AWARENESS AND UTILISATION OF ONLINE COMMUNITIES OF PRACTICE FOR KNOWLEDGE SHARING AMONG PRACTICING MIDWIVES IN KATSINA STATE, NIGERIA

BY

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DECLARATION

I declare that this Dissertation entitled "Awareness and Utilisation of Online Communities of Practice for Knowledge Sharing among Practicing Midwives in Katsina State, Nigeria" has been carried out by me in the Department of Library and Information Science. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this work was previously presented for the award of another degree or Diploma at this or any other institution.

…………………………………… ……………………

Mustapha Mannir Date

CERTIFICATION

This Dissertation entitled "Awareness and Utilisation of Online Communities of Practice for Knowledge Sharing among Practicing Midwives in Katsina State, Nigeria" by Mustapha Mannir meets the regulations governing the award of Master's Degree in Information Science of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This Dissertation is dedicated to my encouraging Parents (Professor Munir Mamman Darma and Hajiya Umma Mannir) and inspiring Supervisors (Professor Zakari Mohammed and Dr. Umar Babangida Dangani).

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ABSTRACT

This study investigated the Awareness and Utilisation of Online Communities of Practice for knowledge sharing among Practicing Midwives in Katsina State. In order to achieve this objective, five (5) research questions and three (3) null hypotheses were formulated. A cross sectional survey design was employed to conduct the study. The population of the study comprised of all the hospitals under Katsina State Health Service Management Board. Out of the twenty (20) hospitals, eight (8) hospitals were selected using stratified sampling procedure. An open and close-ended questionnaire was administered to 180 Midwives in the hospitals selected with a total of 113 (62.7%) copies returned. The data collected for the study were presented and analyzed using both descriptive statistics and inferential statistics. It was discovered that, majority of the Midwives in Katsina State hospitals are aware of the existence of Katsina nurses forum (Facebook) and it is being utilize for knowledge sharing, whereas all the Midwives in Katsina State are not aware of the existence of Global Online Communities of Practice for knowledge sharing due to lack of awareness, lack of trust, Workplace acceptance and support, Lack of internet access, Lack of active participation of members, Lack of time, and slow internet speed. It was found that, networking with peers, user friendly and multi media oriented, and professional development were the reasons for utilisation of Online Communities of Practice for knowledge sharing. The study recommends the design of awareness campaign programs, formulation of policies that support the use of Online Communities of Practice for knowledge sharing, use of consultancy services to mount training, and creation of local platforms using social networking sites across all the Hospitals to sensitize, motivate, and encourage the Midwives in Katsina State Hospitals to embrace the use of both local and global Online Communities of Practice for knowledge sharing.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

A successful online collaborative knowledge sharing among geographically dispersed professionals depend upon the level of awareness and utilisation of various online technologies use for knowledge sharing. The need to improve standardization and spread of best practices among practitioners brought about knowledge sharing within and outside organization. Knowledge sharing is the flow of knowledge from someone who has it to someone who wants it. Lee (2001) defined Knowledge sharing as "activities of transferring or disseminating knowledge from one person, group or organization to another". In other words, knowledge sharing is the process of exchanging and communicating knowledge between employees in an organization.

Knowledge sharing can be created in many forms such as: “a story describing a similar experience whereby a method or technique was developed or used to solve a problem. If unable to provide a solution directly, knowledge may be shared in relation to contacting someone who might know and be willing and able to help”.

Today, there is no doubt that one of the biggest and strategic assets of an organization affecting its success and competitive advantage is its knowledge and Knowledge sharing activities. However, what knowledge actually means is still widely debated. A definition provided by Davenport and Prusak (2000) is currently more commonly adopted in the literature: "fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information". Knowledge can be defined as human expertise, which is found in peoples mind and gained through experience, interaction and the like. Knowledge can be used for learning new things, creating core competences, solving problems, and initiating new situations for individuals and organizations (Kumaresan & Liberona 2013). Organizations that need to grow, compete, and function in an ever evolving environment, naturally must consider how to exchange and communicate knowledge between employees within and outside the organization, this is because knowledge sharing offers the benefits of building on past experience and knowledge, responding more quickly and efficiently to problems, developing new ideas and insights, avoiding reinventing the wheel or repeating past mistakes.

Knowledge sharing may deliver a strong benefit by way of increasing efficient operations, better decision making, improved project delivery and services, improved ways of working and minimization of unnecessary duplication, improved client/customer service, speed and effectiveness at which key organizational issues are addressed, also improved the identification and dissemination of best practices, enhanced organizational development and the creation of new opportunities, inspired creativity and innovation, and enhanced employees' retention rates.

Exchanging and communicating of knowledge between employees within organization is referred to as intra knowledge sharing, while knowledge shared or accessed outside organization is referred to as inter knowledge sharing. Seleamat and Choudrie (2004) revealed that, inter knowledge sharing is an important factor in improving the quality of work, efficiency of decision making, productivity, competitiveness, customer service, production of goods, accuracy of task performance, and achieving major savings in time for individuals and organizations. Unlike other organizational assets, knowledge tends to increase when used or shared: "ideas bread new ideas and shared knowledge stays with the giver while it enriches the receiver" (Devenport and Prusak 1998).

Healthcare Knowledge Sharing

It has been argued that capturing and sharing of knowledge within and outside organization, is a top priorities for most organisations today (Quintas 2002). This is even more important in healthcare organisations than in other organisations as patient care is very complex and challenging. Knowledge sharing among healthcare professionals is considered to be critical for improving the quality of patient care; it may involve sharing of clinical experiences, skills, know-how known to have significant impact on the quality of medical diagnosis and decisions.

Lin and Hsieh (2006) are of the view that, delivering safe and high quality services to patients is highly dependent on sharing the following types of knowledge, i.e. medical knowledge, scientific knowledge, incident knowledge, and experience knowledge. Medical knowledge is defined as the required information for diagnosis and treatment (Aron, Dutta, Janakiraman, & Pathak, 2011**).** Scientific knowledge is about applying research findings in practice. Incident knowledge refers to learning from medical errors. However, experience knowledge refers to experienced healthcare providers educate less experienced practitioners about the best practice procedures. Failure to share the above mentioned types of knowledge can impact on patient safety (Lin and Hsieh, 2006). Thus, all these types of knowledge require special attention, in order to create an environment to improve the quality of healthcare services. One of the mechanisms to support knowledge sharing among professional practitioners is through Communities of Practice platform.

Communities of Practice

The notion of Communities of Practice as a milieu for knowledge sharing has gain significant ground in recent years particularly in the cooperate world (Hung, Huang, Lin, and Tsai 2005; Wenger and Synder 2000). Lave and Wenger (1991) have defined Communities of Practice as a group of people who come together to share common interests and goals, with the aim of sharing information, developing knowledge and developing themselves both personally and professionally. Other definitions of community of practice are: “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, & Snyder 2002), and “a group of people informally bound together by shared expertise and passion for a joint enterprise” (Wenger and Snyder 2000). Quintas and Ray (2002) paraphrase Wenger (1998) by describing Communities of Practice as an informal social network in which individuals engage with each other to share applied knowledge and experience. This relationship is facilitated by a shared repertoire of concepts, actions, tools, stories, artifacts and discourse. Lesser & Storck, (2001) defined Communities of Practice as a group whose members regularly engage in sharing and learning, based on their common interests. It is clear from these descriptions that when referring to Communities of Practice the recurring terms and emphasis is on the informal nature of the relationship, and on the sharing of applied knowledge / experience. These 'communities of practice', as they are often called, play a critical role: they are the major building blocks in creating, sharing, and applying organisational knowledge.

Wenger et al. (2002) identified three essential characteristics of Communities of practice: domain, community, and practice. The 'domain' creates common ground (i.e. the minimal competence that differentiates members from non-members), and outlines the boundaries that enable members to decide what is worth sharing and how to present their ideas. The ‘community’ creates the social structure that facilitates learning through interactions and relationships with others. The 'practice' is the specific knowledge that the community shares, develops, and maintains.

