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## Nurse and Midwife Educators' Experiences of Translating Teaching Methodology Knowledge into Practice in Rwanda

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## ABSTRACT

Nurse and midwife educators play a vital role in nursing and midwifery students' development pre-graduation by enabling them to gain essential competencies in caring for mothers, newborns, and infants. In 2017, to enhance the quality of pre-service education of nurses and midwives in Rwanda, the Training, Support, and Access Model (TSAM) for Maternal, Newborn and Child Health (MNCH) project funded continuous professional development (CPD) training workshops about teaching methodologies for nurse and midwife educators from the six main programs of nursing and midwifery education around the country. This qualitative descriptive study was conducted to explore nurse and midwife educators' experiences of translating the knowledge and skills acquired from participating in the CPD workshop about teaching methodologies into their teaching practices in Rwanda. A purposive sample of fifteen educators was participated in semi-structured individual interviews. Five themes emerged from inductive content analysis: *enhanced competencies about teaching practices, application of knowledge and skills gained into classroom and clinical teaching, collaboration and teamwork, facilitators and challenges to the application of the knowledge and skills into practice, and indirect outcomes to MNCH care*. The results indicated that although educators reported increased competencies in teaching, their knowledge and skills translation were often hampered by insufficient teaching materials, equipment, and heavy workloads. These findings can serve to inform the TSAM-MNCH project, post-secondary education system, and policy, and research aimed at enhancing nursing and midwifery education delivery in Rwanda.

*Keywords:* Teaching methodologies, nurse or midwife educator or faculty, continuous professional development, nursing or midwifery education, knowledge translation, developing countries, and Rwanda

## SUMMARY FOR LAY AUDIENCE

Nurse and midwife educators play an important role in nursing and midwifery students' development pre-graduation by enabling them to gain essential competencies in caring for mothers and babies. In 2017, to enhance the quality of education of nurses and midwives in Rwanda, the Training, Support, and Access Model (TSAM) for Maternal, Newborn and Child Health (MNCH) project funded continuous professional development (CPD) training workshops about teaching methodologies for nurse and midwife educators from the six main programs of nursing and midwifery education around the country. This qualitative descriptive study was conducted to explore nurse and midwife educators' experiences of translating the knowledge and skills acquired from participating in the CPD workshop about teaching methodologies into their teaching practices in Rwanda. Fifteen educators were participated in individual interviews. Five themes emerged from the analysis: *enhanced competencies about teaching practices, application of knowledge and skills gained into classroom and clinical teaching, collaboration and teamwork, facilitators and challenges to the application of the knowledge and skills into practice, and indirect outcomes to MNCH care*. The results indicated that although educators reported increased competencies in teaching, their knowledge and skills translation were often hampered by insufficient teaching materials, equipment, and heavy workloads. These findings can serve to inform the TSAM-MNCH project, post-secondary education system, and policy, and research aimed at enhancing nursing and midwifery education delivery in Rwanda.

## **CO-AUTHORSHIP**

Jean Pierre Ndayisenga conducted the research for his masters' thesis under the supervision of Dr. Marilyn K. Evans, Dr. Yolanda Babenko-Mould, and Dr. Madeleine Mukeshimana who will be co-authors on presentations and publication of the manuscripts resulting from this thesis.

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## CHAPTER ONE

### Introduction

Nurse and midwife educators play a vital role in nursing and midwifery students' development pre-graduation by enabling them to gain essential competencies in caring for mothers, newborns, and infants. In Rwanda, nurse and midwife educators are faculty members who facilitate and conduct classroom and clinical teaching and learning activities. They guide nursing and midwifery students to develop fundamental knowledge, skills, and professional values that are necessary for their future professional practices (Gaberson, Oermann, & Campbell, 2010). In addition, they play an important role in creating conducive teaching and learning environments in both classrooms and clinical settings by using different teaching methodologies (Emanuel & Pryce-Miller, 2013; Niederriter, Eyth, & Thoman, 2017; Way, 2016).

In 2017, to strengthen the quality of pre-service education of nursing and midwifery students in Rwanda, the Training, Support, and Access Model (TSAM) for Maternal, Newborn and Child Health (MNCH) project in Rwanda funded continuous professional development (CPD) training workshops about teaching methodologies for nurse and midwife educators from the six main programs of nursing and midwifery education around the country. The TSAM-MNCH in Rwanda is a four-year partnering project operating from April 2015 to March 2020 funded by Global Affairs Canada (GAC) at the Government of Canada and administered through Western University in London, Ontario (The Training, Support and Access Model [TSAM], 2019). One of the TSAM-MNCH project goals in Rwanda is to help the ability of nursing and midwifery programs to supply competent, educated nurses and midwives to provide maternal child care (TSAM, 2019). For the purpose of this study, teaching methodology refers to a system of practices, principles, methods, and procedures that a teacher uses to facilitate the teaching and

learning process (British Council of Education, 2018; Kucharcikova & Tokarcikova, 2016).

Continuous professional development (CPD) is defined as the “the process and activities designed to enhance the professional knowledge, skills, and attitude of faculty members so that they might, in turn, improve the teaching and learning of students” (Guskey & Passaro, 1984 p.16).

This qualitative descriptive study was conducted to understand nurse and midwife educators’ experiences of translating knowledge about teaching methodologies into practice in Rwanda after having attended a workshop on the topic. In this chapter, background information about nursing and midwifery education and CPD, with emphasis on developed countries, is discussed. In addition, a brief overview of nursing education in Rwanda is provided. The significance, purpose, and research questions of the study are also provided. At the end of this chapter, an overview of the thesis is described.

### **Background**

The shortage of nurse and midwife educators is one of many global issues in nursing and midwifery education. According to WHO (2006), the majority of countries worldwide are experiencing nursing and midwifery faculty shortages. Furthermore, an inadequate number of nursing and midwifery faculty contributes to a decreasing number of qualified nurses and midwives in practice to support the health of women and infants (Nowell, White, Mrklas, & Norris, 2015).

Nurses and midwives play a vital role in strengthening the health care system for the achievement of Sustainable Development Goals (SDGs) related to health (Bvumbwe & Mtshali, 2018; Crisp, Brownie, & Refsum, 2018). Globally, midwives and nurses represent the majority of the health professional workforce and they are at the center of almost every healthcare system

(Crisp et al., 2018; Global Health Workforce Alliance, 2013). In sub-Saharan countries including Rwanda, nurses and midwives form the universal access point for almost 90% of healthcare services users (Bvumbwe & Mtshali, 2018). A cross-sectional, descriptive study done by Gitembagara, Relf, and Pyburn (2015), indicated that in Rwanda, the level of nursing and midwifery staffing in both district hospitals and health centers is still low at 27.02 % and 44% respectively. The State of the World's Midwifery 2014 report indicated that 78% of countries worldwide are experiencing a shortage of competent midwives to provide essential maternal, newborn and child health care services (UNFPA, International Confederation of Midwives [ICM], & WHO, 2014). This shortage of nurses and midwives is significant and could result in unnecessary maternal, neonatal, and child deaths (UNFPA et al., 2014; World Health Organisation, 2016). There is an increased demand for nurse and midwife educators who can provide effective pre-service education of future nurse and midwife professionals, particularly in developing countries.

The scarcity of classroom and clinical teaching resources and insufficient support for faculty members challenges the effectiveness of nursing and midwifery education (Benner, 2012). Many nurse and midwife educators globally are older and retiring which adds to the shortage (Haddad & Toney-Butler, 2019). In addition, a large number of nursing and midwifery educators have not been adequately prepared for teaching which diminishes the effectiveness and quality of the education they are able to provide to students (Nowell et al., 2015; Oermann, De Gagne, & Phillips, 2018; Riley & D, 2009). With this significant shortage of nurses and midwives as well as qualified nurse and midwife educators, it is difficult to build an adequate, relevant, and competent nursing and midwifery workforce required for the achievement of SDGs in Sub-Saharan African countries (Bvumbwe & Mtshali, 2018).

To respond to these nursing and midwifery education challenges, there is a need to provide effective health education programs to educate competent nurses and midwives who can be employed in clinical settings, as well as in academia. The appropriate preparation of educators to teach in pre-service nursing and midwifery programs is critical to ensure that future nurses and midwives have the knowledge, skills, and attitudes necessary for professional clinical practice (Chaghari, Saffari, Ebadi, & Ameryoun, 2017; Salminen, Minna, Sanna, Jouko, & Helena, 2013; World Health Organisation, 2016). Having adequate knowledge and skills about teaching methodologies are valuable resources for educators and has the potential to transform and enhance existing nursing and midwifery education programs, particularly in developing countries (Chaghari et al., 2017; World Health Organisation, 2016). Educational preparation of nurse and midwife educators about teaching methodology can contribute to the improvement of the quality of nursing and midwifery education and practice.

### **CPD with Educators in Nursing and Midwifery Education Programs**

Many nurses and midwives who receive professional graduate education training at the master's or doctoral level develop an understanding of their research role as academics but often do not receive adequate preparation for their teaching role as a faculty member (McArthur-Rouse, 2008; Rowbotham, 2015). Inadequate knowledge and skills about teaching and learning has an impact on educators' teaching role performance and teaching confidence (Guerriero, n.d.; Hotaman, 2010). In nursing and midwifery pre-service education, this may contribute to an inadequate number of competent nursing and midwifery professionals graduating from educational institutions. To address this issue of inadequate and limited knowledge and skills on teaching and learning among educators, universities and colleges could implement different approaches, such as continuous professional development regarding teaching methodologies.

Continuous professional development can contribute to a nursing faculty's performance in classrooms and clinical teaching practices (Rowbotham, 2015). Faculty members who completed educational preparation in teaching and learning reported a higher level of teaching performance and confidence than those who did not participate in educational preparation (Postareff, Lindblom-Ylänne, & Nevgi, 2008). According to Rowbotham (2015), negative teaching experiences and lack of competency in teaching methodologies can decrease the teaching performance of faculty members. In a study by Trower, Cathy, and Gallagher (2010), conducted with more than 10,000 tenure-track faculty, new faculty members were reported more likely to be effective, successful, and satisfied with their teaching roles if opportunities for continuous learning were available and a culture of collaboration, collegiality, and community was well established and created within the university. Results of another study done by Foor and Cano (2011), suggested that to strengthen faculty members' competency in teaching, administrators of teaching institutions should emphasize continuous faculty development on all factors related to personal growth and satisfaction with teaching roles.

### **Rwanda Maternal and Child Health Care System**

The health care system in Rwanda is organized in a pyramidal structure made of five levels including village, cell, sector, district, and national level. Rwandan health system is composed of eight national referral and teaching hospitals, four provincial hospitals, 36 district hospitals, 499 health centers, and 476 health posts (MoH, 2018). Like other Sub-Saharan African countries, in Rwanda, almost 90% of health care services are provided by nurses and midwives (Bvumbwe & Mtshali, 2018a; Gitembagara et al., 2015; MoH, 2001). For instance, at peripheral levels, minimum package of activities (MPA) related to maternal and child health care services such as information, education, and communication (IEC), home visit and family planning



counseling and services are provided by community health workers (CHWs) at the community level while others activities such as premarital, antenatal care, postpartum care for mother and child, and vaccination are provided by nurses and midwives at health posts and health centers. In addition, nurses and midwives are in charge of providing other maternal health care services like normal delivery at health center level (MoH, 2018; MoH, 2001). The complementary package of activities (CPA) of mentioned MPA related to maternal and child health care services are provided at district hospital levels by emphasizing on treatment of referred cases from health centers (MoH, 20016). These CPAs are provided through interprofessional collaboration of different health professional including physicians, nurses, and midwives. In Rwanda, the CPA related to maternal and child health care service at district level include antenatal consultations for at-risk pregnancies, family planning for referred cases like female and male sterilization. Also, physicians, nurses and midwives working at district hospitals levels provide curative care to women and infant including management of difficult labors and deliveries, management of postpartum complications and newborns with complications after birth. Cases that are not managed at district hospitals could be referred to provincial hospitals located at each province to be managed by specialist doctors, nurses, and midwives. At the national level, there are University Teaching Hospitals, Rwanda Biomedical Center (RBC), and the Ministry of health which is governing all health care services in Rwanda.

### **Becoming a Nurse or a Midwife Educator in Rwanda**

Similar to other Sub-Saharan African countries, Rwanda has experienced a shortage of qualified nurses and midwives in clinical services as well as in academic settings. With a significant shortage of nurses and midwives in both groups, it is difficult to meet the basic health needs of the Rwandan population, particularly women and newborns. This issue was aggravated

by the 1994 Genocide against the Tutsi where significant number of health professionals, including nurses and midwives, were killed or fled the country (Drobac & Naughton, 2014). To strengthen the nursing and midwifery profession, Rwanda has committed to educate more nurses and midwives, so that by 2019 the workforce would comprise of 5,095 nurses and midwives with Advanced Diplomas, 1,011 nurses and midwives with Bachelor's degrees, and 160 nurses and midwives with a Master's degree (Binagwaho, Kyamanywa et al., 2013; Mukamana, Uwiyeze, & Sliney, 2015). Although Rwanda has made significant progress towards the achievement of health-related SDGs after the Genocide (Ndenga et al., 2016), with the current shortage of nurses and midwives, it has been difficult to build an adequate, relevant, and competent nursing and midwifery workforce required for the achievement of SDGs. Therefore, in Rwanda, there is a significant need to recruit more qualified and competent nurse and midwife educators to help address the shortage of nurses and midwives in practice. In addition, nurse and midwife educators currently working in pre-service education need adequate knowledge and skills on appropriate teaching methodologies, to enhance their ability to teach effectively in both classrooms and clinical settings.

In Rwanda, different higher learning institutions, including public and private nursing and midwifery schools, are facing challenges in their mission to appoint well-qualified nurse and midwife educators to their academic programs. Administrators of the nursing and midwifery education programs are also required to identify nurse and midwife educators who are competent, knowledgeable, and proficient in their clinical skills, in addition to having the basic knowledge and skills about teaching methodologies appropriate for teaching, mentoring, and evaluating nursing and midwifery students in classroom and clinical settings (Harerimana & Beer, 2013; Mukamana et al., 2015; Thuss, Babenko-Mould, Andrusyszyn, & Laschinger, 2016).

