it enhances nurses' chances of obtaining research funding. Nigerian studies have also affirmed that internal funding, the earmarking of grants, and mandatory involvement in research would all facilitate nursing research (Asuquo et al.,2013; Ofi et al.,2007).

Systemic facilitators include creating government awareness of the need to increase budgetary allocations to research as a means of addressing disease burden in a country.

This finding is consistent with IBM (2006), who affirmed that the stance taken by governments on the importance of research determines to a great extent the success or failure of its health care system. The author added that developing a funding strategy for healthcare infrastructure and for independent research are ways that government can effectively promote the involvement of all stakeholders in research and achieve a comparative effectiveness of alternative therapies. Similarly, WHO (2012a) affirmed that government investment and commitment to research-driven knowledge generation facilitates research involvement. WHO advocated the need for increased allocation of government resources toward health systems research as a way forward to developing evidence-based policy.

*Policy development facilitators:* These facilitators are divided into the two sub-units of individual and systemic. Individual facilitators to policy development include building capacity through university education, integrating policy courses into the curricula, and mentoring. Edward et al. (2009) affirmed that to actively involve nurses in policy, individual capacity must be enhanced through graduate and post-graduate education. Furthermore, they advocate sufficient investment in pre-service, in-service and post-basic education and training, to strengthen the services of nurses and midwives in policy development (WHO,2010b). These facilitators were also consistent with studies asserting that being knowledgeable about health policy led to increased perceptions of self-confidence, competence in knowledge skills, and understanding of context of health policy activity. (Rains and Carroll ,2000; Shariff,2014).

Systemic facilitators to policy development include group advocacy through nursing associations, active participation in health system politics, and organizational restructuring. Carnegie and Kiger (2009) also affirmed that nurses can gain confidence in collective action by virtue of their numbers. According to Abood (2007), the sheer number of nurses offers the

nursing profession a formidable power base that can be utilized in the day-to-day world of politics and legislation. Farsi, Dehghan-Nayeri, Negarandeh , Broom (2010) argued that nurses need to get involved in politics, that one of the strength for nurses' involvement in policies is through politics. Shariff, (2014) and Ditlopo et al. (2014) also saw the need for supportive organizational structures. From the findings of the case study here, these facilitators of knowledge creation and policy engagement, when effectively utilized by nurse's leaders, will enhance awareness and motivate nurses to overcome their complacent attitude towards research and policy making to actively develop research productivity and use the evidence generated to inform policy in the context of mother to child HIV transmission.

*Barriers to nurses' involvement in research***:** Research or knowledge creation constraints can be found in individual, institutional, and systemic constraints to research productivity. Constraints to individual knowledge creation include a lack of interest, little value attached to research, lack of knowledge skill that lead to a lack of confidence, fear, a lack of money, insufficient time for research, and lack of mentors. Institutional and systemic knowledge creation constraints include the lack of value that institutions place on research is demonstrated by their refusal to develop a stimulating research environment. They also do not provide research grants or sponsorship for higher education, and place stringent admissions criteria on experienced nurses, which hinder their admission into universities. Studies in low- and middle-income countries have identified these barriers to nurses' involvement in research that is linked to poor skills and lack of environmental support (Asuquo et al.,2013; Edward et al.,2009; Ofi et al., 2007).

*Barriers to nurses' involvement in policy decision making*: The barriers to nursing involvement to decision making is divided into individual and systemic constraints. Individual

constraints on nurses' involvement in policy development include; devaluation of their ability to contribute to policy making and their poor educational status. Systemic constraints include; institutional devaluing of nurses' knowledge and contribution to policy, under representation of nurses in higher administrative positions and policy formulation arena. Other systemic constraints are health system politics, marginalization of the nursing profession, and the lack of nursing advocates. These barriers were consistent with Shariff's (2015) study, which acknowledged the same constraints.

To actively engage nurses in productive research and policy formulation in Cross River State, it will be necessary to broaden student awareness on the need for research, what the current health policy issues are, as well as the policy processes needed to address these problems. With this foundation laid, nursing leaders then need to use the facilitators identified above to overcome the constraints rooted in individuals, health care systems and the government against both research productivity and policy development. Nursing leadership therefore becomes a tool to direct context-specific envisioning solutions to overcome these individual and health care system constraints. Transformational leaders would be visible sources of inspiration to other nurses, and with their knowledge and experience, would provide, emotional, social and practical help to positively influence nurses' opinions regarding research productivity and policy development in the context of MTCT. Therefore, to eliminate mother-to-child HIV transmission, the nursing profession needs leaders who can influence individuals, the health care system, and the government to attain health care goals.