Communities of Practice was initially considered to be predominantly a situated learning or co-located learning that involve face to face exchange of knowledge. However, due to geographical distance, dispersion, and time differences of professional practitioners, the traditional Communities of Practice sharing of knowledge on regular basis can be costly, time consuming and more difficult. However, the spread of technology and globalization has resulted in the emergence and development of different Online Communities of Practice. The Internet as an agile, flexible and low cost communication means was the propulsion factor for the adoption, in large scale of Online Communities of Practice. An Online Communities of Practice is a network of individuals who share a domain of interest about which they communicate online. The practitioners share resources, experiences, problems, solutions, tools, methodologies. Such communication results in the improvement of the knowledge of each participant in the community and contributes to the development of the knowledge within the domain. Online Communities of Practice facilitates the sharing of experience by enabling people with common interests and objectives to engage in discussion, debate, and reflection through the web. An important Online Communities of Practice characteristic is asynchronous communication, i.e., it is not limited to having all parts interacting at the same time. With this, using the Internet, a disperse group of professionals can talk asynchronously according to their convenience (Cesar, Bulterman, Guimaraes, & Kegal 2010). Online communities of practices are organized using online forums, mailing list, social media, and website/web portals such as:

Facebook

- Katsina Midwives Forum (https://wv\"w.facebook.com/KatsinaNurscsForum),
- World Midwives Community (https://www.facebook.com/WorldMidwives).

Twitter

- National Association of Nigeria Nurses and Midwives (https://twitter.com/nannm1)

LinkedIn

- Nursing & Midwifery Council (https://www.linkedin.com/company/the-nursing-and-midwifery-council).

YouTube

- International Confederation of Midwives (https://www.youtube.com/user/worldIVlidwives/feed')

Web portals

- The Global Alliance for Nurses and Midwifery (GANM) (https://knowledge-gateway.org/ganm)

- Postpartum Family Planning Communities of Practice (https://knowledge-gateway.org/ppfp)
- Family Planning and Immunization Integration (https://knowledge-gateway.org/fpimmunization)
- RH Global (https://knowledge-gateway.org/global)
- Urban Reproductive Health (https://knowledge-gateway.org/urbanrh)
- Elimination of Mother-to-Child Transmission of HIV (https://knowledge gate way. org/emtct)
- The Maternal, Infant and Young Child Nutrition and Family Planning Communities of Practice (https://knowledge-gateway.org/miycnfp)

The Online Communities of Practice provide Midwives around the world access to the relevant information they need, at the time they need it, and in a venue in which they can immediately share local and international experience in order to improve reproductive health programs.

However, the creation of Online Communities of Practice may not guarantee that knowledge sharing will actually take place. The success of any Online Communities of Practice depends primarily on whether the users are willing to adopt and make a proper use of the platform (Gu and Jarvenpaa 2003). It is believed that Online Communities of Practice may not generate value itself. For it to achieve the expected potentials, its users are required to adequately and properly utilize it in the intended way.

In developing countries like Nigeria, knowledge sharing is predominantly through traditional Communities of Practice where the participants of traditional Communities of Practice meet face to face to discuss and share knowledge. This is unlike developed countries where the use of Online Communities of Practice for knowledge sharing is increasingly popular and most preferred tool for knowledge sharing among Midwives (Romano, Gesualdo, Pandolfi, Tozzi, & Ugazio 2012; Severin, Kurosinksi, Verbraeken, Simonds, & Palange 2012). A survey on Physicians who use social media and other internet-based communication technologies shows that more than 70% of the United State Midwives use it to obtain and share relevant knowledge with peers in order to minimize professional isolation, and bridge knowledge gaps that exist between them (Cooper, Gelb, & Rim,2012).

1.2 Statement of the Problem

Knowledge sharing among healthcare professionals is considered to be critical for improving the quality of patient care, such as the sharing of scientific knowledge, incident knowledge, and experience knowledge, is known to have a significant impact on the quality of medical diagnosis and decisions making. The absence of knowledge sharing in our hospitals can lead to professional isolation and what is called "Knowledge to Practice gap". The gap that exists between what is already known and what is actually done in practice (Lin and Hsieh, 2006; W.H.O., 2005). The knowledge to practice gap, is an important cause for the occurrence and reoccurrence of various medical errors such as missing-diagnosis, wrong treatment, and unexpended deaths. Bridging the knowledge to practice gap is achieved through sharing of relevant knowledge and scientific evidence based practices on regular basis (Richey & O' Brien, 2011, W.H.O. 2005).

However, traditional or face to face methods of knowledge sharing on regular basis (such as seminars and workshops) can be costly, time consuming and more difficult due to geographical dispersions of professionals. Thus, proper and adequate use of Online

Communities of Practice is a viable alternative to live conversation, spread of best practices on regular basis, irrespective of different geographical locations and time differences. Online Communities of Practice offer a unique low-cost way to work towards closing knowledge to practice gap by making latest scientific evidence based practice available to reproductive health professionals and provide other supports that would otherwise be unavailable to healthcare professionals. Several researches show that Midwives in developed countries use Online Communities of Practice to minimize professional isolation, and bridge the knowledge to practice gaps that exist between them (Antheunis et al. 2013; Cooper, et al. 2012; Lulic and Kovic 2012; McGowan, Wasko, & Vartabedian, 2012). Similarly, the use of Smartphone and tablets for online Communities of Practice has increase significantly among Midwives around the world (Antheunis, Tates, & Nieboer 2013; Lulic and Kovic 2012).

Despite the potentials of Online Communities of Practice, a preliminary investigation of five public rural hospitals in Katsina State conducted by the researcher showed that, the available platforms for Midwives in Katsina State Hospitals to share knowledge were traditional or face to face methods (such as seminars and workshops), which is not on regular basis, time consuming, high cost, and more difficult due to geographical dispersions of professionals, which gives room for high level of professional isolation and knowledge to practice gap among the Midwives, the result of which can be seen in high occurrences of missing diagnosis, wrong treatment, and unexpected deaths of women during birth. The consequences of the professional isolation and knowledge to practice gaps are evidence in unacceptable high level of maternal mortality rate of 1,000/100,000 live births in Katsina state, and a shortfall in achieving the 5th Millennium

Development Goals (W.H.O. 2005; Katsina State Ministry of Health, 2010). This brought the question that; could the above mentioned matter be attributed to low awareness and usage of Online Communities of Practice for knowledge sharing among practicing Midwives in Katsina state? In light of the foregoing, there is the need to investigate the extent of the awareness and utilisation of Online Communities of Practice for knowledge sharing among practicing Midwives in Katsina State Hospitals.

1.3 Research Questions

The research seeks to find answers to the following research questions:

1) What types of Online Communities of Practice are available for knowledge sharing among Midwives in Katsina State Hospitals?
2) To what extent do Midwives are aware of Online Communities of Practice for knowledge sharing in the Hospitals under study?
3) To what extent do Midwives utilise Online Communities of Practice for knowledge sharing in the Hospitals under study?
4) What are the reasons for using Online Communities of Practice for knowledge sharing by the Midwives in the Hospitals under study?
5) What are the challenges associated with the utilisation of Online Communities of Practice for knowledge sharing by Midwives in the Hospitals under study?

1.4 Objectives of the Study

The research was designed to achieve the following objectives:

1) To find out the types of Online Communities of Practice available for knowledge sharing among Midwives in Katsina State Hospitals.

2) To ascertain the extent Midwives in Katsina State Hospitals are aware of Online Communities of Practice for knowledge sharing.

3) To ascertain the extent Midwives in Katsina State Hospitals utilise Online Communities of Practice for knowledge sharing among them.

4) To find out the reasons Midwives in Katsina State Hospitals utilise Online Communities of Practice for knowledge sharing.

5) To reveal the challenges to utilisation of Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals.

1.5 Hypotheses

The research sought to answer the following null hypotheses:

Ho1. There is no significant difference among Midwives in Katsina State Hospitals in their level of awareness of Online Communities of Practice for knowledge sharing.

Ho2. There is no significant difference among Midwives in Katsina State Hospitals in their level of utlisation of Online Communities of Practice for knowledge sharing.

Ho3. The challenges to Online Communities of Practice utilisation for knowledge sharing have no significant effect on the level of utilisation among Midwives in Katsina State Hospitals.