Presently, nursing and midwifery schools in Rwanda often recruit nurse and midwife educators from among the graduates of their different graduate and undergraduate programs. These newly hired educators may not have specific preparation for teaching, and some have inadequate clinical nursing and midwifery practice experiences to develop the level of clinical competencies required to teach nurse and midwife students. Furthermore, some educators in nursing and midwifery schools in Rwanda have travelled abroad to upgrade their educational levels to masters and doctorate degrees in different fields of their specialty (Mukamana et al., 2015). Although graduate education helps these educators to become more competent in terms of doing academic research in their respective fields of specialization they may not, however, be appropriately prepared for teaching nursing and midwifery curriculum using appropriate teaching methodologies.

To enhance the quality of nursing and midwifery education in Rwanda, much effort has been made to strengthen the teaching competencies of nurse and midwife educators in the country (National Council of Nurses and Midwives, 2011; Rwanda Ministry of Education, 2008). It is with this in mind that the University of Rwanda (UR), through the School of Nursing and Midwifery (SoNM) and in collaboration with the TSAM-MNCH project, organized the CPD workshop for nursing and midwifery faculty regarding teaching methodologies. The aim of this workshop was to improve the knowledge and skills of current nurse and midwifery educators with contextualized content regarding teaching and learning principles, pedagogy and methodologies so that they may apply their knowledge and skills to effectively deliver courses related to maternal, newborn and child health (MNCH) in their respective nursing and midwifery education programs (TSAM, 2019). Offering a CPD workshop on teaching and learning could be

a way of improving the quality of nursing and midwifery education in Rwanda as well as responding to the shortage of nurses and midwives working in clinical services and in academia.

### **The CPD Workshop Session about Teaching Methodologies**

The CPD workshop session about teaching methodologies was organized by the SoNM at the UR. The main objective of this training was to equip new and junior nurse and midwife educators, with knowledge and skills about teaching methodologies to be used in both classrooms and clinical teaching practices with a focus on MNCH. The provision of the CPD workshop about teaching methodologies to nurse and midwife educators was made possible through the TSAM-MNCH project in Rwanda. This CPD workshop had four specific objectives, including (1) demonstrate an understanding of teaching methodologies to be used in both classroom and clinical settings; (2) describe teaching and learning principles and techniques; (3) apply adult learning principles in classroom and clinical teaching, and assessment; and (4) apply various teaching and assessment methods in the classroom, clinical and laboratory setting. It was expected that this CPD workshop would enhance nurse and midwife educators' capacity and ability to educate competent graduate nurses and midwives in their perspective practices to promote maternal child care in Rwanda.

Two sessions of the CPD workshop were delivered to 64 newly recruited and junior nurse and midwife educators working in the public and private School of Nursing and Midwifery (SoNM) namely: SoNM at University of Rwanda (UR) with its three campuses, Ruli High Institute of Health (RHIH), University Gitwe (UG), and Kibogora Polytechnic (KP). The CPD workshop was organized into two successive sessions each lasting five days from the 14<sup>th</sup> to 18<sup>th</sup> and 21<sup>st</sup> to 25<sup>th</sup> of August 2017 in the Musanze District, Northern Province of Rwanda. The CPD workshop sessions were relevant to specific outcomes of the primary TSAM project, namely

enhancing the capacity of pre-service program graduates to provide maternal, newborn, and child health care and applying pre-service teaching methodology and curriculum development for maternal, newborn and child health care. Adult teaching methodologies consisting of group discussions followed by presentations in plenary sessions were used by the workshop facilitators. This descriptive qualitative study was initiated after the workshops were delivered to explore nurse and midwife educators' experiences of applying the knowledge and skills gained from the CPD workshop about teaching methodologies into their everyday classrooms and clinical teaching practices.

### **Significance of the Study**

The CPD workshops about teaching methodologies were provided to enhance the teaching competencies of nurse and midwife educators in order to help increase the number of competent graduate nurses and midwives who would then be prepared to promote maternal child care in Rwanda. However, little is known about nurse and midwifery educators' experiences of translating knowledge and skills acquired from such CPD workshops into their teaching practices. Therefore, there was a need for further insight into these professional continued education experiences from the perspective of the learners. Gaining in-depth understanding about nurse and midwife educators' perceptions of their experiences translating newly acquired knowledge and skills about teaching methodologies is vital to reveal facilitators and barriers to application into practice settings. The findings of this study could provide data about the effectiveness of the above-mentioned CPD workshops to the TSAM-MNCH project as well as inform the nursing and midwifery pre-service programs in Rwandan higher education institutions. In addition, the findings could provide more information about nursing and midwifery education needs in Rwanda. Finally, results from this study could be used as a

foundation for future nursing and midwifery education research aimed at promotion and improving pre-service nursing and midwifery education delivery in the classroom and clinical settings.

### **Statement of Purpose**

The purpose of this qualitative descriptive study was to explore nurse and midwife educators' experiences of translating the knowledge and skills acquired from participating in the CPD workshops about teaching methodologies into their teaching roles with nursing and midwifery students in Rwanda.

### **Research Questions**

This study was guided by two main research questions: (1) What is the experience of nurse and midwife educators' application of teaching methodologies in practice after attending CPD workshops about teaching methodologies? (2) What are the facilitators and challenges that influence the translation of teaching methodology knowledge and skills into practice by nurse and midwife educators after participating in these workshops?

### **Declaration of Self**

In keeping with my selection of a methodology that is both descriptive and qualitative, I feel it is important to address my professional and life experiences and their potential influence on my view of the phenomenon of interest in this study. I was educated as a nurse-midwife in Rwanda and have worked as a Registered Midwife in two different district hospitals in Rwanda. After one year of clinical experience in maternity practice, I was recruited by the University of Rwanda as a nurse midwife-educator in a position of Clinical Instructor for four years and later promoted to Tutorial Assistant. My role as a midwife educator were to assist in classroom teaching sessions and conduct practical and clinical teaching and learning sessions for nursing

and midwifery students in Rwanda. I remember how very challenging it was to shift from the clinical practice role to the theory-based teaching role as a faculty member. In my professional experience, I have participated in different professional development activities, including online courses and face-to-face workshops on topics such as scholarship in health professional education, CPD workshops about teaching methodologies, Cross-Cutting Theme (CCT) for pre-service faculty members, Competency-Based Education (CBE), and Global Innovation in Nursing and Midwifery Education, Research, and Practice. In addition, I have facilitated some CPD workshop activities, such as CPD workshops about teaching methodology for nurse and midwife educators teaching in public and private Nursing and Midwifery Schools in Rwanda in collaboration with the TSAM-MNCH project in August 2017. As a facilitator, I was involved in planning and organizing this educational workshop. Although I have some understanding of teaching in nursing and midwifery schools in the Rwandan context, and I have been involved in CPD workshop activities about teaching methodologies as a participant and later as a facilitator, I was consistently reflecting on my thoughts and feelings throughout the research process to ensure that the findings reflected the perceptions of nurse and midwife educators who participated in this study, and were not unduly influenced by my own previous experiences.

### **Overview of the Thesis**

This thesis is written in an integrated article format and consists of three chapters. Chapter One provides the introduction of the research topic, background and general overview of pre-service nursing midwifery education, teaching methodologies, and CPD in nursing education in general with an emphasis on the Rwandan context. The significance of the study, the study purpose, and the research questions are also presented. Chapter Two, the manuscript, is the core component of this thesis and includes the background, literature review, purpose, research

questions, methodology, research findings, discussion, implications, and study strengths and limitations. Chapter Three includes a further discussion of the study implications and recommendations as they relate to nursing education, practice, research, and policy. The final chapter also provides a summary and recommendations.



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## CHAPTER TWO

### Introduction

Globally, midwives and nurses represent the majority of the health professional workforce and they play a vital role in strengthening the health care system for the achievement health-related Sustainable Development Goals (SDGs) (Bvumbwe & Mtshali, 2018; Crisp et al., 2018). In Sub-Saharan African (SSA) countries including Rwanda, nurse and midwives form the universal access point for almost 90% of healthcare services users (Bvumbwe & Mtshali, 2018). Rwandan nurse and midwife educators are faculty members who facilitate classroom teaching, engage in clinical teaching, and guide nursing and midwifery students to develop fundamental knowledge, skills, and professional values that are necessary for their future professional practices (Oermann et al., 2018). In addition, they play an important role in creating conducive teaching and learning environments in both classrooms and clinical settings by using different teaching methodologies (Emanuel & Pryce-Miller, 2013; Niederriter, Eyth, & Thoman, 2017; Way, 2016). Nursing and midwifery educators require the necessary skills and knowledge on pedagogy to be effective and competent in teaching students.

This qualitative descriptive study was conducted to understand nurse and midwife educators' experiences of translating teaching methodology knowledge acquired while attending training workshops in Rwanda.

### Background and Significance

Competent nurse and midwife educators are essential components of pre-service nursing and midwifery education. They play a vital role in the preparation of future competent nursing and midwifery professionals by enabling them to gain essential knowledge and skills in caring for mothers, newborns, and infants. Competent nurses and midwives help to strengthen the

health care system for the achievement of the health-related SDGs (Bvumbwe & Mtshali, 2018; Crisp, Brownie, & Refsum, 2018).

According to WHO (2016), globally, the majority of countries are experiencing nursing and midwifery faculty shortages. With shortages of nursing and midwifery faculty available to teach new nurses and midwives, the number of nurses and midwives in the workforce to support the health of women and infants could continue to decrease (Nowell et al., 2015). Many nurse and midwife educators globally are older and retiring which adds to the shortage (Haddad & Toney-Butler, 2019). Scarcity of classroom and clinical teaching opportunities for educators and insufficient support for students challenges the effectiveness of nursing and midwifery education (Benner, 2012). In addition, there is a large number of nursing and midwifery educators who have not been adequately or formally prepared for the teaching roles which diminishes the effectiveness and quality of the education they are able to provide to students (Nowell et al., 2015; Oermann, De Gagne, & Phillips, 2018; Riley & D, 2009). Consequently, with the shortage of nurses and midwives in practice as well as educators, it is difficult to build an adequate, relevant, and competent nursing and midwifery workforce required for the achievement of SDGs in SSA countries (Bvumbwe & Mtshali, 2018). For example, in Rwanda, there is a high shortage of health professionals including nurses and midwives. In 2016, the ratio of health professionals per population was 1/10,055 for physicians, 1/1,094 for nurses, and 1/4,064 for midwives (Republic of Rwanda Ministry of Health, 2019).

To respond to these nursing and midwifery education challenges, there is a need to provide effective health educational programs to educate future nurses and midwives who can be employed in clinical settings as well as in academia. In addition, the preparation of nurse and midwife educators to teach in pre-service programs is critical to the development of knowledge,

skills, and attitudes of future nurses and midwives (Chaghari et al., 2017; Salminen et al., 2013; World Health Organization, 2016). Furthermore, knowledge and skills about teaching methodologies are valuable resources for nurse and midwife educators and have the potential to transform and enhance existing nursing and midwifery education programs (Chaghari et al., 2017; World Health Organization, 2016). Educational preparation of nurse and midwife educators about teaching methodology can contribute to the improvement of the quality of nursing and midwifery education and practices. For nurse and midwife educators involved in pre-service education, this preparation could be achieved by using different approaches, including continuous professional development offerings on pedagogy and teaching methodologies.

In Rwanda, nursing and midwifery education are provided at the postsecondary level by the University of Rwanda (UR) as a public institution and other private higher learning institutions including the University of Gitwe (UG), Kibogora Polytechnic (KP), and Ruli Higher Institute of Health (RHIH). The education of nurses and midwives is provided at a diploma level with 3 years post-secondary education or at a bachelors' degree level with 4 years post-secondary education in one of public or private nursing and midwifery teaching institutions. The government of Rwanda in collaboration with the Ministry of Education, Ministry of Health, and all public and private nursing schools continue to support upgrading nursing and midwifery education. To achieve this, at the UR a Master's program in nursing was initiated in 2015, and later in 2017 a PhD program was established. However, public and private nursing schools are still having nurse and midwife educators who have not yet upgraded their education level to master's and doctorate degree level.



To enhance the quality of nursing and midwifery education in Rwanda, much effort has been made to strengthen the teaching competencies of nurse and midwife educators (National Council of Nurses and Midwives, 2011; Rwanda Ministry of Education, 2008). In 2017, the Training, Support, and Access Model (TSAM) for Maternal, Newborn and Child Health (MNCH) project funded continuous professional development (CPD) training workshops about teaching methodologies for nurse and midwife educators. The TSAM-MNCH in Rwanda is a four-year partnering project operating from April 2015 to March 2020 and funded by Global Affairs Canada (GAC) at the Government of Canada and administered through Western University, in London, Ontario (TSAM, 2019). One of the TSAM-MNCH project's goals in Rwanda is to ensure the sustainability of nursing and midwifery teaching institutions and to improve their ability to supply competent trained nurses and midwives to provide maternal child care (TSAM, 2019).

Although CPD workshops for nurse and midwife educators has been carried out in Rwanda, no known research has been undertaken to explore nurse and midwife educators' experience of translating the gained knowledge and skills from such workshops to teaching practice. Therefore, this study aimed to provide insights and in-depth understanding about nurse and midwife educators' perceptions of their experiences translating the knowledge and skills about teaching methodologies gained from CPD. This information is vital in identifying the factors that influence knowledge application into practice settings. The findings of this study could contribute to the existing body of literature about nursing and midwifery education needs in Rwanda as well as other developing countries.

For the purpose of this study, teaching methodology refers to a system of practices, principles, methods, and procedures that a teacher uses to facilitate the teaching and learning

process (British Council of Education, 2018; Kucharcikova & Tokarcikova, 2016). Continuous professional development (CPD) is defined as the “the process and activities designed to enhance the professional knowledge, skills, and attitude of faculty members so that they might, in turn, improve the teaching and learning of students” (Guskey & Passaro, 1984 p.16). In this study, continuous professional development (CPD) is used interchangeably with other concepts such as continuous professional education (CPE), continuous education (CE), lifelong learning (LLL), and in-service education (Davis et al., 2014; Guskey & Passaro, 1984 p.16; Knox, Cullen, & Dunne, 2014; Marzlin, 2011;).