### 7.4 The action component of PAR in changing participants into researchers

The overall aim of PAR when utilized in any study is to achieve a just society or organisational structure without marginalisation. PAR therefore becomes a catalyst for intervention in social transformative process as it was evident in this study. Park, Brydon-Miller, Hall and Jackson (1993) emphasised that it's transformative ability is buried in its three key components namely: education, investigation/research and social action. These components were integral to PAR implementation in this study setting, and they were actualised as follows:

**Education:** My literature reviews and familiarization with the various health care facility created awareness of the magnitude of the problem associated with lack of nurse's involvement in research production and policy development. After due recruitment of participants, the next step was to organise a meeting to develop the group and its goals based on the nature of the problem which was already outlined in the research proposal. Although the participants (co-researchers) were not involved in the initial conceptualization of the problem and study aim, as suggested by Dickson (2000), the early group discussions about the topic raised awareness and passion for the project, and many became committed and active group members. Streubert (2011 affirmed that when research questions are seen as important and community members believe their effort could bring about needed change, they are often willing to participate. The first meeting was made up of members of the advisory committee, participants such as doctors, midwives and nurse leaders from academic, clinical and community areas and my supervisor who joined from Canada through social media (Skype and Adobe connect). She was able to address some of the issues that emanated from group members. Issues discussed included, the essence of nurse's involvement in research and policy development, lack of funding, research mentors, inadequate research skills, workload, and under representation of nurses in strategic

leadership position. These dialogue sessions led to group members becoming sensitized and taking ownership. This was evident in how group members became actively engaged throughout the research process including recruitment, data gathering, data analysis and generation of discussion ideas and study recommendations.

With group sensitization on nature of problem, it enhanced consciousness raising, produced valuable knowledge on nurses limited involvement in research and policy as well as various constraint to their involvement. The forum provided members with opportunity to examine their understandings, skills, values and ways in which they construe themselves and their actions in the professional sphere. This is consistent with Carney, Dundon and Léime (2012) idea that, the trusting environment created by the PAR process through listening and active involvement enhances a deeper understanding of the issue at hand. The first meeting ended with group formation and participants expressing interest and determination to investigate the magnitude and contour of the problem associated with nurse's non-engagement in research production and policy development.

Once the group was formed, the need to identify the group goals became imperative. Participants' interaction and findings from each deliberation were recorded and minutes taken during each interaction. Techniques chosen by participants included: brainstorming, charting, ranking of ideas and voting. Through dialogue the group members unanimously agreed that in addition to supporting the project at hand, which was to examine the extent of nurses' involvement in research and policy for elimination of mother to child transmission of HIV, they identified other potential research topics based on the priorities of their individual institutions. The created groups to work on these research topics and these projects became a driving force for collective action and consistent engagement with the research group. Members were provided

with a set of post-it notes and asked to write the area of group research which should be targeted first before progressing to other areas. The various ideas were posted on a chart and ranked in line with the best available evidence, institutional priorities and local health problems. This ranking exercise helped to work out differences where disagreement existed with ideas (Carney, Dundon and Léime, 2012). For example, two participants from the same institution suggested determining factors associated with poor patronage of the health care facility, the other suggested determining measures for male involvement in PMTCT. Finally, members voted and a general consensus on area of research (in areas of disease burden.) for each health facility was accepted. Group planned an advocacy visit to the commissioner for health, Nursing and Midwifery council of Nigeria and significant others.

The identification of group goal was in line with Tuckman (1965) who stated that group formation goes through stages namely: forming, storming and norming. In this study, the forming and storming stages were evident in the meeting and sensitization of the group about the opportunities and challenges associated with the groups' aim. Norming ensured that the group agreed on a set goal and a mutual plan. This entailed defining, analysing and ranking of problem systematically and delineating individual and group task as well as planning for change (ANGOC, 2010; McNiff and Whitehead, 2006; Waterman, 2001). This process was evident in the exercise our group engaged in described above. Generally, it could be seen that the PAR process provided avenue for the group to reflect, take ownership and make explicit how certain structures have influenced their current marginal position in the research production and policy formulation arena.

With participants from diverse background such as: different social worlds, identities, diversity of knowledge and social experiences, creating a democratic milieu became imperative

which, according to Ospina et al. (2004) is a challenging task that must be given due attention for the group to succeed. To counteract any domineering culture or personalities, the lead researcher and my thesis supervisor directed considerable energy at ensuring symmetry of relations and preventing an individual control of the project and its staff. The group engaged in ideology critique with a focus on the group goal. This is similar to McMaggart (1991) who stated the need to ensure that the group work is not misdirected and its understanding is not distorted by deference to illegitimate authority. Therefore, individual viewpoints in all issues were acknowledged and scrutinized by the group to attain set goals. According to Ospina et al. (2004) democratic value also implies going step-by-step through a process of clarifying tasks and roles, negotiating authority and setting boundaries, taking no one for granted, adhering to the constructive nature of realities as well as attending to the power dynamics that may emerged. The transparent and continuous interactive process of PAR enhanced scrutiny, developing critical consciousness, trust-building and members felt comfortable participating.

According to Lewin (1946) field theory, PAR co-researchers are bonded by two key components, interdependence of fate and task interdependence to form a powerful dynamic group. Group members realize that their fate depends on the fate of the group (interdependence of fate) and members have group tasks which they depend on one another for achievement (Brown, 1988). This interdependence enhanced communication and members appreciated one another's share of responsibility, which fostered achievement of their common goals (Smith, 2001). In this study group task included: (a) to collectively examine the extent of nurse's involvement in research and policy in the context of mother to child HIV transmission and (b) actively engaged nurses in health care research production in line with the standard set by WHO

(2010b) and IOM (2010) on nurses' leadership health care reform. Individuals in this study experienced interdependence of fate and this led to the group success.