1.6 Significance of the Study

The focus of this study was to determine the level of awareness and utilisation of Online Communities of Practice for knowledge sharing among Midwives in Katsina state Hospitals. The expected outcomes of the study will help in creating wider awareness of the various Online Communities of Practice and the benefits of utilising it for knowledge sharing and professional development among Midwives in Katsina State, and it will also help in creating awareness among information professionals.

The findings of the study will help in providing information that will assist Katsina State Health Service Management Board and the Federal Republic of Nigeria to identify the extent at which Online Communities of Practice are being utilized among Midwives for knowledge sharing and the challenges of their utilisation, so as to provide alternative platform as well as provide suitable measures, strategies, and infrastructure to improve the adoption and utilisation of online communities of practices platforms for standardization and adoption of best practices among Midwives in Katsina State and elsewhere in the country and beyond. Similarly, it would contribute to the existing body of knowledge.

1.7 Scope of the Study

The study covered only two categories of Midwives i.e. Nurse-Mid wives and Midwives in the General and Maternity Hospitals under Katsina State Health Service Management Board. The exclusion of the Midwives from the Federal and Local Government Area Hospitals in Katsina State was based on time and resource constraints to cover such Midwives scattered in different geographical locations in the state.

1.9 Operational Definition of Terms

The following are the operational definition of the key terms used within the context of this study:

Availability: awareness or knowledge about the existence of a technology that is accessible or obtainable.

Awareness: knowledge about the existence and capabilities of a technology, its features, and benefits.

Communities of Practice: is a platform or network of professional practitioners who share a domain, concern or a passion and interact on regular basis to share skills, experiences, problems, and solutions in order to improve the knowledge of each participant and the overall discipline.

Hospitals: is a place or health care institution providing patient treatment with specialized medical and nursing staff and medical equipment.

Knowledge Sharing: is an activity through which knowledge (namely, skills or expertise) is exchanged among professionals, people, friends, families, communities, or organizations.

Midwives: Are health practitioners educated in midwifery only. They provide primary care to women and their babies during pregnancy, labor, birth, and the postpartum period (care after birth).

Nurse-Midwives: are healthcare practitioners educated in the two disciplines of nursing and midwifery. They provide primary healthcare to women of childbearing age including: prenatal care, labor and delivery care, care after birth, gynecological exams, newborn care, assistance with family planning decisions, preconception care, menopausal management and counseling in health maintenance and disease prevention.

Online Communities of Practice: is a Communities of Practice that is developed on, and is maintained using the Internet.

Utilisation: To make use of something especially in practical form or for practical purpose and benefit.

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

The objective of this chapter is to review literatures that are relevant to the study. The literatures reviewed were organized under the following subheadings: The concept of knowledge: the concept of knowledge sharing; the significance of knowledge sharing; the concept of Communities of Practice; Online Communities of Practice. The chapter also addresses the following areas based on the research objectives: reasons for adoption and utilisation of online Communities of Practice for knowledge sharing; awareness and utilisation of Online Communities of Practice for knowledge sharing; the challenges to utilisation of Online Communities of Practice for knowledge sharing; and the summary of the study.

2.2 Concept of Knowledge

The term "knowledge" seems to be used by people frequently, what knowledge means is still widely debated. The definition provided by Davenport and Prusak (1998) is commonly adopted in literature: "a fluid mixture of condensed experience, values, context information and experimental insight that offers a structure for evaluation and incorporation of new experiences and information. According Nonaka & Takeuchi (1995), knowledge is dynamic and it can be said to be "just" information but when it is put into context the information becomes knowledge. Information becomes knowledge when humans interpret and use it. Davenport and Prusak (1998) defined knowledge as a high-value form of information that is ready to apply to decisions and actions.

Generally, there are two types of knowledge found in organizations and between individuals: explicit and tacit knowledge. Explicit knowledge is a formal, written down and documented knowledge, while tacit knowledge is informal knowledge that resides in individual's mind in forms of mental modes, personal experience, know-how, and insight (Mason, McAdam, & McCrory 2007; Nonaka & Takeuchi, 1995; Smith, 2001).

2.3 Knowledge Sharing

Ronald (2010) described knowledge sharing as the process by which individuals communicate their knowledge unconsciously or deliberately to other individuals. Knowledge sharing presumes a relation between at least two parties, one that possesses knowledge and the other that acquires knowledge. The first party should communicate its knowledge (Hendriks, 1999). Also Hansen & Haas (2005) stressed that knowledge sharing can be understood as the behavior by which an individual voluntarily provides other social actors, both within and outside an organization, with access to his or her unique knowledge and experiences. Knowledge sharing refers to the provision of information and know-how to help others and to collaborate with others to solve problems, develop new ideas, or implement policies or procedures (Wang & Noe, 2010).

Davenport and Prusak (1998) describe knowledge sharing as transactions that take place at knowledge markets. These markets have buyers and sellers of knowledge and the transactions are beneficial to both. Knowledge buyers are people who bring their problems to the market to buy solutions, "insights, judgments and understanding" (Davenport and Prusak, 1998). Knowledge sellers are experts in the field who are reputable, therefore the buyers trust the knowledge sellers, seeing that the knowledge markets would not work without trust. Knowledge brokers play an essential role in the knowledge market by facilitating the transactions (Davenport and Prusak, 1998).

Knowledge sharing takes place within and outside organizational settings. In term of definition, Hutchinson and Quintas (2008) defined intra knowledge sharing as the process or activities of exchanging and communicating valuable knowledge between employees within organizational settings. Taminiau, Smit, and DeLange (2007) define intra knowledge sharing as all the forms of knowledge sharing that are institutionalized by management. Intra knowledge sharing provides individuals with a structured environment in which to share knowledge.

Although intra knowledge sharing play an important role in facilitating knowledge sharing, Dori, (2000) states that, however, there's a growing recognition that valuable learning often takes place through inter knowledge sharing, which allows professionals to cross organizational boundaries, and incooperate different set of expertise, perspectives, and problem solving capabilities in to their work practices. Inter knowledge sharing is the communication outside the formal organizational structure (Jewels, Underwood & DePablos, 2008).

2.3.1 The Significance of Knowledge Sharing

A number of studies demonstrate that knowledge sharing has provided many advantages, from helping the organisation to maintain its sustainable competitive advantage to enhancing organisational performance (Reid, 2003). Previous research also suggests that knowledge sharing can reduce the loss of intellectual capital due to people leaving the organisation, reduce costs by decreasing and achieving economics of scale in obtaining information from external providers, reduce the redundancy of knowledge-based activities, increase productivity by making knowledge available more quickly and easily and increase employee satisfaction by enabling greater personal development and empowerment (Hussain, 2004).

Knowledge sharing may deliver a strong benefit by way of increasing efficient operations, better decision making, improved project delivery and services, improved ways of working and minimization of unnecessary duplication, improved client/customer service, speed and effectiveness at which key organizational issues are addressed, improved the identification and dissemination of best practices, enhanced organizational development and the creation of new opportunities, inspired creativity and innovation, and enhanced employees' retention rates (Ngah and Jusoff, 2009).

Cohen and Levinthal (1990) suggest that knowledge sharing is a critical factor in an organisation's ability to respond quickly to change, innovate and achieve competitive success. A growing body of empirical evidence indicates that organisations that are able to share knowledge effectively from one unit to another are more productive and more likely to survive than organisations that are less adept at sharing knowledge (Argote and Ingram, 2000).

Given its importance, the notion of knowledge sharing has been extensively discussed in a broad range of literature, and it has shown that if an organisation implement knowledge sharing strategies effectively, it is certain to enhance organisation performance (Ngah and Jusoff, 2009; Hsu, 2008; Giannetto and Wheeler, 2000).

2.3.2 Knowledge Sharing Techniques/Tools

According to Kalling and Styhere (2003) sharing knowledge and experience can be executed in different ways that is best suited for the organization and the members of it. One important aspect that needs to be considered is the interaction between the members of the organization when the knowledge is shared. According to Ronald, (2010) knowledge sharing can be conducted through the following techniques: After Action Reviews, Peer assists, Storytelling, Mentoring, Forums, meetings, Workshops, training, seminars, Knowledge fairs, and Communities of practice. This research is based on Communities of Practice as a platform for knowledge sharing.