### **Literature Review**

A literature search was conducted to gain an understanding of the state of knowledge in the area of nursing education and teaching methodology in general, and in Sub-Saharan (SSA) countries, in particular. Access to electronic articles was gained through the following databases: PubMed, ProQuest Education Journals, Scopus, Cumulative Index to Nursing and Allied Health Sciences (CINAHL), Nursing and Allied Health Database, and PsychINFO. To retrieve additional resources, search engines such as Google and Google Scholar were also used. Keywords used to guide the search included nursing or midwifery faculty, nurse or midwife educators, nursing education, midwifery education, teaching methodology, knowledge translation, continuing professional development, nurses, midwives, developing countries, and Rwanda. These keywords were used in combination with each other as well as independently. Ancestry searches were also performed. The search was further refined to include peer-reviewed articles, thesis, and dissertations written in the English language. Due to limited literature research related to teaching methodologies in nursing and midwifery education, no definite year limitation was used in this literature search.

A total of 42 articles were retrieved and 23 articles that fulfilled the inclusion criteria were selected for the literature review. Based on an analysis of retrieved resources, the literature review section is organized under the following topic themes: (1) CPD in nursing and midwifery profession, (2) CPD with educators in nursing and midwifery education programs, and (3) teaching methodologies into practice.

### **CPD in Nursing and Midwifery Profession**

Professional development is defined as the “the process and activities designed to enhance the professional knowledge, skills, and attitude of faculty members so that they might, in turn, improve the teaching and learning of students” (Guskey & Passaro, 1984 p.16). In the literature, CPD is used interchangeably with the term “in-service education” which refers to all activities organized and offered by the employer during working hours aimed to improve job-performance (Knox et al., 2014). In addition, CPD is similar to other concepts, such as continuing education (CE) or continuous professional education (CPE) and lifelong learning (LLL) (Davis, Taylor, & Reyes, 2014; Marzlin, 2011). CE or CPE is defined as a formal educative program undertaken by nurses and midwives to gain higher academic credentials after their initial registration (Marzlin, 2011). LLL is defined as a formal or informal dynamic process, which encompasses both professional and individual competencies development (Davis et al, 2014). In this thesis, CPD, CE, and LLL are used interchangeably to mean short-term, in-service education provided to nurse and midwife educators after their initial professional registration. In-service education, in this thesis, refers to educational activities provided to nurses and midwives at their workplace to update their knowledge and skills pertaining to nursing education (Davis et al., 2014).

In developed countries such as Australia, England, and the United States of America, continuous professional learning is mandatory and associated with licensure for professional midwives, nurses, and medical doctors (Ross, Barr, & Stevens, 2013). In Sub-Saharan Africa and developing world, some countries such as Nigeria, Ghana, Lesotho, Kenya, South Africa, and Rwanda have mandated CPD activities as part of the re-licensure process for medical doctors, nurses, and midwives (Moetsana-Poka & McCarthy, 2014; NCNM, 2011; Nsemo et al, 2013). However, evidence indicates that work commitments, times constraints, domestic responsibilities, cost, and schedules of CPD activities were found to prevent nurses and midwives from engaging in CPD in developing countries (Chong, Francis, Cooper, & Abdullah, 2014). According to Phillips et al (2012), mandatory CPD offers a strategy by which nurse and midwife educators can remain competitive and progress in evidence-based teaching as well respond to public demands.

Uwajeneza et al. (2015) conducted a descriptive qualitative study with nine midwives working in district hospitals in Eastern province of Rwanda to explore their experiences of knowledge and skills translation after participating in Advanced Life Support in Obstetrics (ALSO) continuous educational program. The results of this study indicated that midwives who participated in CPD programs had increased their knowledge, skills, and confidence in their area of practice. Also, the study findings indicated that midwives were able to improve their clinical practices as a result of participation in CPD programs. These results concur with the findings of another qualitative descriptive study conducted by Kasine et al. (2018) with ten nurses working in five district hospital in Eastern Province of Rwanda to explore their experiences of translating CPD education utilization the Helping Baby to Breath course in nursing practice. Kasine et al. (2018) highlighted that the participation in the CPD program increased nurses' competencies

which resulted in the improved practice of newborn resuscitation in their working clinical settings. Different barriers including insufficient of resources and heavy workload were mentioned as the most common barriers that affected negatively the application of knowledge and skills after participation in CPD programs in Rwanda (Kasine et al., 2018; Uwajeneza et al., 2015).

### **CPD with Educators in Nursing and Midwifery Education Programs**

Many graduates who receive professional graduate education training at the master's or doctoral level develop an understanding of their research role as faculty members but often do not receive adequate preparation for their teaching role as a faculty member (McArthur-Rouse, 2008; Rowbotham, 2015). Inadequate knowledge and skills in teaching and learning have an impact on educators' teaching role performance and teaching confidence (Guerriero, n.d.; Hotaman, 2010). In nursing and midwifery pre-service education, this may contribute to inadequate number of competent nursing and midwifery professionals graduating from educational institutions. To address this issue of inadequate and limited knowledge and skills on teaching and learning among educators, universities and colleges could implement different approaches, such as continuous professional development regarding teaching methodologies.

Continuous professional development can contribute to a nursing and midwifery faculty's performance in classrooms and clinical teaching practice. A mixed method study by Postareff et al. (2007) with 204 faculty members from different disciplines at the University of Helsinki, Finland explored the effect of pedagogical training on teaching in higher education. The results showed that continuous educational training enhanced the faculty members' ability to move from a teacher-centered approach to a student-centered approach. Educators who completed in-service pedagogical training reported focusing more on students' learning in their teaching practice than

those who did not participate in pedagogical continuous learning activities (Postareff et al., 2007). The same author emphasized that faculty members who completed educational training in teaching reported a higher level of teaching performance and confidence than those who did not participate in educational training. The results highlighted by Postareff et al. (2007) concur with the findings of a two-group pre-and post-test quasi-experimental study conducted in the US at the Southern Illinois University by Rowbotham (2015), to examine the impact of faculty development activities on educators' self-efficacy, skills, and perspectives. According to Rowbotham (2015), negative teaching experiences and lack of competencies in teaching methodologies can decrease the teaching performance of faculty members. In a study by Trower, Cathy, and Gallagher (2010), conducted with more than 10,000 tenure-track faculty, new faculty members were reported to more likely be effective, successful, and satisfied with their teaching roles if resources, such as continuous learning opportunities were available and if a culture of collaboration, collegiality, and community were created and well established within the university. Another quantitative study conducted by Foor and Cano (2011) in the US with 239 faculty members to determine factors that predict job satisfaction, suggested that faculty leaders and administrators should focus on continuous faculty development on all factors related to faculty's personal growth and satisfaction with teaching roles.

### **Teaching Methodologies into Practice**

In nursing and midwifery education, the translation of knowledge about teaching methodologies into practice may be influenced by how well nurse and midwife educators are exposed to the practice of teaching. Teaching practice in nursing and midwifery education is the practical application of teaching methods, teaching principles, and teaching strategies to enhance the knowledge and skills of teaching as an educator (Nwanekezi, Okoli, & Mezieobi, 2011).

Teaching practice involves exercises using different activities and practical training of daily clinical and classroom teaching (Mukumbang & Alindekane, 2017; Nwanekezi et al., 2011). During teaching practice, educators focus on the delivery of teaching and learning contents and the feedback from the students and supervisors which may contribute to the development of theoretical knowledge and skills in teaching methodologies (Mukumbang & Alindekane, 2017). However, in their qualitative study conducted in Iran, to understand facilitators and barriers of effective teaching in higher education, Bidabadi et al, (2016), found that many educators in higher learning institutions experience challenge in organizing effective teaching and learning.

Bidabadi et al. (2016) mentioned that the major barrier for educators to use effective teaching methodologies in their teaching practice is related to a limited knowledge and skills on effective pedagogy. The author recommended that to motivate students in their learning process, educators should be able to decide and choose effective teaching methods that focus on the learners' task and activity performance rather than acquisition of theoretical based knowledge. According to Mukumbang and Alindekane (2017), being involved in continuous professional development teaching activities plays an important role in the development of educators' teaching competency and could enhance the quality of their teaching practice in both classroom and clinical settings.

Most of the reviewed studies reported that participation in CPD programs improved nurses' and midwives' competencies and confidence level in their workplaces including academic and clinical settings. Although continuous professional development has been identified as a sustainable way of developing competencies and improving skills, few studies have been conducted to explore facilitators and challenges nurse and midwife educators experience when applying the knowledge and skills acquired from continuous education

offerings into their classrooms and clinical teaching practices (Chong et al., 2014; Hotaman, 2010; Moetsana-Poka et al., 2014; Nsemo et al., 2013).

### **Literature Review Summary**

Nurse and midwife educators play an important role in pre-service education by guiding nursing and midwifery students to develop their professional knowledge and skills (Rowbotham, 2015; Trower et al., 2010). The reviewed literature indicated that CPD programs constitute an asset to enhance and increase competencies of nurses and midwives working in both academic and clinical settings (Kasine et al., 2018; Postareff et al., 2008; Rowbotham, 2015; Trower et al., 2010; Uwajeneza et al., 2015). Also, the literature review highlighted that to ensure the quality of professional practices is maintained and sustained, participating in CPD activities are required for professional re-licensure process especially for nurses, midwives, and medical doctors in many developed and developing countries (Moetsana-Poka & McCarthy, 2014; NCNM, 2011; Nsemo et al, 2013; Ross, Barr, & Stevens, 2013). However, much of the development and implementation of CPD programs in developing countries relies on financial support from donors and partners (Chong, Francis, Cooper, & Abdullah, 2014)).

The literature review indicated that participation in CPD programs increases the knowledge, skills, and confidence of attendees (Foor & Cano, 2011; Phillips et al., 2012; Postareff et al., 2007; Rowbotham, 2015; Trower & Gallagher, 2010). The integration of CPD programs in pre-service education has shown to increase the competencies of faculty members who provide classrooms and clinical teaching practices (Postareff et al., 2008; Rowbotham, 2015; Trower et al., 2010). In addition, continuous education training is considered as an effective way of enhancing faculty members' ability to move from the teacher-centered approach to the student-centered approach (Postareff et al., 2007).



The literature review revealed various factors that hinder the application of knowledge and skills acquired from CPD activities into teaching practice. The most common identified barriers included heavy workload, and insufficient resources, materials and equipment (Kasine et al., 2018; Uwajeneza et al., 2015). However, little is known about the experience of translating newly acquired knowledge and skills into practice from the perspective of faculty members who participated in continuous professional education. Therefore, further exploration of the factors influencing nurse and midwife educators' translation of knowledge and skills acquired from CPD workshop about teaching methodologies into their teaching practices in developing countries is warranted. This study aimed to address this gap in knowledge and increase the understanding regarding nurse and midwife educators' experiences applying newly acquired knowledge and skills about teaching methodologies into their classroom and clinical teaching practice in Rwanda.

### **Statement of Purpose**

The purpose of this qualitative descriptive study was to explore nurse and midwife educators' experience of translating the knowledge and skills acquired from participating in CPD workshops about teaching methodology into their teaching role with nursing and midwifery students in Rwanda.

### **Research Questions**

This study was guided by two main research questions: (1) What is the experience of nurse and midwife educators' application of teaching methodologies in practice after involvement in CPD workshops about teaching methodologies? (2) What are the facilitators and challenges that influenced the translation of teaching methodology knowledge and skills into practice by nurse and midwife educators after participating in these workshops?

## **Methodology**

### **Design**

A descriptive qualitative design was used to guide the research process and considered relevant to gain the understanding of how knowledge and skills about teaching methodologies acquired from the CPD workshop were translated into teaching practice by nurse and midwife educators. When little is known about a phenomenon, a qualitative descriptive methodology is well suited to achieve a rich description of individuals' experiences or phenomena (Sandelowski, 2010). Unlike other common traditional qualitative methodologies, such as phenomenology or ethnography, which are built upon a particular technic and procedures, qualitative description is grounded in the general principles of naturalistic inquiry with the aim of presenting the phenomenon in its natural occurrence (Colorafi & Evans, 2016; Sandelowski, 2010).

The goal of qualitative descriptive studies is a comprehensive summarization of specific phenomenon experienced by a group of individuals or individuals in everyday life (Lambert & Lambert, 2012). The design involves an approach that enables rich descriptions and in-depth understanding of life experience and findings that are responsive to specific conditions and situations (Magilvy & Thomas, 2009). As stated by Colorafi and Evans (2016), qualitative descriptive methodology helps to present the findings of this study in a straightforward language that clearly describes the phenomena of interest. The use of a qualitative descriptive approach in this study provides the researcher opportunities to offer a comprehensive summary of participants' experiences accurately (Colorafi & Evans, 2016; Sandelowski, 2010).

### **Setting**

The research took place in Rwanda, a small landlocked country located in Sub-Saharan Africa specifically in Great Lakes region. The study was conducted with nurse and midwife

educators who participated in the CPD workshop and who were teaching at one of the six campuses of Schools of Nursing and Midwifery (SoNM) in Rwanda including SoNM at the University of Rwanda (UR), University of Gitwe (UG), Kibogora Polytechnic (KP), and Ruli Higher Institute of Health (RHIH). These six nursing and midwifery teaching institutions were chosen because they have created a partnership and working collaboration with the TSAM-MNCH project to strengthen pre-service training of nursing and midwifery professionals.

### **Sampling**

Purposive sampling (Sandelowski, 1995) was used to select informants who could provide the rich informative data about their experiences of applying newly acquired knowledge and skills on teaching methodologies into their teaching practice settings. According to Palinkas et al. (2011), purposive sampling is commonly used in qualitative studies and involves the identification and the selection of individuals who are particularly experienced with or knowledgeable about the phenomenon of interest. To be included in this study, nurse or midwife educator had to be a full-time faculty member in a direct classroom or clinical teaching position, working at one of the Rwandan Nursing and Midwifery Schools, have participated and completed the five days of teaching methodology CPD workshop which was organized and funded by TSAM-MNCH project in August 2017. Nurse and midwife educators with a nursing education degree, managers, and faculty who were not working or were on leave were excluded from this study. In this study, ten to twenty participants were expected to be interviewed. According to Polit and Beck (2017), a qualitative study does not rely on a large pre-set sample size. Data saturation was reached after conducting interviews with 15 nurse and midwife educators from 28 educators who responded and volunteered to participate in this study.

## **Recruitment**

From 14<sup>th</sup> to 25<sup>th</sup> of August 2017, in collaboration with the School of Nursing and Midwifery at University of Rwanda, the TSAM-MNCH Rwanda project organized and funded the CPD workshop about teaching methodologies for nurse and midwife educators who teach in six public and private Nursing and Midwifery Schools in Rwanda. The participants of this study were recruited from the 64 nurse and midwife educators who attended the CPD workshop. The recruitment of participants was done approximately one year after the participation in the CPD workshop.