**Investigation/research:** In participatory action research those who desire knowledge to attain a free egalitarian society engage in the investigation of reality, to enhance their understanding of the problems and its root causes (Park et al.,1993). The process of knowledge production was central to the work of the research group described above. This participatory research process was evident in how health care leaders with problem formed partnership with me to identify the root of the problems, the dimension of constraints, organisational contradictions as well as the potentials open for group actions. In this study group members participated in the study data collection by sharing their stories through formal interview process and focus group discussion. They also provided their input in analysis by validating findings (member checking).

**Action:** Collective social action is a key component of any PAR project. It is often said that in PAR knowledge production and knowledge utilization is direct (those who produce the knowledge use it) because, PAR restructures the relationship between the two and put its members in-charge of both the generation and usage (Park et al., 1993). This was eminent in this study as the co-researchers demonstrated a strong sense of commitment to the research process, and engaged in collective actions for change such as staying in the group to plan advocacy visit to health care authorities in the study site including a visit to the Commissioner of Health. Currently group members have developed research proposals on the chosen research areas with some e-mentoring from our international academic partners such as researcher at the University of Ottawa, including my thesis supervisor. A nursing research group have been formed and with the support of my supervisor, seed funding has been secured to motivate young researchers.

Abstracts on two research areas have been forwarded to International Conference of Midwives (ICM) 2017. Most co-researchers strongly acknowledged and verbalized their interest in the research approach used in this study, as it stimulated their inherent research potentials and fostered their involvement in health care research.

**Challenges:** Although this participatory action research process in this study generated new insights, identified problems and helped to set some research priorities, the need to watch against over ambiguous project development was necessary. Such as identifying causes of maternal mortality in the various level of health care facility in the country and yet without funding. The participants were encouraged to consult experts in their identified areas of research interest. This helped guide the groups in developing clear goal and direction as well as the feasibility and cost of a given study. Some co-researchers also tried to initiate some activities which directly contradicted the groups' purpose. For example, some members suggested using the forum for an advocacy visit to the Nigerian labour congress, to request for the upgrading of nurse's salary to avoid immigration of nurses out of the countries. Some members also felt that their decision should be taken without questioning their relevance, trying to dominant over every decision making process. Therefore, the group took some steps to guide against activities which threatened to weaken the groups' democratic principles and goal. The steps taken included my speaking individually with such members, and remaining them about the principles governing the group creation. Not all participants continued with the research process, some stop coming complaining of lack of time while some became irregular with the group meeting.

## 7.4 Implications of the Study

The unique contribution of nurses in ameliorating the disease burden associated with MTCT in HIV is well documented. For example, Balogun and Odeyemi (2010) affirmed that nurses have good knowledge of HIV strategies. Similarly, the International Center for AIDS Care and Treatment Programs (ICAP), (2013) agreed that creating an HIV-free generation will never be possible without the contribution of nurses and midwives. However, without their contribution to research and without their use of research evidence to inform policy, the HIV disease burden will continue to grow.

Transforming the health care system requires the unique contribution of all stakeholders, including nurses. According to Sturke et al. (2014) the implementation of scientifically proven interventions are necessary to achieve the desired results in relation to MTCT. For nurses to take the lead in health care reform has been advocated since 2010 (IOM, 2010). Nevertheless, there continues to be a general apathy towards research activity and a lack of involvement in policy formulation. The general complacent attitudes of nurses towards research and policy formulation requires a critical remedy in the form of transformational leadership. According to Contino (2004) leadership remains one of the key determinants of organizational greatness and is critical to achieving the millennium development goals (WHO, 2007).

Nurses possess the ability to exert both direct and indirect influence to achieve health care system goals (Gifford et al.,2007). Nursing leadership therefore becomes the panacea in this setting, to motivate nurses to become involved in research and policy development in order to eliminate mother-to-child HIV transmission. Transformational leadership can enhance nurses' critical appraisal of themselves foster their engagement in research and policy development and to reduce individual, institutional, and systemic constraints which hinder their contribution.

Leaders could utilize a participatory approach such as used in this study, to initiate a strong body of nursing research. The formation of a research group has helped nurses in the study setting to develop an interest in research. However, this group is limited to only a few participants in an urban area.

The democratic milieu created by PAR enhances adherence to the constructive nature of realities. This is consistent with Gaventa and Barrett (2010) who asserted that a PAR approach has the potential of breaking hidden and overt clutches of power, as participants become aware of themselves, begin to question the status quo as well as engage in knowledge production and policy decision making. To engage nurses in sustained individual /inter-professional research and policy development, and foster integration of best practices into an effective and sustainable health system in low- and middle-income countries like Nigeria, transformational leadership is mandatory to influence nurses into achieving their desired goals. According to Shaw (2007) it is important to look at leadership as a three-way interaction between three elements, namely; the person (leader), setting and followers. So, while leadership traits and attributes are important to enhance intellectual stimulation, inspirational motivation, and idealised influence on nurses, the setting of leadership should be taken into consideration. Since the social climate should be conducive to enhance leaders and followers coming together This could be achieved through. Since nurses comprise the largest health care workforce, their successes and/or failures have significant impact on the health care delivery system as a whole. Hence there is need to strengthen the knowledge base and skills of nurses in ways that enable them to keep pace with the ever-changing world of health care. Nursing leaders and health care organizations must make targeted efforts to create mechanisms that facilitate both the creation and translation of knowledge into clinical decisions and direct patient care activities in the context of MTCT. Since

this is the first study in Nigeria that examines nurses' involvement in research and policy development in the context of MTCT, further research is needed to determine if similar or differing factors influence nurses' involvement in other settings, especially the 12 + 1 states in Nigeria with the highest burden of MTCT of HIV.