Peer assist: is a method of cooperation, based on dialogue and mutual respect among peers. Peer Assist involves a meeting organized by a work team who are starting up a new project (the hosts).The hosts call on another group who already have experience with a similar project. They introduce the background and data of their project and their capabilities. They then express their specific needs. Once the situation is explained, both teams work together to identify possible solutions to the problem.

After Action Review (AAR): AAR's main purpose is learning by talking and thinking about a completed activity or project. Its goal is simply to state lessons learned, rather than to solve problems or criticize.

Storytelling: People have told stories for thousands of years. Even today, stories are part of our daily lives. Stories have recently been rediscovered as a way to transfer knowledge. Stories allow us to describe employee relations or activities in a formal or informal way. The aim is to transmit tacit knowledge that an organization can use. Stories are a simple and accessible way to communicate complex ideas, key messages and lessons learned. Telling stories out loud engages people's minds, imaginations and emotions. This makes storytelling much more accessible than theory, and a very powerful way to transfer knowledge. But we must recognize the importance of analytical thought. We must use stories to complement other tools.

Mentoring: Is a learning relationship between two employees. Mentors are experienced employees who share their knowledge, experience and ideas with less experienced employees, or associates. Associates are people who have shown what they can do. Associates really want to acquire new knowledge and skills. Mentoring is not specific to a position. A mentor is not the employee’s manager. Mentoring occurs outside any formal employer employee relationship. Mentoring looks to the future. Its aim is career development. Its aim is to give associates the general management and/or leadership skills that will prepare them to meet the demands, roles and responsibilities that lie ahead. Mentoring is based on mutual commitment, respect and trust.

Forums and meetings: Small meetings, discussion groups and large forums can all serve as opportunities for sharing knowledge and learning. But, for this to happen, they have to be organized with learning in mind. The process of the meeting, discussion or forum has to be well planned in advance. By forums and meetings, we are referring to everything from a large conference or congress, to round-table discussions that happen on their own or inside a larger conference, to armchair presentations or panel presentations, and any type of staff or regular meeting that brings people together. Meetings and forums can be useful learning and knowledge sharing opportunities when:

- They are planned to be interactive. Presenters must not only allow for questions from participants. They must also plan exercises that permit participants to work in small groups. This work must be fed into the larger discussion.

- The process of the meeting is carefully set out. It must be clear to all. Everyone must be included.
- The forum or meeting's objectives are clear to all and agreed by all.
- Both outspoken and quiet participants have the opportunity to contribute.
- The formal presentations are clear and to the point. They stick to the time limit allocated (usually not more than 20 minutes per presenter and not more than 40 minutes of presentations overall).
- The chair or manager of the process is clearly identified, has a plan and sticks to it.

Workshops, Training and Seminars: In traditional courses, people listen to the presenter without interrupting. More and more, this approach is giving way to a much more dynamic and stimulating group learning process. This may involve a workshop, training session or seminar. The trend in learning activities is now for people to interact with their peers. People share what they know. People discuss things. People benefit from each other's views and experiences. A presenter no longer leads these meetings. A facilitator does. The facilitator's mandate is to guide the various activities and discussions throughout the event. Several knowledge-sharing methods can be used in a seminar, training session or workshop. These methods can be tailored to your needs.

Knowledge Fairs: Got a lot of information to share with a whole lot of people? Think an interactive presentation would be the ideal way to share your knowledge of a specific subject? Then it may be useful to organize knowledge fair. Knowledge fair is designed to present information on a chosen theme. You can use several technical means to present your information to the target group. They include showcases, panels, scale models and kiosks. You can also have all kinds of demonstrations and presenters.

2.4 The Concept of Communities of Practice

Defining community of practice is not an easy task. Many academics and practitioners have addressed this issue, defining the concept in different ways. Although the term has been coined in recent years, the phenomenon is not new but refers to an age-old idea. According to Jean Lave, a cognitive anthropologist, and Etienne Wenger, an educational theorist and computer scientist, Communities of Practice have existed for as long as people have been learning and sharing their experiences through storytelling. In more recent times; more generally, as Lave and Wenger (1991) assumed, communities of practice have always and still do exist everywhere in every aspect of human life. "We all belong to a number of them at work, at school, at home, in our hobbies.

Lave and Wenger (1991) have defined the Communities of Practice as a group of people who come together to share common interests and goals, with the aim of sharing information, developing knowledge and developing themselves both personally and professionally. Other definitions of community of practice are: "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger et al.2002), and "a group of people informally bound together by shared expertise and passion for a joint enterprise" (Wenger and Snyder 2000). People join communities for several reasons, such as education, professional issues, and hobbies. Within such a community, people share their experience and tacit knowledge in free flow, improving their abilities and skills, and fostering learning. Communities of Practice members explore ideas, discuss situations and needs, and help each other solve problems, although they do not meet every day. Each person has their own experience; Communities of Practice simply allows them to share such experience with other members when they meet. Community members develop common sets of codes and language, share norms and values, carry out critical reflection, and engage in dialog with each other at a professional level, generating an environment characterized by high levels of trust, shared behavioral norms, and mutual respect and reciprocity (Sharratt and Usoro 2003). This environment has been directly linked to knowledge sharing processes.

Although Lave and Wenger (1991) are recognized as the pioneers of Communities of Practice research, the phenomenon was simultaneously investigated by Brown and Duguid (1991). Indeed, the term “community of practice” was first mentioned by Lave and Wenger (1991) in their book on situated learning, but the idea has existed since Homo sapiens evolved 50,000 years ago and the phenomenon has been investigated with reference to research on the relationship between knowledge and work practice.

Having defined the concept of Communities of Practice and reviewed its different forms, it is right to look inside the Communities of Practice in order to understand certain clearly identified characteristics such as the domain, the community and the practice (Wenger et al. 2002). These three fundamental elements are useful to distinguish communities of practice (as previously defined) from communities (in the broadest sense). As Wenger (2011) states, not all communities are communities of practice. Indeed, a community, in the sense of a group of people who share a concern or passion for something, is a necessary but element for constituting a Communities of Practice, but not the only one. Besides the community of people, the domain of knowledge and shared practice are crucial too. Based on the work of Wenger et al. (2002), these three elements are discussed next.

Domain: What is the domain of a Communities of Practice? In 1998, Wenger relied on three characteristics, i.e. mutual engagement, shared repertoire and joint enterprise, together known as the community domain, to identify a Communities of Practice. In this regard, he defines a Communities of Practice as a group of people who communicate with each other (mutual engagement) and develop ways and resources (shared repertoire) for reaching a common goal (joint enterprise). Later, Wenger et al. (2002) revised these three characteristics and named them "domain," "community" and "practice." According to her, a domain is the area of knowledge that brings the community together and defines a set of issues that members need to address. Within communities, the domain guides the questions, so stimulating members to present their ideas for introducing or contributing to a discussion. It also facilitates the learning process among people. In this regard, the domain creates "the common ground (i.e., the minimal competence that differentiates members from non-members) and outlines the boundaries that enable members to decide what are worth sharing and how to present their ideas". As well as defining common ground, the domain also defines a sense of common identity. As Wenger (2002) suggested, within Communities of Practices, identity is not defined by a task, as it would be within a team, but by an area of knowledge that needs to be explored and developed.

Community: While the domain creates the common ground of a Communities of Practice, the community refers to the social structures that encourage learning through interaction and relationships among members. As Wenger et al. (2002) suggest, community is a crucial element for an effective knowledge structure. Besides knowledge sharing and practice, a community is composed of people who interact and build interpersonal relationships on issues important to their domain.

Interpersonal relationships are the foundation upon which the community evolves. A community is a place in which people help each other augment their knowledge about a specific practice. Social relationships, especially if kept up regularly, enable discussion and debate among community members on issues within a domain, fostering ideas and developing a sense of belonging and commitment. The social dimension, thus, is a necessary but not sufficient condition to build a Communities of Practice. To build a Communities of Practice, as Wenger et al. (2002) assume, the interactions among members must have some continuity. For example, people who meet sporadically to discuss a particular topic do not constitute a Communities of Practice. To build a community the interactions must be regular, so enabling members to develop a shared understanding of their domain and an approach to their practice (Wenger 1998; Wenger et al. 2002).