For this study, the initial contact with potential participants was done by the TSAM-MNCH project manager on the behalf of the researcher using the contact information from the list of attendees to the CPD workshop. At this initial contact, the TSAM-MNCH project manager informed the nurse and midwife educators who attended the CPD workshop about the study. At the same time, the project manager asked those who expressed an interest in knowing more about the study and participating in this study for their permission to be contacted directly by the researcher using their contact information they supplied at the workshops. Among 64 nurse and midwife educators who attended CPD workshops about teaching methodologies, the researcher accessed only the list and contact information of 42 attendees who agreed to be contacted by the researcher. The contact information consisted of nurse and midwife educators' names, workplace, email address, and telephone numbers. Using contact information, the researcher contacted the attendees, provided them with a letter of information (Appendix A) about the study and if interested, invited them into the study. Given that this study involved nurse and midwife educators who worked at the university teaching environment with the ability to understand and express themselves fluently in English, all correspondence was in English.

The researcher tried to contact all 42 educators on the list obtained from the TSAM-MNCH project. However, some nurse and midwife educators did not respond to the research emails or telephone calls, some who were contacted did not volunteer to participate in this study, and others did not meet inclusion criteria of this study. Recruitment continued until data saturation was achieved and it was determined that no new information was being elicited from participants and that sufficient data had been collected to answer the research questions. Data saturation was reached after conducting interviews with 15 nurse and midwife educators from 28 educators who responded, were invited and volunteered to participate in this study.

### **Data Collection**

The primary data collection method for this study was individual one on one interviews using a demographic questionnaire (Appendix B) and a semi-structured interview guide (Appendix C). Data collection was conducted from November to December 2018. An initial meeting was scheduled with those who expressed an interest in the study when first contacted. This initial contact was in person or via telephone call. At this meeting, the researcher discussed more about the study with the participants, answered any questions they had about the study, and provided the Letter of Information (Appendix A). The participants informed the researcher of a convenient date, time, and place, where they were most comfortable to be interviewed, such as at their workplace or in another location. A reminder telephone call or email (Appendix E) was sent to participants one day before the planned interview time. All interviews were conducted in English. A written consent (Appendix D) was signed by each participant before starting the interview.

All interviews were recorded with the permission of each participant to avoid any distraction that could result from taking notes during their conversations and to help capture all

that they said. Researcher encouraged the informants to talk freely about their experience using their own words, to facilitate dialogue and open conversation. Probing questions such as could you tell me more about that, how are you using them, what do you remember about that, and provide an example were used as needed to elicit more depth information. Demographic information including gender, age, education level, professional background, and teaching experience was gathered to describe the sample using a demographic questionnaire (Appendix B). Each interview was approximately 60 to 90 minutes in length.

Immediately, at the end of each interview, the researcher took field notes in order to ensure that key contextual information and observations that were made during interview process were captured and recorded appropriately (Phillippi & Lauderdale, 2018). Also, reflective journaling was used throughout data collection and analysis to document all of the researcher's thoughts and feelings that occurred while interviewing participants, and to capture initial impressions gathered from reading and analyzing the transcripts (Ortlip, 2008). To ensure data integrity, the audio-recorded interviews were transcribed verbatim by the researcher.

At the end of interview, the researcher reminded the participants about the need for the second contact with them via telephone for the purpose of member checking. During this second contact, the researcher shared his interpretations of the information provided with participants to make sure that the shared experiences of the nurse and midwife educators were captured accurately. This second contact provided an opportunity to invite them to offer any further input if needed.

### **Data Analysis**

Inductive content analysis as described by Hsieh and Shannon (2005) was used to guide data analysis for this study. According to Noble and Smith (2014), inductive content analysis is

used in qualitative research when there is not enough existing knowledge about the phenomenon of interest. In addition, the inductive content analysis includes open coding, creation of qualitative data categories, and abstraction to identify themes from collected data (Elo et al., 2014; Noble & Smith, 2014). This process of data analysis was appropriate for this study because little was known about knowledge translation from teaching methodology CPD training workshops into teaching practice of nurse and midwife educators.

Data analysis was conducted concurrently with data collection and started as soon as possible after the completion of the first interview. To assist in the organization of the transcribed data, a management software tool NVivo pro version 12 was used.

First, to ensure accuracy and completeness, the research read each transcript while listening to its recorded audiotape. Subsequently, the researcher read and re-read each transcript in its entirety to gain a complete sense of what had been said by the participant. After reading repeatedly each transcript, the researcher engaged in open coding and highlighted words, phrases and sentences in the transcripts. Then, codes were assigned to the highlighted pieces of text from each transcript. According to Sandelowski (2010), open coding is when the researcher circles a chunk of text and gives it a code. A coding guide was developed consisting of all the codes or labels from the transcripts. Next, similar codes were grouped together into categories which depict the same ideas or concepts. The categories were subsequently grouped into themes which together described nurse and midwife educators' experience of applying knowledge and teaching skills gained from the teaching methodology CPD workshop to their teaching practice settings. The researcher collaborated with the supervisor throughout the data analysis process to discuss the codes and categories and to come to a consensus of the final emergent themes.

### **Approaches for Creating Authenticity**

To ensure the trustworthiness of the research findings from this study, the researcher used the criteria of credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1986). According to Lincoln and Guba (1986), the credibility of qualitative study is related to the extent by which the researcher ensured that participants were accurately identified and described. In addition, to collect credible data, the researcher purposively selected participants who had experienced application of knowledge and skills on teaching methodologies after attending the CPD workshop on pedagogy. Prolonged engagement with participants and use of open-ended questions in a conversational style during the interviews enabled the participants to provide rich and detailed descriptions of their experience. The researcher and supervisor also collaborated and cross-checked with each other to identify and come to the consensus of emergent themes that describe the experience of nurse and midwife educators (Schwandt, Lincoln, & Guba, 2007). In addition, to enhance the credibility, member checking with participants was conducted by presenting them the preliminary themes to ensure that the shared experiences of nurse and midwife educators were captured accurately in their perspectives (Schwandt et al., 2007)

Dependability as one of the standards of evaluating a qualitative study refers to the consistency or stability of the research process over a period of time (Elo et al., 2014; Graneheim & Lundman, 2004). The dependability of this study was ensured by keeping a record of all decisions made throughout the research process using an audit trail. Data collection was conducted under relatively similar situations, and the interviews were kept in line with the purpose of the study. Confirmability refers to the extent by which the research study's findings are based on the participants' words and narratives rather than potential researcher's assumptions or bias (Elo et al., 2014; Morrow, 2005). The researcher engaged with reflective journaling



throughout the research process to documents all thoughts and feelings that occurred while conducting interviews and to capture impressions and thoughts from reading interview' transcripts and during data analysis process (Ortlip, 2008).

Transferability of a qualitative study deals with the applicability of findings to other contexts (Morrow, 2005). To achieve transferability, a rich and detailed description of the setting, sample phenomenon of interest was provided. Also, the transferability was enhanced by using direct quotations to illustrate the identified themes that describe participants' experiences (Morrow, 2005; Schwandt et al., 2007).

### **Ethical Considerations**

This study was conducted after receiving ethical approval from the Western University Health Research Ethics Board (HSREB) (Appendix F) and ethical approval from University of Rwanda Institutional Review Board (IRB) (Appendix G). After reading the letter of information (Appendix A) about this study which was provided before deciding to start interview session, nurse and midwife educators who voluntarily accepted to participate in this qualitative study signed a consent form. The anonymity of all participants was reassured and preserved by assigning alpha-numeric codes to transcripts and digital recordings of interviews from all interviewees. For confidentiality reasons, all information collected in this study were only used for the purpose of this study and the access to this information was reserved only to the researcher and committee members of this study.

By participating in this study, confidentiality was fully protected. During the audio-recorded interviews, participants were reassured that no information would be disclosed that could identify them or others. Also, any identifiers which were mentioned by participants involuntary were not included in the transcripts. Participants were informed they could choose

not respond to any question or share any information that made them feel uncomfortable. They were also informed that they could withdraw or decline from this study at any time. If they decided to withdraw from this study, their data would be removed and destroyed from this study's database.

Information collected in this study were electronically recorded and transcribed by the researcher. Participants' information and data collected were password-protected in the researcher's computer, while transcripts and consent forms were stored in a locked filing cabinet kept in a secured area at the researcher's home. Raw data from the interviews were kept separately from the signed consent forms. The access to the participants' information and data was limited only to the researcher, the research committee member, and the project supervisor. Participants' names or personal identifiers will not be in any publications or presentations of this study's results. All audio recordings were erased after the interviews have been transcribed and checked for accuracy. All transcripts and demographic information collected in this study will be kept for seven years following data collection in password-protected computers. After seven years, they will be destroyed by shredding and disposed with confidentiality.

## **Findings**

### **Participants**

A total of 15 full-time nurse and midwife educators who worked at one of the six different campuses of public and private Nursing and Midwifery Schools which had a partnership with the TSAM-MNCH project in Rwanda participated in this study. All participants had completed bachelor's degrees and eight having completed master's degree. There were eight female and seven male educators. Most of the participants were between 30 and 40 years of age, the youngest was 25 years old while the oldest was 54 years old. Only one participant had more

than 10 years of experience in clinical practice, seven had between two years and five years of clinical experience, and the other seven had clinical experience ranging from six to ten years. Participants' experience in nursing and midwifery education varied, seven had between six and ten years, six had between two to five years, and two had teaching experience of more than ten years.

### **Themes**

Five interrelated themes that described the nurse and midwife educators' experiences of applying new knowledge and skills about teaching methodologies into teaching practices were identified: 1) *Enhanced competency about teaching practices*, 2) *Application of knowledge and skills gained into classrooms and clinical teaching*, 3) *Collaboration and teamwork*, 4) *Facilitators and challenges to the application of the knowledge and skills into teaching practice*, and 5) *Indirect outcomes to maternal, newborn, and child health care*. These themes included several sub-themes, which are described below.

#### **Theme One: Enhanced Competencies about Teaching Practices**

This first theme was characterized by the educators' increased knowledge, skills, and confidence about teaching methodologies to be used in classrooms and clinical settings. Participants mentioned gaining increased knowledge about theoretical and clinical teaching methods, student-centered teaching, students' learning styles, and effective teaching and learning environments. One participant described learning about what is needed to prepare for classroom teaching: *"As an educator, I have to prepare myself, prepare all teaching materials needed like projector. .... I make sure that the classroom is available, chairs which will make students sit in a comfortable manner....."* (Participant No 6).

The majority of participants described being more organized in preparation for classroom and clinical teaching after attending the workshop. Some educators stated that they learned how to “*organize teaching materials*”. Participants also stated that their knowledge and skills about how to organize teaching and learning sessions, develop course contents, and prepare evaluation tools, such as examinations increased. As one participant expressed,

*“I learned how to organize a teaching session, how to organize content, how to provide it and how to assess the content covered in classroom teaching and learning session.....  
Another thing is how to organize the structured exam relating to objectives of the course”*  
(Participant No.08).

Participants discussed feeling *more confident* in preparing course syllabi, teaching materials, and lesson plans for both clinical and classroom settings. For example, in describing what was learned from participating in the workshop, one educator stated, “*I became more confident in my teaching practices because I always prepare my teaching very well before going in classroom and clinical or in skills lab teaching session*” (Participant No.2).

Participants mentioned that their knowledge about various teaching methodologies used in classroom and clinical settings teaching practices improved. As one participant stated, “*...These teaching technics or methods include lecturing, discussion, and case study. Also, I learned more about other teaching methods to be used in clinical teaching practice like simulation, demonstration, and case study*” (Participant No.11).

The participants commented that they now recognize the role students play in teaching and learning situations and the importance of teaching being student-centered. One participant expressed that, “*after this workshop, I have learned that it is better to put students at the center of teaching and learning practices*” (Participant No.14). The educator further stated that being

student-centered “*engages more students to participate in the teaching and learning activities*” (Participant No 14).

Many participants described that after attending the CPD workshop, their knowledge and level of understanding about students’ learning styles increased. One participant expressed that, “*Yes, from the training, I learned that students have different learning styles. I understand that there are some who are auditory learners, others who are tactile or kinesthetic, others who are visual learners...*” (Participant No.8). Other participants started to organize their teaching and learning session based on their students’ learning styles, “*.... So, the knowledge I have gained help me to prepare appropriate teaching materials that I am using when teaching students with different preference styles of learning....*” (Participant No.3).

The participants stated they gained knowledge about conducive teaching and learning environments for students. Some participants emphasized using the knowledge gained about creating a conducive environment for effective student learning in the classroom setting. This is highlighted in the following statement: “*The following could be available to have that conducive environment including a clean environment, the way the students are sitting, no disturbance, your voice, and how you interact and communicate with students in teaching and learning process*” (Participant No.4)

### **Theme Two: Application of Knowledge and Skills Gained into Classrooms and Clinical Teaching**

This theme refers to the changes the participants made to improve their classrooms and clinical teaching practices and to enhance students’ learning after having attended the workshops. Participants stated that after learning about teaching methodologies, they made many changes in their classroom setting and clinical teaching practice which, in turn, improved the students’

learning outcomes. Most of the participants mentioned altering their teaching practices by integrating and mixing different teaching methods into classroom and clinical teaching. One participant stated, “*Nowadays I improved my teaching practices by combining different teaching methodologies like lecturing, seminar, case study, brainstorming, and demonstration in skills or simulation lab*” (Participant No.06).

Participants also mentioned experiencing “*positive changes*” and “*improvements*” in their teaching-related activities such as in preparation, classroom management, assessments, use of appropriate teaching methodologies while teaching nursing and midwifery students. One educator stated the increased skills gained from the workshop led to many improvements in teaching methods: “*...these improvements include increased skills related to classroom management, and teachings practices by using appropriate teaching methods and strategies, and clinical assessment approaches like the use of formative and summative assessments*” (Participant No. 5). The educators mentioned replacing some of traditional, outdated, and incorrect information they previously relied on in their classroom teaching practices with the new up-to-date information on teaching methodologies. One educator stated, “*I really appreciated the CPD workshop because it assisted me to improve the way I am teaching in classrooms as well as in clinical settings by shifting from traditional teaching methods to modern teaching methods like participatory teaching methods*” (Participant No.7).