Health care system management is an area that requires a broad and intense contribution from all health stakeholders, including nurses. To actively involve nurses in research and policy development and to attain both global and national targets to eliminate mother-to-child HIV transmission, the following recommendations are made:

1. Strong nursing leadership should be encouraged to transcend barriers and facilitate nurses' involvement in research and policy development. Most nursing leaders (from senior nursing officer) have clinical competencies related to a specific role or an associated task, but lack leadership in research and policy. Leadership skills could be developed by training and organizations investing resources to ensure that nurses developed needed skills to attain health care goals.
2. Nursing research fund should be created to support nurse-led research
3. Government should promote policies that foster a culture of research and evidence-based practice in health care organizations.
4. International training opportunities for research and policy formulation should be provided for nurses to develop expertise in these areas.
5. Stringent admission criteria (such as making it mandatory for experience nurses with 5 credits in English, Mathematics, Physic, Chemistry and Biology and a grade point average(GPA) of these five subjects not above 18 only admitted to in the universities) should be reduced for experienced nurses who wish to acquire university education.

6. Universities should integrate policy courses into their curricula from first degree nursing programs
7. Mentoring of young researchers by experienced ones is needed. Retired nurses should mentor younger nurses on how to navigate the policy arena.
8. Group advocacy using nursing associations should be encouraged.
9. Evidence-based decision making should be promoted as the norm in nursing practice.
10. Nurses in LMICs should be well-informed of sources of research grants including from local and international research funding organizations.

## 7.5 Limitations of Study

Though this study has made an important contribution to both the national and international literature on nursing research productivity and policy development, the findings may not be generalizable beyond the study setting. This is because the study is a qualitative study with a small sample size and it was limited to health care leaders in Cross River State. This study did not include participants from House of Assembly responsible for passing policies into laws in the state. Some participants working in the northern and central parts of the state could not participate in most group meetings, hence their input into each research process was limited and their level of engagement not on equal grounds with others. Given that nursing is a predominantly female profession, the use of gender lens in this study could have provided additional sights to the study findings. The lack of gender-based analysis in the study is thus considered a limitation. Nevertheless, it has provided rich insights into nurses' involvement in research productivity, their participation in policy development, and has provided some

highlights of the barriers that hinder their participation in the context of MTCT/vertical transmission of HIV.

## 7.6 Conclusion

The need to actively engage the nursing workforce in research productivity and policy development cannot be overemphasized. As the highest number of health care workers, nurses are expected to lead in health care reform, which entails using research evidence to inform health policies. However not even one nurse-leader was actively involved in conducting research or involved in policy formulation pertaining to MTCT of HIV, where the study setting of Cross River State is one of the states with highest MTCT burden. Nurses were limited to data collection and implementers of PMTCT policies. Their general lack of involvement is traceable to individual, institutional, and systemic constraints. The study further revealed a general state of apathy towards their non-involvement as well as a reluctance to question the status quo, due to inner fears of negative consequences. Remaining quiet in the face of glaring inequality is one of the ways in which nurses' powerlessness is manifested. Hierarchies of power and organizational structure hinder nursing leaders from occupying certain prestigious posts, which automatically excludes them from decision-making fora. It also keeps them in subservient positions, always waiting for invitation rather than being able themselves to invite others. Not one nurse has occupied the post of a commissioner of Health for the past two decades. The top-down policy development format of policy making also magnifies their implementing role, limiting the opportunity for their input during policy development. This calls for an urgent need for nursing leadership to mobilize collective efforts and to work in collaboration with other health care professionals and health care organizations to ensure the active participation of nurses in

knowledge production and policy development. Governments should promote policies that ensure mandatory representation of all relevant stakeholders in the policy arena.

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## APPENDICES

### Appendix A. Demographic Questionnaire

Background information *(complete prior to interview)*

1. Sex: ❑Female ❑ Male
2.State of origin: ❑ Cross River State ❑ Akwa Ibom State

Others specify----------

3. What age category are you in (in decades)?

❑21-30 ❑ 31 - 40 ❑ 41 – 50 ❑ 51- 60 ❑ 60+

4. What is your highest level of formal education (may include their professional degree)?

❑RN Diploma ❑ RM Diploma ❑ Bachelor's Degree ❑ Master's Degree

❑ Doctorate Degree

Other Specialty training (please specify): _____

5. What is your current position? _____

6. Years of service: ❑ 1- 5 years ❑ 6 – 10 years ❑ 11 – 15 years ❑ 16 – 20 years

❑ 21 years and above

7. Area of specialty: Community ❑ Clinical ❑ Education ❑ Ministry of health❑

Others specify ----------

8. Which Local Government Area do you currently work in

Ogoja, ❑ Yala ❑ Abi, ❑ Akamkpa, ❑ Calabar Municipal ❑ Akpabuyo ❑

Others specify ----------

9. Type of health care facility in which you serve

Primary ❑ Secondary ❑ Tertiary ❑

## Appendix B: Interview Guide

**Project Title**: **Nurses' Involvement in Health Care Research and Policy Development in the Context of Mother-to-Child HIV/AIDS Transmission in Nigeria**