Practice: Finally, another crucial element for constituting a Communities of Practice is the practice itself. According to Wenger et al. (2002), the practice is a set of shared repertoires of resources that include experiences, stories, tools, and ways of addressing recurring problems. Rather than a community of interest, members of a Communities of Practice are practitioners, and thus develop a shared repertoire of resources. For this reason, the practice is nothing more than the specific knowledge owned, developed and shared by members within a Communities of Practice.

Conclusively, in this research work a Communities of Practice is defined as a group of professionals who come together to share experiences aimed at improving their skills by working alongside more experienced members and being involved in increasingly complicated tasks. The community is a locus that enables a newcomer to learn by engaging in simple tasks, assisted by comparatively or highly experienced people (the latter being commonly known as old-timers). Initially, newcomers become acquainted with the tasks, norms, values and principles of the community and then gradually increase their participation and involvement in community life. Authors have referred to the journey from being a newcomer to becoming an expert.

2.5 Online Communities of Practice/Virtual Communities of Practice

Communities of Practice were initially considered a situated learning *or* co-located learning (Wasko and Faraj 2005). However, the spread of technology and globalization has resulted in the emergence of online communities of practice. People now participate in online communities to share their expertise, experiences and knowledge (McDermott, 1999, cited in Mitchell & Young, 2002).

The Internet, as an agile, flexible and low cost communication mean, was the propulsion factor for the adoption, in large scale, of online communities of practice. An online Communities of Practice is a network of individuals who share a domain of interest about which they communicate online. The practitioners share resources (for example experiences, problems and solutions, tools, methodologies). Such communication results in the improvement of the knowledge of each participant in the community and contributes to the development of the knowledge within the domain (Bos, Zimmerman, and Olson 2007). In another words, online Communities of Practice can be seen as an environment where group of people with common interests discuss and exchanges their knowledge on a given domain through an on-line network, such as the Internet.

Furthermore, the members tend to be physically distant, geographically in different locations (Murillo 2008; Rogers 2000; Thomas 2005). Online communities of practices are organized using online forums, mailing list, web 2.0, social media and website/web portals.

Forums: Online discussion forums, also known as message boards, internet forums, and bulletin boards are web-based applications that support ongoing discussions. Discussion (forums are usually focused on particular topic areas, and led by forum moderators whose role is to keep discussions on topic and to censor abusive behavior.

Email Listservs/Mailing list: Email listservs, also known as electronic mailing lists, is a virtual email group of people gathered together through subscribing to one email address. Once a message sent by any of the participants to the common email, it is being forwarded automatically to the whole group subscribed. Mailing lists are mainly used as a mass information or networking tool.

Social media: The definition of "social media" is broad and constantly evolving. The term generally refers to Internet-based tools that allow individuals and communities to gather and communicate; to share information, ideas, personal messages, images, and other content; and, in some cases, to collaborate with other users in real time. Social media are also referred to as "Web 2.0" or "social networking." such as:

Facebook

- Katsina Nurses Forum (https://www.facebook.com/KatsinaNursesForum)
- World Midwives Community (https://www.facebook.com/WorldMidwives)
- Midwifery Today (https://www.facebook.com/MidwiferyToday)

- National Association of Nigeria Nurses and Midwives
  (https://www.facebook.com/NursinRAndMidwiferyCouncilNigeria);
- International Confederation of Midwives
  (https://www.facebook.com/InternationalConfederationofMidwives)

Twitter

- National Association of Nigeria Nurses and Midwives
  (https://twitter.com/nannm 1)
- International Confederation of Midwives
  (https://twitter.com/internationalconfederationofMidwives)

LinkedIn

- Nursing & Midwifery Council

(https://www.linkedin.com/coinpany/the-nursing-and-midwifery-council)

- International Confederation of Midwives

(https://www.linkedin.com/company/international-confederation-of-Midwives-icm-)

YouTube

- International Confederation of Midwives
  (https://www.youtube.com/user/worldMidwives/feed)

Website/web portal: portal is a term, generally synonymous with gateway. Web-enabled portals are gateways to information and other resources available from various sources and sites on the Internet or intranets, extranets or other internally stored databases and systems, such as. the Implementing Best Practice (IBP) Knowledge Gateway (https://knowledge-gatcway.org/) developed by W.H.O. and partner agencies to provide reproductive health professionals around the world access to several Online Communities of Practice such as:

- The Global Alliance for Nurses and Midwifery (GANM) (https://knowledge-gateway.org/ganm)
- Postpartum Family Planning Communities of Practice (https://knowledge-gatewav.org/ppfp)
- Family Planning and Immunization Integration (https://knowledge-gateway.org/fpimmunization)
- RH Global (https://knowledge-gateway.org/global)
- Urban Reproductive Health (https://knowledge-gateway.org/urbanrh)
- Elimination of Mother-to-Child Transmission of HIV (https://knowledge-gateway.org/emtct)
- mHealth Working Group (https://knowledge-gateway.org/mhealth)
- The Maternal, Infant and Young Child Nutrition and Family Planning (MIYCN-FP) Communities of Practice (https://knowledge-gatewav.org/miycnfp)

The knowledge gateway is an easy-to-use tool that provides reproductive health professionals with an online "space" where they can participate and immediately share local and international experience in order to improve reproductive health programs (Richey & O' Brien, 2011). It uses a low-resolution electronic platform that is easily accessible in areas with both low and high Internet bandwidth. Membership is free and users can access the Knowledge Gateway through e-mail with direct links to Web-based workspaces which contain a community library, discussion board, announcement board, and community calendar. Communication in Knowledge Gateway Communities of Practice is asynchronous, allowing members to participate at their convenience. Users can create their own Communities of Practice or join established ones and discuss issues, experiences, and lessons learned from their family planning/reproductive health programs. Members are also increasingly using the Knowledge Gateway to support virtual working groups that use the platform to work collaboratively on a specific activity (Richey & O' Brien, 2011).

The Knowledge Gateway provides an opportunity for a diverse group of reproductive health professionals such as doctors, nurses, Midwives, and community health workers to communicate across geographically disparate settings. The ability to communicate quickly and easily also facilitates more rapid sharing and scale-up of sound technical and programmatic approaches. The Knowledge Gateway also removes significant barriers that often hinder communication among reproductive health professionals who work in various geographical locations and at different level of the health system (Richey & O' Brien, 2011).

2.6 Awareness of Different Online Communities of Practice for Knowledge Sharing

The level of Online Communities of Practice awareness varies from one point of the world to the other. In developed countries of the world, the level of awareness of Online Communities of Practice has grown considerably in recent years (Griflis, Dall'ora, Simon, Ball, and Lindguist 2014). The survey conducted by Griffis et al., (2014) revealed that 21% of nurses are aware of Online Communities of Practice and its potentials. Three years later, the study demonstrates significantly higher percentages with more than 90%

awareness of Online Communities of Practice among nurses. Additionally, the study shows that, it is slightly above 67.0% of the respondents that are aware of Online Communities of Practice in Western Europe. This dramatic increase on Online Communities of Practice awareness shows the increasing value of Online Communities of Practice to health professionals to potentially improve or advance their mission in health and healthcare (Griffis et al, 2014).

The story remains the same in many advanced developing countries of the world. The study by Keckley & Hoffman, (2010) finds out that 65% of the surveyed nurses and 60% of the surveyed Midwives are aware of Online Communities of Practice. The result of interviews conducted from Australia, India, and Malaysia shows that 80% of the participants are aware of Online Communities of Practice for professional purposes (Mohammed, Andargie, Solomon, and Eshetu 2013). Similarly Archambault, Bilodeau, & Gagnon (2012), report that 70% of young British health professionals are aware of Online Communities of Practice as sources of knowledge. This implies that awareness of Online Communities of Practice is relatively higher among young professionals.