Most participants described that they changed their routine teaching practices, such as instead of using only lecturing method adopting more participatory teaching methods in order to promote student-centered nursing and midwifery education. Some stated that participatory teaching methods could promote better teaching and learning session as it shifts from being teacher-centered to becoming more student-centered. As one participant described: “*Before, I*

*used lecturing more than other methods...after the CPD workshop, I realized some students are interested in participatory methods. Now, I changed to more participatory methods such as group discussion session, assignments, debate, and case studies” (Participant No.10).* Another participant stated that using participatory teaching methods contributes to students’ successful achievement of learning objectives and facilitates development of expected nursing and midwifery professional competencies: *“Once I am teaching them by using the gained knowledge and skills like participatory methods give me another window to know how students are achieving learning objectives so that they will become the competent professional after their graduation” (Participant No.08).* Other participants expressed feeling more confident that the changes they have experienced in course preparation will facilitate the achievement of course objectives for both the students and facilitator: *“.... I feel confident because the students are well prepared, received sufficient module information, they are ready to learn and be able to achieve most of the objectives mentioned in that module syllabus” (Participant No 06).*

Nurse and midwife educators shared how their involvement in the CPD workshop enhanced their use of reflective clinical teaching strategies improve students’ clinical competencies. For example, one educator noted that using pre-and post-conferences in clinical settings helped students to develop more cognitive clinical competencies: *“In clinical teaching, I use pre-conference which helps to know expected clinical learning outcomes. Also, I use post-conference to evaluate if expected objectives have been achieved and review how to improve on the following clinical practice day” (Participant No.1).*

Many educators mentioned that they have increased the use of different clinical teaching and learning tools such as a student’s clinical portfolio. One participant emphasized a student’s portfolio as a significant strategy for clinical learning: *“We tried to use new strategies like a*

*clinical portfolio to help students learn.... portfolio is important because it helps the student to learn and achieve their clinical learning objectives without misusing their time at clinical sites” (Participant No.6).*

Participants mentioned their increased knowledge and skills about teaching methodologies helped them to “*engage students and encourage self-directed learning*”. As one educator stated about student participation, “.... *I try to engage my students and make sure that every student has participated in my course. For example, during students’ presentations, everyone should have equal chances of participation*” (Participant No.4). Other participants described changing their teaching approaches and styles to promote students’ learning opportunities. “*That helps me to make some daily changes related to my teaching methodologies and styles of teaching and this helped me to maximize learning opportunities and performances of students attending my teaching and learning sessions (Participant No.3)*. Participants mentioned the creation of conducive teaching and learning environment improved students’ performances. One participant stated, “*I improved on my teaching ways and that increased students’ performance as well as scores. This also was improved because teaching and learning environment was improved. These are the good things improved on the side of students*” (Participant No 05).

### **Theme Three: Collaboration and Teamwork**

This theme describes how their collaboration with others and teamwork improved as a result of attending the CPD workshops and contributed to the achievement of theory course and clinical practice goals. The theme of collaboration and teamwork in teaching practices was characterized by professional interaction between nurse and midwife educators working together and with others working at different nursing and midwifery teaching institutions and extended to



the other health professionals including nurses, midwives, and physicians working in clinical settings.

Participants commented that there was more sharing of ideas and team spirit in teaching activities like skills demonstration and evaluation among the educators. As one participant stated:

*“Our collaboration with other educators or clinical settings’ staff was improved because, now, we all work together as a team in different teaching activities like skills lab demonstration in simulation center or clinical settings. Everyone’s willingness of helping each other was improved” (Participant No.02).*

Networking was also mentioned has having been initiated among the nurse and midwife educators making it easier to work together. As one participant reported: *“Now there is a network between the nurses and midwives’ educators working from schools that were involved in that CPD workshop about teaching methodologies....it is easier to collaborate and work together and to help each other” (Participant No.01).*

Increased collaboration and teamwork between nurse and midwife educators working in the academia and those employed in clinical settings was also mentioned. *“...I can collaborate with different people from school, all health professionals from clinical settings including physicians, midwives, and nurses” (Participant No.3).* The participants further described that as a result of this increased collaboration and teamwork among educators and practitioners, students’ learning was enhanced. One participant reported: *“Our collaboration with other educators and people working in clinical settings helped our students to learn better from clinical settings and that has to be done when there is a good teamwork spirit with other health professionals” (Participant No.3).* Participants remarked how increased collaboration helped them to effectively interact with other health professionals working at clinical teaching settings

as a team or at personal level, sharing knowledge and clinical teaching ideas and contributing to the shared goal of improving the competencies of future nursing and midwifery professionals.

*“This improved collaboration and networking between teaching institutions and clinical settings staff which strengthened networking, peer education and exchanging ideas, knowledge, and skills from that CPD .... Also, nurses and others are facilitating our students’ clinical learning activities” (Participant No.04).*

#### **Theme Four: Facilitators and Challenges to the Application of Knowledge and Skills into Teaching Practice**

This theme describes facilitators and challenges that influence the knowledge and skills translation into practice after participation in CPD workshop. The nurse and midwife educators reported a number of factors that influenced their ability to apply their newly acquired knowledge and skills about teaching methodologies. Facilitators included teamwork, existing teaching support systems like Information and Communication Technologies (ICT), administrative support, and Human Resource for Health (HRH). Challenges and barriers included insufficient teaching materials, resources, equipment, and financial problems. Other challenges included heavy workload related to a large number of students and involvement in administrative activities.

Teamwork was identified by most participants as the main facilitator in applying newly acquired knowledge and skills on teaching methodologies into practice settings. Participants explained that the *willingness* to help each other and *team spirit* helped them to address some of the challenges related to teaching. *“...that helped me to address some barriers in my teaching. ..., facilitated the advancement of knowledge about some teaching methodologies” (Participant No.13).*

Many participants said that the *existing supporting system*, namely administrative support and Human Resources for Health (HRH) faculty, facilitated their knowledge and skills translation into teaching practice.

*“HRH and other senior faculty help us to use effectively the gained knowledge and skills because they are acting as our mentors in classroom and clinical teaching practices. They help us to understand clearly the use of some particular teaching methodologies and some principles of adult learning principles” (Participant No. 3).*

The HRH faculty members are educators from United States institutions working in partnership with the University of Rwanda to mentor Rwandan health professionals and teach students from different schools including nursing and midwifery (Binagwaho et al., 2013). Participants appreciated that the academic administrative staff and head of departments assume the responsibilities of facilitating teaching and learning process. As stated by one participant: *“...other facilitators are leaders especially the head of the department facilitating us, and she makes sure that the process of classrooms and clinical teaching progressing well” (Participant No.04)*. One participant described support from administrative as motivating, *“If anything happens or missing, the management is willing to give all the support, and this motivates us to do the work properly” (Participant No.02)*.

Participants described that their knowledge and skills translation was facilitated by the existing supportive ICT teaching system. The participants commented being able to access internet connection and interact with students by using the Moodle Online Platform while using different student-centered and participatory teaching approaches. One participant commented: *“...we have access to internet connection ....., we use Moodle platform to prepare teaching and*

*learning session, to share teaching materials and resources on Moodle Online Platform and students learn easily on their own under educator's facilitation" (Participant No.02).*

Although the use of ICT resources was described by some participants as the facilitator of their knowledge and skills translation into teaching practices, a few educators stated the use of ICT resources such as Moodle Online Platform is hampered by non-availability or lack of the strong internet connection at their respective teaching campus. As one participant remarked:

*"Another barrier is about technology especially ICT because sometimes the internet connection is not working well or not available and it is not easy for us to use online teaching platform like Moodle" (Participant No.04).*

Some participants reported a lack of teaching equipment, such as projectors, insufficient mannequins in simulation labs or classrooms and limited clinical teaching materials presented barriers to teaching. In regard to this challenge, one educator remarked about the limited availability of needed resources to teach and the negative impact on students' learning:

*"... always we are struggling to find out all materials needed in our teaching practices ... we have few materials like projectors and some of the available projectors are not clear... Also, some necessary clinical teaching materials are not available at some settings. This limits evidence-based practices and education and competencies development for our students" (Participant No.7).*

Others described having limited access to teaching materials. As one participant stated,

*"Sometimes you cannot be able to access the necessary classroom teaching materials"*

*(Participant No. 9).* Another participant mentioned not being able to access simulation teaching materials due to a high number of simulation lab users: *"Also, some materials are not available in simulation lab or a big number of people who use simulation center in teaching at the same*

*time” (Participant No 4). Although many participants commented on the lack or limited availability of necessary classrooms and clinical teaching materials, some of the educators described how having teaching materials, resources and equipment can facilitate the application of their acquired knowledge and skills on teaching methodologies. One participant stated, “I have got different facilitators like some teaching materials such as computers, projectors, and internet connection. ...well-equipped simulation with good mannequins that contributing to the effective use of the knowledge and skills gained from CPD workshop” (Participant No.05).*

Many participants described that heavy workloads and time constraints hampered their ability to apply teaching methodologies knowledge and skills acquired from the CPD workshop into classroom and clinical practice settings. Some participants commented that it was difficult and sometimes impossible for them to apply some of the teaching methodologies due to having to teach a large number of nursing or midwifery students. One educator explained: *“we are now facing the problem of student-teacher ratio due to a very big number of students in classrooms and it is very difficult to consider every student individually and to use some teaching methods” (Participant No.11).* Another factor that contributed to the heavy workload was the expectation of their added involvement in administrative activities as stated by one participant: *“also, we face challenges related to many administrative activities added to teaching-related activities. This affects negatively my teaching practices” (Participant No.7).*

#### **Theme Five: Indirect Outcomes to Maternal, Newborn, and Child Health Care**

The final theme depicts educators’ perception on how their application of knowledge and skills acquired from CPD workshops into their teaching practice will indirectly relate to improved maternal, newborn, and child care in Rwanda. Most participants commented that learning more about teaching methodologies enhanced their capacity to help students acquire the

necessary competencies for professional nursing and midwifery practice. In describing how incorporating the acquired knowledge and skills in clinical and classroom teaching will result in more competent nurses and midwives, one educator stated. *“I think that by using the good teaching methodologies learned from that CPD workshop, ... contributed to the development of competencies of future nurses and midwives after their graduation” (Participant No.06).*

Many nurse and midwife educators felt confident that the quality of service delivery and job satisfaction in clinical settings would be improved as a result of nursing and midwifery graduates who benefited from experiencing the enhanced teaching methodologies used by educators in pre-service nursing and midwifery education. For example, one educator stated *“as we are working in pre-service education, we are training tomorrow’s nurses and midwives. I believe that, when they are well trained, they work well when they are in their job or employment settings” (Participant No.13).* A majority of participants suggested that well-trained nurses and midwives will contribute to the improvement of health care services in Rwanda. One educator explains, *“...so being well trained will help them to be involved in the improving of the quality of nursing and midwifery care and services in Rwanda” (Participant No.04).*

With improved pre-service nursing and midwifery education, as a result of faculty being knowledgeable about teaching methodologies, participants described an additional indirect outcome, such as addressing challenges in maternal and child health. *“...I hope that competent nursing and midwife graduates will be involved in solving or addressing different challenges that faced by the community in maternal and child health as well as in reproductive health and even in family planning” (Participant No.01).* Other participants commented that nurse and midwives with increased competencies will contribute significantly to the improvement of maternal, newborn, and child care services in the future. In describing students exposed to enhanced pre-

service teaching and learning methodologies and the impact they will have, upon graduation on maternal and child health services in Rwanda, one educator said: *“when these students will be graduated with enough competencies, they will go outside and they will make a difference in caring for mothers and babies (Participant No.3)*. Similarly, other participants described increased competency is an effective way of preventing and reducing maternal and infant morbidity and mortality rates: *“...having competent professionals will decrease significantly the number of maternal and child death. This will help us to be sure that no mother is dying while giving birth, no child is dying during and after birth” (Participant No.13)*.

### **Discussion**

This qualitative descriptive study explored nurse and midwife educators' experiences of translating the knowledge and skills acquired from participating in CPD workshops about teaching methodologies into their teaching practices with nursing and midwifery students in Rwanda. Five main themes, specifically, enhanced competencies about teaching practices, application of knowledge and skills gained into classrooms and clinical teachings, collaboration and teamwork, facilitators and challenges to the application of the knowledge and skills into practice, and indirect outcomes to maternal, newborn, and child health care, emerged from the data analysis. This study's findings highlight that nurse and midwife educators who attended continuous education programs regarding pedagogy report increased competencies related to teaching methodologies which, has the potential for changes and improvement in their classrooms and clinical teaching practices. The transformation in how they taught after having attended the CPD workshops was influenced by improved teamwork and collaboration, existing teaching support systems like ICT, administrative support, and human resources for health. However, their ability to alter and improve existing teaching practices was often hindered by

insufficient or lack of teaching materials, equipment, and resources, heavy workloads related to a large number of students enrolled in nursing and midwifery programs, and involvement in administrative activities assigned by their institutional managers and leaders.

Increasing nurse and midwife educators' competencies enhances their ability to teaching effectively, using appropriate teaching methodologies that could positively improve the outcomes of classrooms and clinical teaching practices in nursing and midwifery education (Bvumbwe & Mtshali, 2018; Jamshidi et al., 2016; WHO, 2016). An outcome from participating in CPD workshops about teaching methodologies was participants' increased competencies in teaching theory and clinical practice courses. These study findings concur with results from previous studies on similar in-service professional development programs which described improved knowledge, skills, and confidence of nurses in their different areas of practices (Cilliers & Herman, 2010; Kasine, Babenko-Mould, & Regan, 2018; Postareff et al., 2008; Rowbotham, 2015; Uwajeneza, Babenko-Mould, Evans, & Mukamana, 2015). For example, in their descriptive study explored midwives' experiences of knowledge and skills translation into their practices after participating in a CPD program in Rwanda, Uwajeneza et al. (2015), indicated that participants reported increased knowledge, skills, and confidence related to their professional areas of practice as a result of attending a CPD workshop program.

Effective preparation and organization of a teaching and learning session contribute to the achievement of positive teaching and learning outcomes (Bvumbwe & Mtshali, 2018; Hotaman, 2010). This study's results indicated that nurse and midwife educators became more organized in classroom and clinical teaching preparation and practices after being involved in a CPD workshop. A well-organized teaching preparation and practices in teaching activities could contribute to the increased teaching confidence and decision-making ability of an educator,



which may lead to high quality of classroom and clinical teaching in nursing and midwifery education. These results are similar to the results of a quantitative study conducted by Rowbotham (2015) in US at Southern Illinois University, which showed that faculty members increased their confidence in teaching after participation in CPD programs. Involvement in CPD programs for nurse and midwife educators can influence how educators feel about their teaching roles and consequently can increase their teaching confidence in both classroom and clinical settings

The results revealed that educators' knowledge about teaching methods, students' learning styles, and conducive learning environments increased as a result of attending CPD workshop. A conducive teaching and learning environment plays a vital role in the success and effectiveness of a teaching and learning session (Oermann et al., 2018).