**Principal Investigator:** Ekaete Asuquo, RN, BNSc, MNSc, PhD Candidate, at the University of Ottawa.

**Thesis Supervisor:** Josephine Etowa, RN, PhD, Associate Professor, University of Ottawa.

**SECTION A:** Nurses' understanding of global plan towards elimination of mother to child transmission (EMTCT) of HIV.

1. What can you say about the issue of EMTCT of HIV/AIDS?
   Probes: in global scene; in Nigeria; and in Cross River state in particular?

2. Do you know of any current work to address this issue? What are they? Are nurses involved in that work? If yes, in what capacity?
   Probes- in CRS, in Nigeria and in the world/Globally

**SECTION B:** Nurses involvement in research productivity targeting EMTCT of HIV.

3. Are you involved in any research? In what areas? In what capacity? Tell me about your research involvement to address issues relating to mother to child transmission of HIV in Nigeria over the past 13years.

4**.** What are some of the barriers that influence your ability to conduct research?

(*probes: lack of knowledge, access to research information. time, financial constraints, etc)*

5. What measures can be utilized to effectively address barriers influencing nurses' participation in research targeting the EMTCT of HIV in Nigeria.

**SECTION C:** Nurses involvement in Policy development targeting elimination of mother to child transmission of HIV**.**

6. Kindly tell me about your experience in policy development involvement. (*Probe for involvement in any committee Government or Non-governmental organisation* )

7.Are there policies that target the issue of EMTCT? In CRS? Nigeria? and globally? How are nurses involved? What are nurses' contributions to these policies?

8. Are they policies fostering nurse's involvement in policy development and implementation? What are the workplace, local government, state or national policies?

9. What are some of the barriers that influence your capacity to be involved in policy formulation? (probes: Not being invited, not normally included in policy formulation, lack of nursing research in specific policy areas., time, etc.)

10. What processes can be utilized to effectively address barriers influencing nurses' participation in policy development targeting the EMTCT of HIV in Nigeria?

**Section E:** This Section seeks your opinion on measures that can be used to effectively involve nurses in health care research and policy targeting EMTCT of HIV in Nigeria

11.What are your suggestions on how we can best engage nurses in research? How about those that can be used to involve them in policy development?

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## Appendix C: Information Letter

**Project Tile**: **Nurses' Involvement in Health Care Research and Policy Development in the Context of Mother-to-Child HIV/AIDS Transmission in Nigeria**

**Principal Investigator:** Ekaete Asuquo, RN, BNSc, MNSc, PhD Candidate, at the University of Ottawa, Canada.

**Thesis supervisor:** Josephine Etowa, RN, PhD, Associate Professor, University of Ottawa, Canada.

You are cordially invited to take part in a study which will contribute to the literature on nurses' involvement in research and policy development on Mother to child transmission of HIV/AIDS. **What is this Study About**?

The purpose of this research is to examine nurses' involvement in health care research and policy development that addresses mother-to-child HIV transmission (MTCT) in Nigeria. Examining their contribution and barriers will facilitate the creation of groups and programs to promote skills and effective involvement of nurses in research and policy development which will address the burden of mother-to-child HIV transmission in Nigeria.

If you agree to take part in this study, you will be asked to complete a demographic questionnaire then participate in a 45 to 60 minutes' interview. You may also be asked to take part in a follow-up focus group meeting that will last for 60 to 90 minutes.

You have been invited to participate in this study because:

- You are residing in Cross River State
- You are a registered nurse.
- You have worked at least for six months in a formal leadership position.
- You are working within the Cross River State of Nigeria health care system.
- Agree to participate in the study by providing informed and

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voluntary consent.

Or non-nurse participants who:

- Is residing in Cross River State
- Have been involved in the EMTCT programed in the state for at least six months.
- Have worked in any health care facility, Ministries of Health
- Agree to participate in the study by providing informed and voluntary consent.

**What would you have to do**?

Each participant will be involved in a face-to-face interview. The interview will be mainly about your involvement in research and policy development towards elimination of mother to child transmission of HIV in Cross River State in Nigeria. With your permission, the interview will be tape recorded. Each interview will last approximately 45 to 60 minutes. If you're selected for the focus group, you will be asked to further clarify and discuss themes. The focus group meeting will last approximately 60 to 90 minutes.

**Your Rights and Related Information for Participating in this Study**.

**Risks and Benefits**

Talking to me about your involvement in health care research and policy development to address mother-to-child HIV transmission(MTCT) might exposed one to unrealized barriers in the health care system which might have been regarded previously as normal. These may lead to experience of some discomfort. You can refuse to answer any questions and I can turn off the tape recorder at any time during the interview. There is no obligation to participate in the interview. You may also choose to withdraw at any time. If you choose to withdraw from the study all data collected will be immediately deleted.