A study reporting some kind of Online Communities of Practice awareness in less developing countries of the world shows that awareness of Online Communities of Practice is still in its infant stage (Mohammed et al., 2013). The study reports that only 14% of Ethiopian health professionals use the various online Communities of Practice for knowledge sharing. This according to the finding was due to low awareness level of the health professionals toward new technologies. The above observation testify that in less developing countries, Online Communities of Practice is still not well understood by the health professionals and hence there is need for more awareness campaigns.

There are several ways through which health professionals who claimed to know about Online Communities of Practice got the information. The study by (Pelizzari, 2003), indicated that, colleagues, professional literatures, and libraries have been the main sources of learning about Online Communities of Practice to those who claimed to be aware of it. The most common ways in which health professionals were exposed to Online Communities of Practice include searching the internet, participation in debates or via colleagues in their profession (Allan, 2005). A similar study by Sanchez-Tarrago and Fernard (2009) found that, the respondents were informed about Online Communities of Practice through colleagues (40%) and professional literature (37%).

2.7 Utilisation of Online Communities of Practice for Knowledge Sharing

The use of the Internet as one of the main communication tools and also as one of the principal means of sharing medical information has become increasingly popular among healthcare professionals (Bennett, Casebeer, Zheng, & Kristofco 2006; Romano, et al., 2012; Severin, et al., 2012). The latest findings from Manhattan Research (2012), a global market research firm which surveys health professionals' use of the Internet across 17 countries and publishes the results annually, reported that more than 80% of health professionals in all countries studied use the Internet for professional purposes and believe that the Internet is essential to their practice. The same report reveals that U.S. health professionals spend an average of eleven hours per week online for professional purposes only. Bennett, et al., (2006) similarly reported that the Internet is the most used resource by U.S. health professionals for finding medical information.

Among the Internet initiatives, the use of Online Communities of Practice by healthcare professionals varies from one point of the world to the other. In developed countries of the world, the level of utilisation of Online Communities of Practice has grown considerably in recent years (Antheunis, et al., 2013; Griffis et al., 2014), with most Midwives and other medical practitioners having already begun formally or informally to embrace most Online Communities of Practice such as blogs, wikis, and social networking websites. Midwives Online Communities of Practice such as Global Alliance for Midwives, postpartum family planning have attracted over 100,000 members each. A survey by Cooper et al. (2012) shows that 59% of U.S. health professionals used social networking sites, more than 41% listened to podcasts, and 12.9% commented on blogs. Similarly, a study by McGowan et al. (2012) also showed that 24% of U.S. Midwives use social media regularly (on a daily base) and over 60% use it on a weekly basis or even more frequently to look for medical information. According to this study, nearly 60% of U.S. Midwives perceived social media as a useful, engaging, and good means to receive the latest and high-quality medical information, and about 60% believed that social media enabled them to practice more effectively. Recent findings from Manhattan Research (2012b) also show that more than two-thirds of U.S. nurses used online videos to learn and keep abreast of the latest clinical information.

Utilisation of Online Communities of Practice in other countries is also growing. Manhatan Research (2012) showed that about 22% of European (UK, France, Germany, Spain, and Italy) health professionals adopted Online Communities of Practice (UK was the highest with 48%). A survey conducted by EPG Health Media (2010) among 315 healthcare professionals (including all specializations) in the same European countries also showed that almost 38% of healthcare professionals are engaged in health-related discussions via Online Communities of Practice and 83% would like to participate in

Online Communities of Practice provided there are proper guidelines and regulations. According to this study, the majority of European physicians (60%) used Online Communities of Practice to communicate with peers rather than with patients or pharmaceutical companies. Antheunis, et al. (2013) also found that Dutch physicians use primarily Linkedln, Twitter, and YouTube for professional purposes.

The use of Smartphone and tablets, which are known for providing easy and instant access to Online Communities of Practice, has also increased significantly among health professionals around the world. According to Manhattan Research (2012), 85% of U.S. health professionals use a Smartphone, and 62% use a tablet for professional purposes; 84% of Australian health professionals use a Smartphone, and 54% use a tablet; in Turkey 64% use a Smartphone, and 35% use a tablet; in five big European countries (UK, France, Germany, Italy and Spain) 69% of health professionals use a Smartphone, and 26% use a tablet; in Brazil 51% use a Smartphone; and in India 17% use a Smartphone. Manhattan Research has published a lot of detail about Online Communities of Practice use by health professionals in different countries. However, the full details of the reports were not available to the researcher.

According to Petrock (2010), sharing medical experience, ideas, and points of view anonymously is the primary purpose of Midwives joining nurses, Midwives-only social networks, while other reasons include: finding information about new offerings or treatments, developing relationship with colleagues, and in rare cases communicating with patients, and marketing their services.

A study by DocCheck surveyed 441 members of one of the popular health professionals' social network in Europe, and reported that health professionals use social networks for the following purposes: Getting help from their peers about medical issues they encounter in their daily practice (60%); re-sharing information they received via other sources (56%); sharing techniques or insights they learned or developed (40%); and for other reasons, such as talking about their opinions, correcting facts, and so on (11%). The majority of the study participants also stated that medical contents and comments posted by their colleagues on social networks were helpful for them. An interesting finding of this study was that more than 60% of health professionals who participated in the study believed that peer-reviewed journals will soon be replaced by online contents created by health professionals (DocCheck, 2010; Mack, 2010).

The literature review has revealed little or few empirical research on the level of utilisation of Online Communities of Practice for knowledge sharing among health professionals with a focus on developing countries in Africa. A study revealing some kind of Online Communities of Practice utilisation conducted by Mohammed et al. (2013) indicated that only 5.3% of the respondents utilise the internet facilities for seeking and sharing of best practices. The study shows that, they mostly use seminars, workshops as a means of sharing knowledge with peers and particularly for their continuing professional development and these methods of sharing knowledge is not on regular basis due to its high cost and time consuming. The low usage of online technologies for knowledge sharing according to the finding was due to low awareness level of the health professionals toward new technologies. The above observation testify that in less developing countries, Online Communities of Practice is still not well understood by the health professionals and hence there is need for more awareness campaigns.

In summary, several studies have highlighted that the use of Online Communities of Practice among health practitioners has been significantly increasing in developed countries while in developing countries of Africa, the use of Online Communities of Practice is at its infant stage. Such an amount of use requires further research to explore the extent of use of the platforms and find out the factors affecting its use. The current research is aimed at filling parts of this knowledge gap by seeking Midwives' viewpoints and experiences regarding the use, and potential contributions of Online Communities of Practice in facilitating knowledge sharing.

2.8 Reasons for Utilisation of Online Communities of Practice for Knowledge Sharing

Studies of Communities of Practices have identified reasons for adopting and using Online Communities of Practice. Dieleman and Duncan (2013) report that rapid identification of skills, provision of safe environments for sharing problems, and continuing professional development were the reasons for utilizing Online Communities of Practice by nurses. Ikioda (2013) revealed that health workers use Online Communities of Practice for expanding skills, expertise, improvement, innovation, and communication with peers over geographical distances. Similarly Usher (2012) found that Australian physicians adopt online communities of platforms because it provides a quick and effective way to communicate; has the ability to be used effectively; it is enjoyable; it has ease of mobility; and it provides a forum for finding relevant health information. Hughes, Joshi, and Lemonde (2009) also revealed that junior physicians are interested in Online Communities of Practice because of their ease of use, their structure, and the breadth of information that these sites provide. Another study by Schweitzer, Hannan, and Coren (2012) found that Online Communities of Practice are useful for continuing medical education. More recently Pahani, Watson, & Partridge (2014) provide a more overarching view of why physicians use Online Communities of Practice as follows:

Networking with peers: The study participants mentioned that Online Communities of Practice enabled them to stay easily connected with past and present colleagues. Online Communities of Practice had enabled the participants to become aware of their colleagues' work, projects, and profile by following their accounts or posts, for immediate questions, feedback, and assistance.

Easy to join and use: Some of the advantages mentioned by the study participants that made Online Communities of Practice a better choice for experience sharing are: it is easy to join and use; it has user-friendly interfaces and functionalities; it is multimedia-oriented and supports a variety of media such as text, images, and audio-video components; it is ubiquitous and can be accessed anywhere, anytime; and it allows access to a much larger audience.