The use of different teaching methodologies help an educator to accommodate students' learning styles, which might have a positive impact on the academic performances of nurse and midwife educators resulting in enrichment of students' competencies (Bilal, Guraya, & Chen, 2017; Boström & Hallin, 2013).

The educators' knowledge about student-centered learning and participatory teaching methods also increased as a result of attending the CPD workshop. Participants came to understand that learners should be the primary focus in education rather than the teacher. Therefore, the educators shifted from using a traditional teacher-centered methodology to a student-centered approach by integrating different participatory teaching methods. According to Kucharcikova and Tokarcikova (2016), participatory methods promote student-centered learning and stress the subjectivity of students and self-constructed competencies. Students were perceived by the educators as being more engaged in the learning process when exposed to

participatory teaching methods. Previous research indicates that participatory teaching methods contribute to student's successful achievement of learning objectives and facilitates the development of expected professional competencies (Gal, Rubio, Iglesias, & González, 2018; Kucharcikova & Tokarcikova, 2016).

Our findings coincide with other studies conducted to evaluate the impact of CPDs programs among nurses and midwife working in clinical settings (Boström & Hallin, 2013; Kasine et al., 2018; Uwajeneza et al., 2015). In their qualitative descriptive study explored nurses' experiences of translating CPD education to nursing practice in Rwanda, Kasine et al. (2018), found the participation in CPD improved nurses' abilities to apply theoretical principles of teaching and learning in their areas of practice which leads to the improvement of work performance.

The nurse and midwife educators reported an increased use of clinical teaching and learning materials such as, a student's portfolio after participation in CPD programs. The use of a clinical portfolio encourages nursing and midwifery students to become more accountable for their own learning and empowers them to become lifelong learners (Ticha & Fakude, 2015). In this study, the use of a student's portfolio was described as a substantial strategy for improving clinical learning. Similarly, in a study conducted in South Africa by Potgieter (2016) with students in clinical settings, it was found that the use clinical portfolio is an effective strategy to enhance critical and analytical thinking among nursing and midwifery students.

This study's results revealed that collaboration and teamwork between nurse and midwife educators increased after participation in the CPD workshop and had a positive impact on improving pre-service education of future nursing and midwifery professionals in both classroom and clinical settings. The increased collaboration and teamwork were not limited in classroom

teaching settings but also extended to working with other health professionals working in clinical settings, including nurses, midwives, and physicians. Good collaboration and teamwork between nurse and midwife educators and other health professionals provides support to each other and helps to create a conducive clinical teaching working environment. The results of this study highlighted that effective and increased collaboration and teamwork enhanced nurse and midwife educators' interactions with other health professionals working at clinical teaching settings as part of a team or at a personal level, sharing knowledge and clinical teaching ideas and that contribute to the shared goals of improving the competencies of future nursing and midwifery professionals. A team mentality can promote morale and encourage interprofessional collaboration and education (Buring et al., 2009; Morphet et al., 2014). Also, participants commented that nursing and midwifery students benefited from good interprofessional collaboration and teamwork relationships in clinical and academic environments. The results of this study concur with the previous studies about interprofessional collaboration and teamwork in preservice health professional education (Bvumbwe, 2016; Hebert, 2015; Morphet et al., 2014). In his qualitative case study to understand and describe the process nurse educators teaching interprofessional collaborations to nursing students in the USA, Hebert (2015) argued that that educators' understanding about interprofessional collaboration play an important role in developing learning opportunities for undergraduate students which enable them to develop competencies required in today's clinical settings. Pre-service nursing and midwifery education outcomes can be improved when a strong collaboration and teamwork are established in nursing and midwifery education between clinical and academic settings (Bvumbwe, 2016; Morphet et al., 2014).

There are various conditions required for effective application of teaching methodologies knowledge and skills into practice. The results from this study highlighted a number of conditions facilitated the translation of teaching methodologies competencies into classroom and clinical teaching practices. Our findings indicated that collaboration and teamwork, existing teaching systems like ICT, and HRH are essential elements for nurse and midwife educators to effectively apply new knowledge and skills gained from the CPD workshop. These conditions facilitated midwife and nurse educators' abilities and willingness to utilize the acquired knowledge and skills in order to positively improve classroom and clinical teaching practice. Similarly, Dube et.al (2017) stipulated that the successful pre-service nursing education not only relies on competencies of educators but also greatly depends on the teaching materials and teaching supporting systems like ICT and conducive learning environments.

For nurse and midwife educators to be able to apply the knowledge and skills acquired from the CPD workshop, they need to be supported by appropriate and adequate infrastructures in their teaching institutions including sufficient teaching materials and equipment for classrooms and clinical teaching practice. However, the participants identified that heavy workloads, insufficient teaching materials, resources, and equipment as the main issues hampering the transfer of new knowledge and skills into their teaching practice. Lack of necessary or limited access to teaching materials negatively affect the outcomes of teaching and learning session for students. Consequently, lack of infrastructure support and teaching resources may result to the poor quality of nursing and midwifery education, which could have long-term impact on the professionals' competencies of future nurses and midwives.

The findings of this study coincide with the results of an integrative review conducted by Bvumbwe and Mtshali (2018) in Sub-Saharan Africa to examine nursing education challenges

and solutions. The findings of that study revealed that lack of teaching resources, equipment, and materials posed major challenges to pre-service nursing and midwifery education in most Sub-Saharan countries. The lack or insufficient of teaching resources, materials, and equipment for use in classroom or clinical settings relates to students and their educators improvising (Mwale & Kalawa, 2016; Rhodes, Morris, & Lazenby, 2011). The results of a qualitative study conducted by Mwale and Kalawa (2016) with nursing educators, clinical nurses and students from nursing college and mission hospital in southern region of Malawi, found that improvising due to lack of basic clinical teaching resources negatively impacts on professional competency and key steps in the teaching of clinical procedures are often missed. Missing some procedural steps in clinical settings could result in training nurse and midwife students who are incompetent and indirectly may lead to unsafe clinical practice ( Mwale & Kalawa, 2016; Rhodes et al., 2011).

This study's results indicated that the participation in the CPD workshop about teaching methodologies improved nurse and midwife educators' competencies for both classroom and clinical teaching, which has the potential to enhance existing pre-service nursing and midwifery education in Rwanda. Increasing educators' abilities to train competent nurses and midwives for clinical practice will contribute to the improvement of health care services and increased job satisfaction in Rwanda. Further, continuous education opportunities for nurse and midwife educators will assist nurses and midwives who graduate to have the knowledge and skills needed to address challenges in maternal, newborn, and child health, and will indirectly improve care services in the future. Similar results were reported in a mixed qualitative and qualitative participatory study conducted in Malawi, Ghana, and Ethiopia to evaluate the effectiveness of pre-service midwifery education (Fullerton, Johnson, Thompson, & Vivio, 2011). The results showed that strengthening pre-service midwifery education could be a sustainable strategy of

improving maternal and newborn health care service delivery, and have a positive impact of reducing maternal and newborn mortality rate (Fullerton et al., 2011).

### **Implication for Education, and Research, and Policy**

It is vital for nurse and midwife educators to develop and increase competencies in the area of teaching practices. The findings of this study have a number of implications in nursing and midwifery education, research, and policy. The results highlight the importance of continuous professional development for nurse and midwife educators and areas that would enhance the advancement of nursing and midwifery classroom and clinical teaching practices in Rwanda. Regarding nursing and midwifery education, educators report having limited knowledge and skills related to teaching methodologies, pedagogy, and students learning styles. Lack of CPD programs for nurse and midwife educators and other faculty members could result in the use of outdated knowledge and skills in teaching practices, thus compromising the quality of nursing and midwifery educational programs. To improve and enhance the quality of nursing and midwifery education, CPD workshops, and refresher courses about teaching methodologies and pedagogy could be made available for all educators, particularly for novice faculty members in order to acquire and sustain the competencies required for teaching in nursing and midwifery higher teaching and learning institutions. Rwandan public and private nursing and midwifery higher teaching and learning institutions in collaboration with higher education councils, Ministry of Education, Ministry of Health, and other partners in pre-service nursing and midwifery educations could initiate and offer regular refresher courses and continuous education opportunities designated to bridge gaps in knowledge and skills among educators

The study's findings can help increase awareness among nursing and midwifery schools' leaders about the challenges that nurse and midwife educators face to apply acquired knowledge

and skills into teaching practices in order to improve the quality of pre-service nursing and midwifery education in Rwanda. There is a need for administration of nursing and midwifery teaching institutions to develop strategies to ensure there are sufficient resources, materials, and equipment for classrooms and clinical teaching practices. The continuous lack of teaching resources, such as, internet connection and projectors could lead to low quality of pre-service nursing and midwifery education which may lead to the persisting shortages or the production of incompetent nurses and midwives. It is, therefore, recommended that nursing and midwifery teaching institutions review their budgets to find sustainable ways of increasing funds allocated to the purchase of all necessary teaching resources, materials, and equipment required for classrooms and clinical teaching practices.

Findings from this study identified heavy workload related to a high student-educator ratio and involvement in administrative activities for nurse and midwife educators as challenges that limited knowledge and skills translation into teaching practices. To improve the quality of pre-service nursing and midwifery education, schools' leaders need to support nurse and midwife educators teaching activities by minimizing administrative tasks. Also, there is a need for balancing the number of students enrolling to nursing and midwifery programs compared to the number of faculty members available to facilitate effective classroom and clinical teaching practices. In addition, nursing and midwifery teaching institutions need to identify strategies which can help to increase recruitment and retention of qualified educators.

In this study, the participants were nurses and midwife educators, and therefore, this study merits a replication with other faculty members working in other health professionals higher teaching and learning institutions. Nurse and midwife educators identified different challenges to the application of acquired knowledge and skills about teaching methodologies into

their teaching practices. For instance, further research could explore the impact of insufficient teaching materials, resources and equipment, and heavy workloads on the quality of pre-service nursing and midwifery education. Lack of literature on the impact of CPD workshop on teaching methodologies designed to update nurse and midwife educators' knowledge and skills could lead to limited findings and evidence for future CPD programs. Future research is recommended such as a grounded theory or ethnography to explore what and how contextual factors influence knowledge and skills translation by educators into their classroom and clinical teaching practices. In addition, more research is needed to explore how challenges to the full application of effective teaching methodologies could be eliminated.

### **Strengths and Limitations**

To our knowledge, this study is the first qualitative descriptive study exploring nurse and midwife educators' experiences applying the knowledge and skills acquired from the CPD workshop about teaching methodologies into their teaching practices in Rwanda. This study's findings contributed to the currently limited research evidence in this area, particularly in developing countries. This study has some limitations that deserve mention. Although there are many faculty members with different backgrounds who are involved in pre-service nursing and midwifery education, only nurse and midwife educators were participants in this study and benefited from the CPD workshop about teaching methodologies. Provision of CPD workshop about teaching methodologies and investigation of the experience of other faculty members with other backgrounds who are involved in pre-service education of nursing and midwifery students is warranted. This study only involved nurse and midwife educators from public and private nursing and midwifery schools that have a partnership and collaboration with the TSAM-MNCH



project in Rwanda. Future CPD programs could be more inclusive of all nursing and midwifery higher teaching and learning institutions in the country.

### **Conclusion**

Adequate knowledge and skills about teaching and learning are valuable resources for nurse and midwife educators and continuous professional development on teaching methodologies has the potential to transform existing pre-service nursing and midwifery education programs. To strength nursing and midwifery profession particularly in developing countries, investing in CPD programs for faculty members involved in pre-service nursing and midwifery education is paramount. There is a value in delivering CPD programs to nurse and midwife educators to increase their knowledge skills, and confidence about classrooms and clinical settings using appropriate teaching methodologies, translating to positive teaching and learning outcomes for nursing and midwifery students. However, educators' abilities to change classrooms and clinical teaching practices were met with individual and structural challenges that need to be addressed.

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## CHAPTER THREE

### IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSION

#### Summary of Key Findings

The purpose of this study was to gain an understanding of nurse and midwife educators' experiences in translating new knowledge and skills into teaching practice after participating in the CPD workshop about teaching methodologies. Five themes emerged from the data analysis: *enhanced competencies about teaching practices, application of knowledge and skills gained into teaching practices, collaboration and teamwork in teaching practices, facilitators of and challenges to the application of knowledge and skills into practice, and indirect outcomes to maternal, newborn, and child health care.* The findings of this study revealed that nurse and midwife educators who participated in the CPD workshop increased their knowledge, skills, and confidence in preparation of classrooms and clinical teaching sessions. Participants also voiced that they became more confident in designing course syllabi and creating lesson plans. The increased nurse and midwife educators' knowledge in pedagogy enhanced their competence to use appropriate teaching methodologies, for example, shifting from lecturing method to participatory teaching methods. The increased competencies in teaching methodologies could positively improve and enhance the outcomes of both classrooms and clinical learning in pre-service nursing and midwifery education.

Participants reported that the application of knowledge and skills acquired from the CPD workshop positively changed their classrooms and clinical teaching practices. Most participants commented that their competencies in teaching nursing and midwifery students were improved. For example, many participants were able to change their routine teaching practices, such as instead of using only lecturing method adopting more participatory teaching methods, which

helped them to shift from being teacher-centered to becoming more student-centered. Consequently, the improvement in teaching enabled students to develop essential professional competencies required for their future practices after graduation. This study's findings suggested that collaboration and teamwork among nurse and midwife educators and other health professionals, including nurses, midwives, and physicians, working together, at different teaching institutions, or in clinical settings were increased due to educators' involvement in the CPD workshop. The findings of this study highlighted that the CPD workshop enhanced educators' abilities to train more competent graduate nurses and midwives with required competencies to promote maternal, newborn, and child health (MNCH) care in Rwanda. This study's findings indicated that CPD workshops about teaching methodologies could be a sustainable way of improving the quality of pre-service nursing and midwifery education in Rwanda. The results also support the notion that offering pre-service CPD programs could help address the shortage of qualified nurses and midwives in academia and in clinical settings. The results of this study revealed that teaching more competent nurses and midwives could have direct and indirect positive outcomes of improving MNCH care services in Rwanda as well as in the region.