**Are there benefits to taking part in the study**?

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There are benefits to taking part in this study. Some possible benefits are subjective appraisal of individualized contribution towards strategies to reduce MTCT of HIV, and engagement in dialogue with others. It may motivate action for active involvement in research and policy with emancipation from barriers in health care system. It may also lead to formation of group that promote research and influence policy. This study may contribute to the development of better support and integration programs and policies to eliminate MTCT in Nigeria.

Additionally, the data collected from this study may contribute to the development of better support and integration programs and policies that can promote nurses involvement in research and policy targeting the elimination of mother to child transmission of HIV.

**Do you have to participate**?

Your participation in this study is voluntary and you may at any time choose to withdraw from the study without any negative consequences to you.

**Compensation/Reimbursement**

Each participant will receive a N3000 equivalent to $20 Canadian dollars' compensation for her time and transportation (including parking).

**Confidentiality/Anonymity**.

Your name or personal information will not be used or shared in the study. Fictitious names (pseudonyms) will be assigned to all participants, and will be used when publishing the research findings. The list of pseudonyms will be kept in an envelope and stored in a locked cabinet in my supervisor, Dr. Josephine Etowa's office in the Nursing Best Practice Research Centre (NBPRC) at the University of Ottawa. Furthermore, all papers, transcripts, audiotapes will be locked up in this same secure location for a period of five years and then destroyed. Study data will be accessible to the researcher and thesis supervisor only. Although efforts will be made to ensure confidentiality in individual interview, but for focus group discussion the researcher cannot guarantee that other participants will do the same, so participants will be advised to keep what is shared within the group confidential.

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**Ongoing Information**

You can ask questions about the study at any time.

If you have further questions or concerns about the study, please contact my supervisor, Dr. Josephine Etowa by email: jetowa@uottawa.ca or by phone: 1-613-562-5800 ext. 7671:

If you have any questions regarding the ethical conduct of this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5; Tel.: (613) 562-5387; Email: ethics@uottawa.ca

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**Appendix D**: Interview Consent Form

Nurses' Involvement in Health Care Research and Policy Development in the Context of Mother-to-Child HIV/AIDS Transmission in Nigeria

**Principal Investigator:** Ekaete Asuquo, RN, BNSc, MNSc, PhD Candidate, at the University of Ottawa, Canada.

**Thesis supervisor:** Josephine Etowa, RN, PhD, Associate Professor, University of Ottawa, Canada.

I acknowledge that I have read and understood the explanation about this study as indicated in the attached "Letter of Information", particularly as it concerns the nature of my participation in the research project. I have been given the opportunity to discuss the study with the researcher. Any questions pertaining to my participating in the study have been addressed to my satisfaction. I understand that my participation in this study is voluntary and I have the right to withdraw from this study at any time without penalty. Hard copies containing personal and research data collected will be destroyed immediately if I choose to withdraw from the study. I freely and voluntarily consent to take part in this study. I will be given a signed copy of this form.

☐ I authorize the investigator to audiotape any interviews I participate in throughout the study. I understand that I may request to have the tape recorder turned off at any time in any case where I do not wish to be recorded. Notes will be used to document the verbal account.

☐ I understand and authorize for my words and/or statements spoken during the interviews to be quoted anonymously in the final report, publications or final dissertation of the study findings.

A copy of the signed consent will be given to each participant. Original signed copies will be kept in a sealed envelope, separate from other study data, and locked up in a cabinet in the office of my supervisor, Dr. Josephine Etowa at the Nursing Best Practice Research Centre (NBPRC) in the University of Ottawa.

If I have further questions or concerns I may contact the Researcher via her supervisor, Dr. Josephine Etowa via email: jetowa@uottawa.ca or phone: 1-613-562-5800 ext. 7671.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa,

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Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5; Tel.: (613) 562-5387; Email: ethics@uottawa.ca

| | |
|---|---|
| Signature of Participant | Date |
| Signature of Investigator | Date |

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## Appendix E: Focus Group Consent Form

**Nurses' Involvement in Health Care Research and Policy Development in the Context of Mother-to-Child HIV/AIDS Transmission in Nigeria**

**Principal Investigator:** Ekaete Asuquo, RN, BNSc, MNSc, PhD Candidate, at the University of Ottawa, Canada.

**Thesis supervisor:** Josephine Etowa, RN, PhD, Associate Professor, University of Ottawa, Canada

I acknowledge that I have read and understood the explanation about this study as indicated in the attached "Letter of Information", particularly as it concerns the nature of my participation in the research project. I have been given the opportunity to discuss the study with the researcher.

I understand that the focus group will be audio recorded and any questions pertaining to my participating in the focus group forum have been addressed to my satisfaction. I understand that my participation in this focus group discussion is voluntary and I have the right to withdraw from this study at any time without penalty. Should I choose to withdraw from the focus group; data will still be used given the nature of focus discussion. I freely and voluntarily consent to take part in this focus group discussion. I will be given a signed copy of this form.