Continued medical education: majority of the study participants mentioned continued medical education as another reason for joining Online Communities of Practice. Traditionally, professionals used journal papers or educational opportunities to stay up-to-date. According to the study participants, the traditional mechanisms are usually delayed and less effective in terms of time management for busy physicians, whereas information and knowledge on Online Communities of Practice moves very fast compared to traditional publications. They usually appear on Online Communities of Practice before they get published in traditional hardcopy formats. It is believed that, hundreds of intelligent, highly skilled, altruistic professionals are out there who are willing to share their knowledge and skills with others, for free, anytime, anywhere, via Online Communities of Practice.

Benchmarking: Becoming aware of new and advanced clinical practices, and learning and incorporating these into practice was also mentioned as another main reason of using Online Communities of Practice. Clinical practice is sometimes conducted differently around the world. Online Communities of Practice provide opportunities to become aware of different ways of performing the same skill and benchmarking the most effective one.

Branding: Many participants expressed the view that professional can have a voice on Online Communities of Practice and establish her/his own "street credibility". This has motivated many professionals to look at Online Communities of Practice as a way to establish and obtain academic or professional affirmation. Many professionals have a profile shared on Online Communities of Practice tools that introduces their work and areas of interests, and this enables them to develop more professional contacts and encounter more collaboration and work opportunities.

Best practice demonstration: Ability of watching and observing others' practices is accepted as a conventional and effective way to transfer knowledge, particularly to transfer technical know-how and skills. Creating such a space to watch, observe, demonstrate, and imitate best practices was one of the main reasons mentioned by the participants. Some of the participants have taken advantage of Online Communities of Practice to create and share videos or audio presentations of their own particular practice.

Openness and interactive story telling: knowledge requires a climate of freedom and openness to be shared (Brink 2003; Wahab and Rose 2011). Professionals are likely to be motivated to share their knowledge where there is such a place allowing them to open up and express their ideas freely. Online Communities of Practice provides such an open space for those professionals to have their own voice, exchange their personal opinions and experiences, and communicate freely with their colleagues. An Online Communities of Practice easily enables people to talk about or write down their clinical stories and experiences and to engage in conversations around the stories.

Archiving articulated tacit knowledge: The process of tacit knowledge to become explicit ends when it is articulated. Articulated tacit knowledge needs to be stored for future use or for further discussion (Wang and Qiu 2011; Yu 2010). Online Communities of Practice helps tacit knowledge sharing by archiving already articulated tacit knowledge (such as tips, tricks, personal opinions, demonstrated skills through videos, etc.) during chats, discussions, and comments. In addition, it allows users to search what they already shared on Online Communities of Practice either using tag systems or search engines.

Enjoyment in helping others: Wasko and Faraj (2000) observe that individuals in electronic networks are intrinsically motivated to share knowledge with others because they derive enjoyment in helping others. Participants are motivated to share knowledge with others because they consider helping others and sharing knowledge is the right thing to do.

2.9 Challenges to Utilisation of Online Communities of Practice for Knowledge Sharing

Challenges or simply obstacles of Online Communities of Practice utilisation by Midwives are those aspects that deter Midwives to make proper and adequate use of Online Communities of Practice for knowledge sharing. Without knowing such challenges, one may face difficulties in formulating strategies towards improving Online Communities of Practice utilisation. It is important to have a clear understanding of the challenges since it is by addressing them that the better uptake of Online Communities of Practice for knowledge sharing may be achieved.

Researchers have revealed several challenges of Online Communities of Practice utilisation. For instance, Barnett, Jones, Bennet, Iverson, Bonney (2013) noted that preserving patient privacy is one of the major barriers in Online Communities of Practice adoption in healthcare. A study by Househ (2012) shows that lack of support and the need for regulation and appropriate policy are the challenges of utilisation of Online Communities of Practice for knowledge sharing. Also a study by usher (2012) revealed three challenges of Online Communities of Practice utilisation: lack of time, Information anarchy, and the potential risk of developing addictive behaviors. Kankanhalli and Kwok-Kee (2005) revealed Loss of Knowledge Power, Codification Effort, and Fear of losing face as challenges. Also Pahani et al. (2014) highlighted the challenges encountered by physicians while using Online Communities of Practice as follows:

Maintaining confidentiality: Maintaining patients' confidentiality or privacy was mentioned frequently as one of the major challenges and barriers to participating in social media conversations. The fear of not maintaining patient privacy appropriately on social media has created a situation where some participants viewed social media as a risky place to share an individual patient's stories.

Lack of active participation: Another important challenge highlighted by the study participants relates to the lack of active participation of physicians on social media. Many physicians still do not believe in the efficiency of social media for knowledge sharing. They view it as a time wasting effort whose benefits are not tangible enough. As expressed by some of the participants, this lack of understanding is one of the main reasons that many physicians have not completely adopted social media tools.

Lack of trust**:** Lack of trust was also addressed by the study participants as one of the major challenges to using social media for knowledge sharing. Physicians do not easily trust other people on social media when the information is related to medical knowledge and practice. Physicians only trust people who are well known in their field.

Finding time**:** Finding sufficient time to use social media was also mentioned by the majority of the study participants as another major barrier to engaging in social media effectively. According to the study participants, physicians have a busy profession and barely have enough time to spend on social media.

Workplace acceptance and support**:** Another significant challenge that was revealed by the study participants was related to the lack of understanding and support by their workplace in adopting social media for knowledge sharing. The study participants stated that there is a serious lack of understanding about social media among healthcare organizations. Most do not support or have even banned social media use by physicians across the entire organization.

Loss of Knowledge Power**:** Knowledge is regarded as a source of power. When individual contributors share their unique knowledge with others, they might concern sacrificing the power (Kankanhalli and Kwok-Kee 2005). People are afraid that they will lose power position in the organization if they contribute unique knowledge to others. Thus, loss of power due to knowledge contribution is a barrier to knowledge sharing (Kankanhalli and Kwok-Kee 2005).

Codification Effort: It takes time and effort to transfer tacit knowledge into explicit knowledge which is understandable for others. Such effort is codification effort of knowledge contributor. When the codification process is complex, people will be more unwilling to contribute knowledge in Online Communities of Practice (He and Wei, 2009; Kankanhalli and Kwok-Kee 2005).

Fear of losing face**:** The fear of being laughed at by more experienced members may hinder knowledge provision or even asking questions (knowledge seeking). For a knowledge provider, it may also be the fear of taking additional responsibility and, even more hindering, losing competitive advantage over others. (Kankanhalli and Kwok-Kee 2005; Ardichvili, Page, & Wentling 2003).

Technology Awareness**:** Individuals' lack of awareness on the existence and potential benefits of Online Communities of Practice is the major constraint contributing to the low utilisation Online Communities of Practice. According to Ardichvili, et al. 2003, scholars' awareness of open access and its benefits is a prerequisite for them to exploit the open access-related opportunities

2.10 Summary of the Review

The purpose of the literature review in this study was to identify gaps to be address in this study. From the reviewed literature, there is evidence of surveys that investigated the health professionals' usage of online communities of practice. Most of the reviewed studies investigated physicians, nurses, and pharmacists, none of the studies investigated Midwives' utilisation of online communities of practice.

However, noted from the review is that majority of the studies were skewed to developed countries. None of the studies have a wider geographic coverage; they lack representation of respondents from developing countries. Very few studies of online Communities of Practice were done in Africa and particularly in healthcare organizations in Nigeria.