Many participants of this study highlighted factors that influenced the translation of knowledge and skills gained from the CPD workshop about teaching methodologies. Factors frequently mentioned that exist in their teaching institutions included teamwork, and existing teaching support systems, such as, administrative support, Human Resources for Health (HRH) faculty, and ICT resources. Nonetheless, the findings also highlighted some barriers that hampered the full utilization of the knowledge and skills gained from the CPD workshop. The most cited barriers included heavy workloads, high number of students, assignment of

administrative activities, and insufficient or nonexistent teaching resources, materials, and equipment.

## **Implications and Recommendations**

### **Implications and Recommendations for Nursing and Midwifery Education**

Findings from this study highlight the importance of CPD programs for nurse and midwife educators and areas that would enhance the advancement of nursing and midwifery classroom and clinical teaching practices in Rwanda. For example, the participation in CPD activities may increase faculty members' knowledge, skill, and confidence needed in delivering effective teaching and learning sessions. Moreover, the findings from this study indicated that participation in the CPD workshop about teaching methodologies enhanced their collaboration and teamwork in their classroom and clinical teaching practices. Therefore, nurse and midwife educators need to be kept up to date about teaching methodologies, pedagogy, and skills to adequately facilitate classrooms and clinical teaching and learning sessions. It recommended that nurse and midwife educators, with the support of their teaching institutions' leaders, seek out opportunities for continuing development and education programs. This could be done through offering in-service CPD workshop and seminars for all new hired educators without background of formal education training. Also, it is recommended that Nursing and Midwifery Schools in collaboration with Ministry of Education in Rwanda initiate formal CPD programs to further enable faculty members' professional development which, in turn, could serve to improve the quality of pre-service education offered to future nurses and midwives.

The results of this study highlight the need to supply the necessary resources, materials, and equipment to improve the quality of nursing and midwifery teaching in classrooms and clinical settings. Therefore, the results of this study could be used to inform the administrators of

nursing and midwifery teaching institutions, the Ministry of Education, and Ministry of Health about the consequences of limited teaching resources in relation to the provision of high-quality pre-service education of competent nurses and midwives. For example, the continuous lack of internet connection and equipment contributes to low quality of pre-service nursing and midwifery education which may lead to persisting production of incompetent nurses and midwives in practice.

To address the shortage of teaching resources, nursing and midwifery teaching institution administrators, and practice leaders in collaborations with education authorities in the government and other stakeholders could review and revise their budgets to increase funds allocated to the acquisition of teaching resources, materials, and equipment required to enhance classrooms and clinical teaching practices. For example, the Ministry of Education and Ministry of Finance could work together with nursing and midwifery teaching and learning institutions to identify needs of educators and establish a strong teaching support system with all necessary teaching resources and materials for both classrooms and clinical teaching practices. To this end, the government could consider increasing the budget for an infrastructure which will support strong teaching support systems that could be used by nurse and midwife educators to establish conducive teaching and learning environments for students. In addition, pre-service nursing and midwifery teaching institutions' managers and leaders are encouraged to improve existing mechanisms for collaboration with stakeholders, donors, and partners to seek funding for additional teaching resources. Nursing and midwifery schools' managers and leaders in collaboration with all faculty members and administrative staff could revise and establish sustainable ways and guidelines for management and utilization of available resources, materials, and equipment. Moreover, administrative staff could make sure that available teaching materials,

resources, and equipment are easily and timely accessed by nurse and midwife educators when needed.

Findings from this study identified heavy workload related to a high student-educator ratio and faculty involvement in administrative activities as challenges to knowledge and skills translation into teaching practices. Heavy workload could be associated negative outcomes for nurse and midwife educators, students, and teaching and learning institutions (Khademi, Mohammadi, & Vanaki, 2015; MacPhee, Dahinten, & Havaei, 2017; Van Droogenbroeck, Spruyt, & Vanroelen, 2014). The outcomes related to heavy workload for educators may include lack of enough time for course preparation and insufficient time to provide effective feedback to students during teaching and learning process (Khademi et al., 2015; Van Droogenbroeck et al., 2014). According to Van Droogenbroeck et al. (2014), educators who are expected to take on many non-teaching-related activities in additional to teaching obligations may experience exhaustion and burnout. In order to address heavy workloads, it is recommended that the number of nurse and midwife educators as well as administrative support staff could be increased. For instance, nursing and midwifery teaching institutions need to lobby the government to provide more funding for the recruitment of more faculty and administrative staff.

To improve the quality of pre-service nursing and midwifery education, school administrators need to support educators' teaching responsibilities by reducing administrative expectations. There is a need to balance the number of students enrolling in the nursing and midwifery programs with the number of faculty members available to teach. Schools of Nursing and midwifery need to avail essential classroom and clinical teaching resources to help nurse and midwife educators establish a conducive teaching and learning environments in both classroom and clinical settings. Furthermore, it is recommended that hospital managers, faculty members,



and health professionals working in clinical settings continue to strengthen and sustain good (inter) professional collaboration and teamwork in clinical teaching activities.

### **Implications and Recommendations for Nursing and Midwifery Research**

This study was, to our knowledge, one of the first to investigate nurse and midwife educators' experiences of translating knowledge and skills into their teaching practices after participating in CPD programs on teaching methodologies in Sub-Saharan Africa specifically in Rwanda. Limited existing research on CPD programs are primarily related to in-services programs for nurses, midwives and other health professionals working in clinical settings (Amadi, 2013; Kasine et al., 2018; Uwajeneza et al., 2015). There was no study has been dedicated to understanding nurse and midwife educators' perspectives and experiences as related to facilitators and challenges affecting their abilities to apply knowledge and skills into their teaching practices. Consequently, this study contributed and added value to the limited literature about CPD programs for nurse and midwife educators working, in developing countries and particularly in Rwanda.

In this study, the participants were limited to nurses and midwife educators and there are educators who are involved in pre-service education of other health professionals and all have the same mission of promoting and improving the quality of health care service delivery. Replication with other faculty members teaching other health professionals in higher teaching and learning institutions is needed. This descriptive study used a qualitative lens, with the purpose of gaining a deep understanding of nurse and midwife educators' experiences. Thus, further research could utilize quantitative methodology or mixed method approaches to explore the effect of continuous professional development on teaching outcomes.

Nurse and midwife educators who participated in this study identified various facilitators and challenges to the application of acquired knowledge and skills about teaching methodologies into their teaching practices. More research is needed to determine strategies to eliminate barriers limiting nurse and midwife educators' abilities to improve the quality of pre-service education. It is also recommended that future research be undertaken to explore the impact of CPD workshop on job satisfaction and self-confidence in teaching practices among educators. Future study is needed to further explore how contextual factors impact knowledge translation of pedagogy in academic settings in low resource countries, and how challenges to the full application of teaching competencies could be overcome.

### **Implications and Recommendations for Policy**

Continuous professional development programs for nurse and midwife profession is shown to be a critical component needed to strengthen the quality of service delivery in Rwanda (Kasine et al., 2018; Uwajeneza et al., 2015). The findings of this study revealed that having attended the CPD workshop about teaching methodologies, nurse and midwife educators increased their knowledge and skills about teaching methodologies, pedagogy, and students' learning styles. Providing CPD programs for nurse and midwife educators could prevent the continued use of outdated knowledge and skills in teaching practices and enhance the quality of nursing and midwifery educational programs. Therefore, to improve the quality of nursing and midwifery education, continuous professional development opportunities and refresher courses about teaching methodologies and pedagogy could be available for all educators, particularly novice faculty members, in order for them to acquire and sustain the competencies required for effective teaching in higher teaching and learning institutions.

Rwandan public and private nursing and midwifery higher teaching and learning institutions in collaboration with higher education councils, Ministry of Education, Ministry of Health, and other partners in pre-service nursing and midwifery educations could initiate and offer regular refresher courses and CPD programs designated to bridge gaps in knowledge and skills among nurse and midwife educators and other faculty members. It is recommended that policies regarding ongoing education for faculty members in nursing and midwifery be developed to guide the implementation and monitoring of CPD activities in pre-service education programs. The findings of this study could inform policy-makers in the Ministry of Educations, and in the public, and private higher teaching and learning institutions to help enhance the delivery of pre-service nursing and midwifery educational programs.

### **Conclusion**

The use of CPD activities related to teaching methodologies potentially offers sustainable way of improving the quality of pre-service nursing and midwifery education. Nurse and midwife educators' meaningful experiences of continuous education provided insights into how competencies about teaching methodologies and pedagogy can begin to transform pre-service nursing and midwifery education and nurse and midwife educators can become more confident in teaching and move from teacher-centered to student-centered teaching approaches. To strengthen the nursing and midwifery profession particularly in developing countries, investing in CPD programs for faculty members is paramount.

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## APPENDICES

### Appendix A

#### Letter of Information

**Study Title:** Nurse and Midwifery Educators' Experiences of Translating Teaching Methodology Knowledge into Practice in Rwanda: A qualitative Descriptive study

**Principal Investigator:** Dr. Marilyn Evans (Supervisor)  
Associate Professor  
Arthur Labatt Family School of Nursing  
University of Western Ontario.

**Co-Investigator:** Jean Pierre Ndayisenga (Master student)  
Arthur Labatt Family School of Nursing  
Faculty of Health Sciences  
University of Western Ontario  
E-mail:  
Tel:

**Co-Supervisor:** Dr. Madeleine Mukeshimana  
Senior Lecturer  
School of Nursing and Midwifery  
College of Medicine and Health Sciences  
University of Rwanda

#### 1. Invitation to participate

I am Jean Pierre Ndayisenga, a master's student working under supervision of Dr. Marilyn Evans an Associate Professor in the Arthur Labatt Family School of Nursing at the University of Western Ontario in Canada and Dr. Madeleine Mukeshimana, Senior Lecturer in the School of Nursing and Midwifery at the University of Rwanda. We would like to invite you to participate in this research study evaluating the continuous professional development (CPD) workshop about teaching methodology (TM) organized by the School of Nursing and Midwifery at the University of Rwanda in collaboration with the Training, Support and Access Model for Maternal, Newborn and Child Health in Rwanda (TSAM-MNCH) project in Rwanda. We want to explore the effectiveness of the TM CPD workshop you attended and the impact of the workshop had on your teaching practice. This study is needed to understand how the CPD workshop has impacted pre-service education of nurses and midwives in Rwanda. We anticipate that 10 to 20 educators will participate in this study.

#### 2. Purpose of the Letter

The purpose of this letter is to provide you with information required for you to make an informed decision regarding participation in this research.

#### 3. Purpose of this Study

The purpose of this study is to explore nurse and midwife educators' experience of translating the knowledge and skills acquired from participating in CPD workshops about teaching methodology into their teaching role with nursing and midwifery students in Rwanda.

#### **4. Inclusion Criteria**

Participants meet inclusion criteria if they are nursing and midwifery faculty, if they have attended the teaching methodology CPD workshop organized by the School of Nursing and Midwifery at the University of Rwanda funded by TSAM-MNCH project in RWANDA, and if they work as full-time faculty members at one of the nursing and midwifery teaching institution in Rwanda.

#### **5. Exclusion Criteria**

Individuals who have not participated in teaching methodology CPD workshops, are not employed full time, and will be on leave from work during the period of the study.

#### **6. Study Procedure**

If you agree to participate, you will be asked to participate in a 60-90 minutes individual interview. The interview will be conducted at a place convenient to you such as your working place or other safe location that is convenient to you. To promote the validity of data collected during this interview, audio taping will be mandatory with your permission and the confidence is guaranteed no other person besides the researcher will hear the tape as it will be transcribed by my researcher only. All identifying information will be disguised in the final transcript and the interview tapes will then be destroyed after seven years

#### **7. Possible Risks and Harms**

There are no known or anticipated risks or discomforts associated with participating in this study. The only inconvenience that might result from participating in this study is the time to be interviewed. However, all interviews will be conducted at a mutually agreed upon place and time with the participant.

#### **8. Possible Benefits**

The possible benefits associated with participating in this study include informing CPD module development on teaching methodologies, TSAM-MNCH project in Rwanda, nursing and midwifery schools in Rwanda, nursing education especially in developing countries that will contribute to the strengthening pre-service-education of nurses and midwives. The potential benefit to society is that participants involved in this study will have an opportunity to apply the knowledge from teaching methodology workshop in their teaching practice of nursing and midwifery students. Nursing and midwifery faculty involved in this study can potentially share their knowledge with other faculty and health professionals, so as to support enhancement of others working in pre-service education of health professionals particularly nursing and midwifery educators.

#### **9. Compensation**

You will not be compensated for your participation in this research.

#### **10. Confidentiality**

By participating in this study, confidentiality will be fully protected. Interviews will be electronically recorded and transcribed by the researcher. The information collected will be locked in filing cabinet a secured area, accessible only to the research team member of this study (which include the master's student, the research committee members and the project supervisor). Raw data from the interviews will be securely stored separately from the signed consent forms. Participants' personal identity will not be released or published. Participants' names or personal identifiers will not be in any publications or presentations of this study's results. The list of identifiers will be destroyed after the data collection is completed. All audio recordings will be kept for seven years on western password protected computers.

If you decide to withdraw from this study prior to initiation of the data analysis phase, your data will be removed and destroyed from our database. Information collected in this study will be kept for seven years and destroyed. During the audio-recorded interviews you are allowed to refrain from disclosing information that will identify you or others. Should any identifying information be disclosed during the interviews and it will not be included in the transcript. If you would like to receive a copy of the overall results from this study, please advise the master's student. Representatives of the University of Western Ontario Health Sciences Research Ethics Board may require access to this study-related records to monitor the conduct of this research.

### **11. Voluntary Participation**

Participation in this study is voluntary. Participants may refuse to participate, refuse to answer any questions they do not feel comfortable with or withdraw from the study at any time with no effect on their future or employment. A consent form will be provided for you to sign prior to the interview and you will be given a copy to keep. They do not waive any legal rights by signing the consent form.

If you have any questions or you need more information, verification of the information, you can direct them to the primary researcher (Mr. Jean Pierre Ndayisenga) or one of his supervisors using the contact information mentioned above. If you have any questions about the rights of the research participants or the conduct of the study you may contact the Office of Research Ethics, The university of Western Ontario at Thank  
you for considering the participation in this study.