☐

I understand and authorize for my words and/or statements spoken during the focus group discussion to be quoted anonymously in the final report, publications or final dissertation of the study findings. I also understand that focus group members are asked to keep everything they hear confidential and not to discuss it outside of the meeting. The researchers cannot guarantee that confidentiality will be maintained by group members. Thus, sensitive issue should be reserved for the individual interviews.

A copy of the signed consent will be given to each participant. Original signed copies will be kept in a sealed envelope, separate from other study data, and locked up in a cabinet in the office of my supervisor, Dr. Josephine Etowa at the Nursing Best Practice Research Centre (NBPRC) in the University of Ottawa.

If I have further questions or concerns I will contact the researcher through her supervisor, Dr. Josephine Etowa via email: jetowa@uottawa.ca or phone: 1-613-562-5800 ext 7671.

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If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5; Tel.: (613) 562-5387; Email: ethics@uottawa.ca

_____ _____

Signature of Participant Date

_____ _____

Signature of Investigator Date

## Appendix F: Focus Group Guide

**Project Title**: **Nurses' Involvement in Health Care Research and Policy Development in the Context of Mother-to-Child HIV/AIDS Transmission in Nigeria**

**Principal Investigator:** Ekaete Asuquo, RN, BNSc, MNSc, PhD Candidate, at the University of Ottawa,Canada.
**Thesis Supervisor:** Josephine Etowa, RN, PhD, Associate Professor, University of Ottawa,Canada.

*The focus group discussion will be based on the preliminary interpretation of the interview data. It will serve as a forum for the study participants to valid the research teams' interpretation of their interview transcripts and for them to extend the analysis further*.
Specific questions for the focus group discussion will emerge from the interview following data analysis by the researcher under the close supervision of Dr. Josephine Etowa. However, the various themes of the topic as addressed in the interview guide will inform the discussion process. These themes include:

1. Nurses' understanding of global plan toward elimination of mother to child transmission (EMTCT) of HIV.
2. Nurses involvement in research productivity targeting EMTCT of HIV.
3. Nurses involvement in Policy development targeting elimination of mother to child transmission of HIV**.**
4. in measures that can be used to effectively involved nurses in health care research and policy targeting EMTCT of HIV in Nigeria
5. Overall suggestions on how to best engage nurses in research and policy development, and
6. Other issues that may emerge from the interview data.

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## Appendix G: Focus Group Information Letter

**Project Tile**: Nurses 'Involvement In Health Care Research and Policy Development in the Context of Mother-to-Child HIV/AIDS Transmission In Nigeria

Principal Investigator/PhD Student: Ekaete Asuquo, RN, BScN, MNSc PhD
School of Nursing, University of Ottawa

Thesis Supervisor: Josephine Etowa, RN, PhD, Associate Professor, School of Nursing, University of Ottawa

You are cordially invited to take part in a focus group discussion which will contribute to the partial fulfillment of the requirements for a Doctorate in nursing.

**What is this Study About**?

The purpose of this thesis research is to assess nurses' involvement in health care research and policy development that addresses mother-to-child HIV transmission (MTCT) in Nigeria.Assessing their contribution and barriers will facilitate the creation of groups and programs to promote skills and effective involvement of nurses in research and policy development which will address the burden of mother-to-child HIV transmission in Nigeria.

If you agree to take part in this study, you will also be asked to complete a demographic form and to take part in a follow-up focus group meeting that will last for 60 to 90 minutes.

**What would you have to do**?

You have been invited to participate in this study because:

- You are a nurse residing in Cross River State, Nigeria.
- You are actively involved in measures to eliminate MTCT in the state. You have worked at least for six months in a leadership position.

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- You are working in either general hospital, comprehensive /health centre in Cross River State, Ministries of Health, Schools of Nursing or Nursing associations in Cross River State.
- You have a valid nursing practice license issued by the Nigeria Nursing and Midwifery Council (NNMC) permitting you to work as a registered nurse in Nigeria

Each participant will be involved in a face-to-face interview prior to the focus group meeting. This focus group meeting is to obtain input from participants. With your permission, the focus group discussion will be tape recorded.

**Your Rights and Related Information for Participating in this Study**.

**Risks and Benefits**

Talking to me about your contributions to research and policy development to address mother-to-child HIV transmission (MTCT) might exposed one to unrealized barriers in the health care system which might have been regarded previously as normal. These may lead to experience of some discomfort. Other members of the health care team may perceive them as being critical to normal rules and regulations. If you were to recall some unpleasant experiences, you can refuse to answer any questions and I can turn off the tape recorder at any time during the discussions. A telephone number of a counseling service will be given to you in case you require further support. There is no obligation to participate in the focus group discussion. You may also choose to withdraw at any time. If you choose to withdraw from the study all physical copies containing personal and research data collected will be returned to you immediately. Also, personal and research information in computer

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files will be securely deleted. In addition, you can call the research protocol officer from University of Calabar Teaching Hospital at any time to talk about the focus group discussion.

**Are there benefits to taking part in the study**?

There are assured benefits to taking part in this study. Some possible benefits are subjective appraisal of individualised contribution towards strategies to reduce MTCT of HIV, engagement in dialogue with others. It may also motivate action for active involvement in research and policy with emancipation from barriers in health care system. It may lead to formation of group that promote research and influence policy. Additionally, this study may contribute to the development of better support and integration programs and policies to eliminate MTCT in Nigeria.