## Appendix B

### Demographic Questionnaire

Please provide some information about yourself (This information will only be used for this study and will be anonymous). When providing the following information, you may decide to don not answer any questions you do not wish to answer.

Initials: ..... ID Code: .....

1. What is your gender?
  - a. Female
  - b. Male
2. What is your age? ..... years
3. What is your educational background or level of education?
  - a. Diploma
  - b. Bachelor's Degree
  - c. Master's Degree
  - d. Doctorate Degree
4. What is your professional title?
  - a. Registered Nurse (RN)
  - b. Registered Nurse-Midwife (RNM)
  - c. Registered Mental Health Nurse (RMHN)
  - d. Other (Please specify): .....
5. What is your teaching institution?
  - a. Institution: .....
  - b. Department: .....



- c. Courses you are teaching: .....
6. How many years have you worked (your working experience)?
- a. In clinical practice:
- i. Less than 1
  - ii. 2 to 5
  - iii. 6 to 10
  - iv. More than 10
- b. In nursing and midwifery education:
- i. Less than 1
  - ii. 2 to 5
  - iii. 6 to 10
  - iv. More than 10
- c. In your current position:
- i. Less than 1
  - ii. 2 to 5
  - iii. 6 to 10
  - iv. More than 10

## Appendix C

### Semi-Structured Interview Guide for Nurse and Midwife Educators

#### Preamble

Thank you for meeting with me. The purpose of this study is to explore nurse and midwife educators' experience of translating the knowledge and skills acquired from participating in CPD workshops about teaching methodology into their teaching role with nursing and midwifery students in Rwanda. Do you have any questions for me? I will be audio-taping our interview. During the audio-recorded interview, you are asked to refrain from disclosing information that will identify you or others. Should any identify information be disclosed during the interview, it will not be included in the transcript.

#### Questions:

##### Build rapport

Please tell me about: .....

1. The knowledge and skills you gained from attending the teaching methodology CPD workshop about teaching in classroom and clinical practice settings.
2. How you used your new knowledge and skills gained from the teaching methodology CPD workshop in your classroom and clinical teaching practice?  
Probe: using different teaching methodologies in your teaching practice  
Probe: Any challenges and facilitators
3. In what ways you have been able to use the gained knowledge and skills from teaching methodology CPD workshop to enhance the quality of classroom and clinical nursing educations in Rwanda?
4. How do you think using your new knowledge and skills gained from teaching methodology CPD workshop has changed your classroom and clinical teaching practice?
5. In what ways did your participation in the teaching methodology CPD workshop influenced your teaching confidence when teaching nursing and midwifery students at your working institution?
6. What are the facilitators you encountered in your work place to put into practice the knowledge and skills gained from the teaching methodology CPD workshop?
7. What are the barriers you encountered in your work place to put into practice the knowledge and skills gained from the teaching methodology CPD workshop?
8. How has the use of your new knowledge and skills changed the professional relationship you have with other nurse educators, nursing and midwifery students, nurses, and other health care providers at clinical sites?
9. Is there anything else you would like to share about your experience?

**Thank you for your Participation and sharing your experiences**

## Appendix D

### Consent Form

**Study title:** Nurse and Midwifery Educators' Experiences of Translating Teaching Methodology Knowledge into Practice in Rwanda: A qualitative Descriptive study

**Principal Investigator:** Dr. Marilyn Evans, Associate Professor, Arthur Labatt Family School of Nursing, University of Western Ontario. **Co-Investigator:** Jean Pierre Ndayisenga, RNM, BScN, MScN Student, Arthur Labatt Family School of Nursing, Faculty of Health Sciences, Western University

I have read the letter of information, have had the nature of the study explained to me, and I agree to participate in this study. All questions have been fully answered to my satisfaction.

Participant's Name (Print Please): .....

Participant's Signature: .....

Date: Month..... Day..... Year.....

Person obtaining informed consent (please Print): .....

Signature: .....

Date: Month..... Day..... Year.....

## Appendix E

### Email Script for Recruitment

**Study title:** Nurse and Midwifery Educators' Experiences of Translating Teaching Methodology Knowledge into Practice in Rwanda: A qualitative Descriptive study

#### Email Script for Recruitment

Subject Line: Invitation to participate in research

You are receiving this email because you participated in teaching methodology workshop that was offered by the University of Rwanda and the Training, Support, and Access Model (TSAM) for maternal, newborn and child health. Having attended this workshop, you are being invited to participate in a study that I, Dr. Marilyn Evans, Dr. Madeleine Mukeshimana, are conducting about Nurse and midwife Educators' Experiences of Translating Teaching Methodology Knowledge into Practice in Rwanda: A qualitative Descriptive study. The study involves participating in an individual interview approximately one year after the teaching methodology CPD workshop that will be conducted in person. The interview will be only audio taped and the confidence is guaranteed no other person besides the researcher will hear the tape as it will be transcribed by my researcher only. All identifying information will be disguised in the final transcript and the interview tapes will then be destroyed after seven years. The interview will take between 60-90 minutes. The researcher will coordinate the interview to take place on a date and at a time and location that is convenient to you.

If you interested in participating or would like more information about this study please contact the researcher at the contact information given below.

Thank you,

Study Project Member

Arthur Labatt Family School of Nursing

Faculty of Health Sciences

Western University

## Appendix E

### Reminder Email Script for Recruitment

**Study title:** Nurse and Midwifery Educators' Experiences of Translating Teaching Methodology Knowledge into Practice in Rwanda: A qualitative Descriptive study

#### **Reminder Email Script for Recruitment**

Subject Line: Invitation to participate in research

You are being invited to participate in a study that I, Dr. Marilyn Evans, Dr. Madeleine Mukeshimana, are conducting about Nurse and midwife Educators' Experiences of Translating Teaching Methodology Knowledge into Practice in Rwanda: A qualitative Descriptive study. The study involves participating in an individual interview approximately one year after the teaching methodology CPD workshop that will be conducted in person. The interview will be only audio taped and the confidence is guaranteed no other person besides the researcher will hear the tape as it will be transcribed by my researcher only. All identifying information will be disguised in the final transcript and the interview tapes will then be destroyed after seven years. The interview will take between 60-90 minutes. The researcher will coordinate the interview to take place on a date and at a time and location that is convenient to you.

If you would like more information about this study please contact the researcher at the contact information given below. A letter of information about the study is attached to this message.

Thank you,

Study Project Member

Arthur Labatt Family School of Nursing

Faculty of Health Sciences

Western University

## Appendix F

### Ethical Approval from Western University Health Science Research Ethics Board (HSREB)



# Western Research

**Date:** 6 November 2018

**To:** Dr Marilyn Evans

**Project ID:** 111898

**Study Title:** Nurse and Midwifery Educators' Experiences of Translating Teaching Methodology Knowledge into Practice in Rwanda: A Qualitative Descriptive Study

**Application Type:** HSREB Initial Application

**Review Type:** Delegated

**Full Board Reporting Date:** 20 November 2018

**Date Approval Issued:** 06/Nov/2018 08:58

**REB Approval Expiry Date:** 06/Nov/2019

Dear Dr. Marilyn Evans

The Western University Health Science Research Ethics Board (HSREB) has reviewed and approved the above mentioned study as described in the WREM application form, as of the HSREB Initial Approval Date noted above. This research study is to be conducted by the investigator noted above. All other required institutional approvals must also be obtained prior to the conduct of the study.

**Documents Approved:**

Document Name	Document Type	Document Date
Appendix D Email Script for Recruitment-Resubmission Information	Email Script	03/Oct/2018
Appendix E reminder email script	Email Script	03/Oct/2018
Appendix F Telephone Script	Telephone Script	03/Oct/2018
Demographic Questionnaire updated October 29	Other Data Collection Instruments	29/Oct/2018
Interview Guide-2 Clean	Interview Guide	10/Oct/2018
Letter of Information-Resubmission Nov 1	Written Consent/Assent	01/Nov/2018
Thesis Research Proposal Clean copy	Protocol	04/Oct/2018

No deviations from, or changes to, the protocol or WREM application should be initiated without prior written approval of an appropriate amendment from Western HSREB, except when necessary to eliminate immediate hazard(s) to study participants or when the change(s) involves only administrative or logistical aspects of the trial.

REB members involved in the research project do not participate in the review, discussion or decision.

The Western University HSREB operates in compliance with, and is constituted in accordance with, the requirements of the TriCouncil Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2), the International Conference on Harmonisation Good Clinical Practice Consolidated Guideline (ICH GCP), Part C, Division 5 of the Food and Drug Regulations, Part 4 of the Natural Health Products Regulations, Part 3 of the Medical Devices Regulations and the provisions of the Ontario Personal Health Information Protection Act (PHIPA 2004) and its applicable regulations. The HSREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000940.

Please do not hesitate to contact us if you have any questions.

Sincerely,

*Note: This correspondence includes an electronic signature (validation and approval via an online system that is compliant with all regulations).*

## Appendix G

## Ethical Approval from the University of Rwanda Institutional Review Board (IRB)



CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 17<sup>th</sup> /08/2018

NDAYISENGA Jean Pierre  
School of Nursing and Midwifery, CMHS, UR

**Approval Notice: No 298/CMHS IRB/2018**

Your Project Title "*Nurse and Midwifery Educators' Experiences of Translating Teaching Methodology Knowledge into Practice in Rwanda.*" has been evaluated by CMHS Institutional Review Board.

Name of Members	Institute	Involved in the decision		
		Yes	No ( Reason)	
			Absent	Withdrawn from the proceeding
Prof Kato J. Njunwa	UR-CMHS		X	
Prof Jean Bosco Gahutu	UR-CMHS	X		
Dr Brenda Asimwe-Kateera	UR-CMHS	X		
Prof Ntaganira Joseph	UR-CMHS	X		
Dr Tumusiime K. David	UR-CMHS	X		
Dr Kayonga N. Egide	UR-CMHS	X		
Mr Kanyoni Maurice	UR-CMHS	X		
Prof Munyanshongore Cyprien	UR-CMHS	X		
Mrs Ruzindana Landrine	Kicukiro district		X	
Dr Gishoma Darius	UR-CMHS	X		
Dr Donatilla Mukamana	UR-CMHS	X		
Prof Kyamanywa Patrick	UR-CMHS		X	
Prof Condo Umutesi Jeannine	UR-CMHS		X	
Dr Nyirazinyoye Laetitia	UR-CMHS	X		
Dr Nkeramihigo Emmanuel	UR-CMHS		X	
Sr Maliboli Marie Josee	CHUK	X		
Dr Mudenge Charles	Centre Psycho-Social	X		

After reviewing your protocol during the IRB meeting of where quorum was met and revisions made on the advice of the CMHS IRB submitted on 27<sup>th</sup> July 2018, **Approval has been granted to your study.**

Please note that approval of the protocol and consent form is valid for **12 months.**

You are responsible for fulfilling the following requirements:

1. Changes, amendments, and addenda to the protocol or consent form must be submitted to the committee for review and approval, prior to activation of the changes.
2. Only approved consent forms are to be used in the enrolment of participants.
3. All consent forms signed by subjects should be retained on file. The IRB may conduct audits of all study records, and consent documentation may be part of such audits.
4. A continuing review application must be submitted to the IRB in a timely fashion and before expiry of this approval
5. Failure to submit a continuing review application will result in termination of the study
6. Notify the IRB committee once the study is finished

Sincerely,

Date of Approval: The 17<sup>th</sup> August 2018

Expiration date: The 17<sup>th</sup> August 2019

**Chairperson Institutional Review Board,  
College of Medicine and Health Sciences, UR**

**Cc:**

- Principal College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate Studies, UR



## CURRICULUM VITAE

**Name:** Jean Pierre Ndayisenga

**Post-secondary Education and Degrees:** Western University  
London, Ontario, Canada  
2017-Current, Master of Science in Nursing

University of Rwanda/College of Medicine and Health Sciences  
Kigali, Rwanda  
2013-2015, Bachelor of Science (Hons), Nursing (Midwifery)

University of Rwanda/College of Medicine and Health Sciences (Former Kigali Health Institute)  
Kigali, Rwanda  
2009-2012, Advanced Diploma in Midwifery

**Honours and Awards:** Master's Scholarship from The Training Support Access, Model, Maternal, Newborn, and Child Health (TSAM-MNCH) project in Rwanda, 2017-2019  
Kigali Health Institute Best Academic Performance as an Overall Best Graduate Student Award 2012

**Related Work and Professional Experiences** Tutorial Assistant  
University of Rwanda. College of Medicine and Health Sciences  
2015-Now  
Clinical Instructor  
University of Rwanda. College of Medicine and Health Sciences  
2012-2015  
Registered Midwife (RM)  
Butaro District Hospital, Rwanda  
2012  
Registered Midwife  
Kilinda Hospital, Rwanda  
2011-2012  
Teacher of Biology and Chemistry  
Bukure Secondary School, Rwanda  
2008

### **Research Activities, Workshops, and Conferences**

1. Participation in Helping Babies Breathe, Essential Care for Every Baby, and Essential Care for Small Babies Training workshop, Rwanda, 2018
2. Engagement and participation in learning skills presentations offered by Western University Student Development Center at Western University, London, ON, Canada, 2017
3. Participation in all Three sessions of Pedopsychiatry training at University Teaching Hospital of Kigali-Rwanda, 2017-2018
4. Cross Cutting Theme (CCT) Workshop for pre-service faculty members took at Musanze district and provided by Western University, and Training Support, Access Modal, Maternal, Newborn, and Child Health (TSAM-MNCH) in Rwanda in Collaboration with University of Rwanda, 2017
5. Research assistant in the study on postpartum depression at University of Rwanda, School of Nursing and Midwifery, 2016
6. Research assistant in study on maternal mental health project at University of Rwanda, School of Nursing and Midwifery, 2016
7. Participation in Symposium for Critical Care Nursing of Special Populations at the University of Rwanda, 2016
8. Attending International conference on Global Innovation in Nursing and Midwifery Education, Research, and Practice organized by the University of Rwanda, 2015.

9. Oral presentation on Evidence-Based Practices in midwifery in a workshop organized by Rwanda Association of Midwives (RAM) and National Launch of the State of the World's Midwifery 2014 which took place at UMUBANO Hotel, Kigali Rwanda, 2014
10. Attended the second international annual scientific conference organized by Rwanda Society of Obstetricians and Gynecologists (RSOG), Kigali, Rwanda, 2014