**Do you have to participate**?

Your participation in the focus group meeting is voluntary and you may at any time choose to withdraw from the study without any negative consequences to you.

**Compensation/Reimbursement**

There will be no compensation for taking part in this study; however, launch would be provided during focus group discussion.

**Confidentiality/Anonymity**.

Your name or personal information will not be used or shared in the study. Fictitious names (pseudonyms) will be assigned to all participants, and will be used when publishing the research findings. The list of pseudonyms will be kept in an envelope and stored in a locked cabinet at the Nursing Best Practice Research Centre (NBPRC) at the University of Ottawa. Furthermore, all papers,

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focus group transcripts, audiotapes will be locked up in this same secure location for a period of five years and then destroyed. Study data will be accessible to the researcher and thesis director only. Although efforts will be made to ensure confidentiality, the researcher cannot guarantee that other participants will do the same so everyone will be advised to keep what is shared within the group confidential.

**Ongoing Information**

You can ask questions about the study at any time. The researcher will provide you with complete information about the progress of the study in a timely fashion. If you have any questions or concerns about the study, please contact:

Ekaete Francis Asuquo

451 Smyth Rd (Room 1118)

Ottawa, On

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If you have any questions regarding the ethical conduct of this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5; Tel.: (613) 562-5387; Email: ethics@uottawa.ca

## Appendix H: UOTTAWA ETHICS APPROVAL

**File Number:** H08-13-23 **Date (mm/dd/yyyy):** 12/09/2013

Université d'Ottawa University of Ottawa
Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

### Ethics Approval Notice

### Health Sciences and Science REB

**Principal Investigator / Supervisor / Co-investigator(s) / Student(s)**

| First Name | Last Name | Affiliation | Role |
|---|---|---|---|
| Josephine | Etowa | Health Sciences / Nursingy | Supervisor |
| Ekaete Francis | Asuquo | Health Sciences / Nursingy | Student Researcher |

**File Number:** H08-13-23

**Type of Project:** PhD Thesis

**Title:** Nurses' involvement in health care research and policy development in the context of mother-to-child HIV/AIDS transmission in Nigeria

| Approval Date (mm/dd/yyyy) | Expiry Date (mm/dd/yyyy) | Approval Type |
|---|---|---|
| 12/09/2013 | 12/08/2014 | Ia |

**(Ia: Approval, Ib: Approval for initial stage only)**

**Special Conditions / Comments:**
N/A



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## Appendix I: UCTH ETHICS APPROVAL

# HEALTH RESEARCH ETHICS COMMITTEE
# UNIVERSITY OF CALABAR TEACHING HOSPITAL
P. M. B. 1278, CALABAR, NIGERIA

**CHIEF MEDICAL DIRECTOR:**
Dr. Thomas U. Agan
B.Med, SC (Anat), MB, FWACS, FMCOG, FCAI
**CHAIRMAN**
Prof. Martin Meremikwu
MB, BCH, MSC, FMC, Paed.

**CHAIRMAN, MEDICAL ADVISORY COMMITTEE**
Dr. Queeneth Kalu
MBBCH, DA (WACS), DA (WFSA)
**SECRETARY:**
Ededet Eyoma Esq.
BA, LLB, BL, MPA, DIP-Comp. Sc, ANIM, AIHSAN

**Our Ref:**_____

**Date:** 3RD DECE. 2013

**Your Ref:**_____

**NOTICE OF FULL APPROVAL OF PROTOCOL**
**NURSES' INVOLVEMENT IN HEALTH CARE RESEARCH AND POLICY DEVELOPMENT IN THE CONTEXT OF MOTHER-TO- CHILD HIV/AIDS TRANSMISSION IN NIGERIA**

| | |
|---|---|
| UCTH HEALTH RESEARCH ETHICS COMMITTEE **REG. NUMBER**: | **NHREC/07/10/2012** |
| Health Research Ethics Committee Protocol Assigned Number: | **UCTH/HREC/33/191** |
| Name of Principal Investigator: | **EKAETE F. ASUQUO** |
| Address of Principal Investigator | **FACULTY OF HEALTH SCIENCE UNIVERSITY OF OTTAWA, OTTAWA, CANADA.** |
| Date of Receipt of Valid Application: | **17TH OCTOBER, 2013** |
| Date of Meeting where determination of Research was made: | **3RD DECEMBER, 2013** |

This is to inform you that the Research described in the submitted protocol, the Consent Forms, and other participant information materials have been reviewed and given *full approval by the Health Research Ethics Committee.*

This approval dates from 3rd December, 2013 to 2nd November, 2014. If there is delay in starting the research, please inform the HREC so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates. In multi year research, endeavour to submit your annual report to the HREC early in order to obtain renewal of your approval and avoid disruption of your research.

The National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the HREC. No changes are permitted in the research without prior approval by the HREC except in circumstances outlined in the Code. The HREC reserves the right to conduct compliance visit to your research site without previous notification.

Prof. Martin Meremikwu
**CHAIRMAN, UCTH HREC**