It is generally acknowledge that health professionals from different communities are likely to have different levels of awareness, usage, and attitude regarding online communities of practice (Comba and Vignocchi 2005). Thus, the fact that most of the reviewed studies were skewed to developed countries implies that they may not necessarily reflect the existing situation of local conditions in different in different developing countries. Therefore, there was a need to conduct specific studies in order to understand the peculiar differences across different environments so as to come up with proper strategies for an effective promotion of Online Communities of Practice utilisation in such environments. The investigation was thus designed to investigate the level of awareness and utilisation of Online Communities of Practice for knowledge sharing among Midwives in Katsina state

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research method and procedure that was adopted in carrying out this study. The research methodology adopted was quantitative research method, this is because the result of the study are documented using objective language, the data is in the form of numbers and statistical result, and the data was gathered through questionnaires that give quantitative answers The outline of the chapter is shown below:

- Research Design.
- Population of the study
- Sampling techniques.
- Instruments for data collection.
- Validity of the instrument
- Reliability of the instrument.
- Procedures for data collection.
- Procedure for data analysis

3.2 Research Design

The type of Survey research design adopted was cross sectional survey. Cross sectional survey design was found to be the most appropriate because the study measured the utilisation of Online Communities of Practice among defined population/groups (Midwives) at a specified time frame. According to Gyette (1983) Cross-sectional research design is used to examine variable in a defined population at a particular point in time. According to Suleiman (2007) survey research design is used in studies that have individual people as the unit of analysis and for collecting original data for describing a population that is too large to observe directly. Survey research design was found to be the most appropriate because the study focused on individual people and the population is geographically dispersed within the local government areas of the State.

3.3 Population of the Study

The population of this study comprises of Midwives practicing in Hospitals under Katsina State Health Service Management Board. Gray (2004) defined a population as the total number of possible units or elements that are included in the study. According to the data collected from Katsina State Health Service Management Board, the total numbers of Midwives are 401. The Table below showed the distribution of the population of the study.

Table 3.1: Distribution of Midwives in Katsina State Hospitals.

S/no	Hospital	No. of Midwives
1	General hospital Daura	16
2	General hospital Baure	03
3	General hospital Kankia	14
4	General hospital Ingawa	03
5	General hospital Mani	04
6	General hospital Funtua	32
7	General hospital Kankara	05
8	General hospital Malunfashi	16
9	General hospital Musawa	12
10	General hospital Katsina	99
11	General hospital Batagarawa	18
12	General hospital Jibia	06
13	General hospital Rimi	07
14	General hospital Dutsinma	16
15	General hospital Batsari	09
16	General hospital Danmusa	12
17	Ibrahim ShemaOrhtopedic Hospital Katsina	00
18	General hospital Kurfi	05
19	TuraiYaradua Maternity & children hospitals Katsina	103
20	Malunfashi Maternity and children hospital	21
Total		**401**

Source: Katsina State Health service Management Board (2015)

3.4 Sample and Sampling Technique

Stratified sampling technique was employed in this study. According to Kothari (2012) Stratified sampling is a sampling procedure in which elements of the population are divided in to homogenous subgroups (called “strata”), and a simple random sample is drawn within each subgroup. The choice of Stratified sampling is due to the fact that the Midwives are geographically dispersed in different local government areas of the state, which make it very difficult to reach the entire population. This position is supported by Ibrahim (2013) who revealed that if the population is too large for the researcher to survey all its members, a small, but carefully chosen sample can be used to represent the population. Base on this the population of the hospitals in Katsina State was divided into two (3) stratum on the basis of senatorial zones. Namely: Daura zone as strata 1 with (5) hospitals, Funtua zone as strata 2 with (5) hospitals, and Katsina zone as strata 3 with (10) hospitals.

According to Keilman (1995) as cited by Ibrahim (2013) a sample of 35% - 43% is considered adequate representative sample in health systems research. Therefore, the researcher agrees to use simple random sampling to randomly sample 40% of the hospitals from each stratum. The researcher wrote the name of each hospital on a slip of paper, and put the slips of paper into a box and mix them thoroughly and then a boy was asked to draw (without looking) the required number of slips for the sample one after the other without replacement. Two (2) hospitals were randomly selected from strata one (1) and strata two (2), and three (4) hospitals were randomly selected from strata three (3).

Table 3.2: Sample Distribution of Midwives in Hospitals in Katsina State.

Stratum	No. of Hospitals	40% of Hospitals	Hospitals Selected	No. of Midwives
Daura Zone as strata1	05	5*40%=2	General hospital Kankia	14
			General hospital Mani	04
Funtua Zone as strata 2	05	5*40%=2	General hospital Malunfashi	16
			Malunfashi Maternity and children hospital	21
Katsina Zone as strata3	09	10*40%= 4	General hospital Rimi	07
			General hospital Batsari	09
			General hospital Kurfi	05
			TuraiYaradua Maternity & children hospitals Katsina	103
Total	**20**	**20*40%=8**	**8**	**180**

3.5 Instrument for Data Collection

Questionnaire was used as the research instrument for data collection in this study. The choice of questionnaire was based on the fact that the respondents are 1iterate and capable of completing the questionnaire without further assistance from the researcher. Secondly, questionnaire is by far the most frequently used instrument in educational research (Nwanna, 2005).

Questionnaire

The questionnaire was name Awareness and Utilisation of Online Communities of Practice among Midwives in Katisna State, the questionnaire was developed by the researcher and it was structured in three (3) sections. Section A: deals with Personal Background Information with four (4) items, while section B: addresses Awareness of Online Communities of Practice for knowledge sharing, with four (4) items Section C: deals with of utilisation of Online Communities of Practice for knowledge sharing, while section, with four (4) items.

3.6 Validation of the Research Instrument

A draft of the questionnaire was given to experts and supervisors for necessary input, corrections, and amendments to be incooperated in order to ensure that the questionnaire is capable of producing the required responses/information from the respondents. The decision by the researcher to adopt content validity is based on the remark by Ibrahim (2013) that validation by others is an effective method of measuring the accuracy of the instrument and for determining if an instrument provides adequate coverage of a topic.

3.7 Reliability of the Instrument

The reliability of the instrument was established by conducting a pilot study. A pilot study is a small scale experiment conducted on members of the relevant population, but not those who will form part of the final sample (Ibrahim 2013). The pilot study was conducted within one week at Federal Medical Centre, Katsina. Ten Midwives were issued the research instrument to fill. Guttmann split-half reliability using spearman rank order correlation formula was used, the table 3.3 showed the result of the pilot study:

Table 3.3: Reliability Statistics

Cronbach's Alpha	Part 1	Value	.133
		N of Items	6[a]
	Part 2	Value	.580
		N of Items	6[b]
	Total N of Items		12
Correlation Between Forms			.755
Spearman-Brown Coefficient	Equal Length		.860
	Unequal Length		.860
Guttman Split-Half Coefficient			.828

a. The items are: Item1, Item2, Item3, Item4, Item5, and Item6.

b. The items are: Item7, Item8, Item9, Item10, Item11, and Item12.

The result indicated that reliability coefficient of the instrument was found to be 0.76. Therefore, the instrument is reliable. The decision by the researcher to conduct a pilot study is based on the remark by Nwanna (2005) that, reliability test makes instrument dependable and more confident.

3.8 Procedure for Data Collection

The questionnaire was administered to the midwives in the selected hospitals by the researcher with the assistance of a midwife of each of the selected hospital. The choice of a Midwife as a research assistance is due to the fact that male researchers are not allowed to the offices of the Midwives since their offices are located in the patient rooms/wards. Four weeks was used for the distribution and collection of the questionnaire.

3.9 Procedure for Data Analysis

The data collected for the study was analyzed using descriptive and inferential statistics. The Data for research question 1-5 was analysed using mean and standard deviation with interpretations to shed more light on the findings. For the hypotheses 1 and 2 One Way Analysis of Variance (ANOVA) was used to analyse the data. The use of ANOVA was informed by the more than two groups of independent variables (Hospitals) to be involved in the test, and for the hypothesis 3 Chi-square (X^2) was used to analyse the date. This is because the hypothesis three is set to test the significant association between two categorical variables.

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CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents the data collected for the study. It was analysed and discussed in relation to the research questions answered and hypotheses tested. The chapter was presented under the following sub-headings:

4.2 Response Rate of the Respondents

4.3 Data Analysis and Discussion

4.4.1 Descriptive Analysis

4.4.2 Inferential Analysis

4.2 Response Rate

The researcher distributed 180 copies of the questionnaire to the Midwives in Katsina State Hospitals, out of which 113 (62.7%) of the copies of the questionnaire were returned duly completed and useful for the analysis. This response rate was achieved due to the fact that the researcher gave adequate time to complete the filling of the questionnaire. Table 4.1 shows the response rate of the respondents according to their hospitals.

Table 4.1 Response Rate of the Respondents

Stratum	Name of Hospital	Questionnaire Distributed	Questionnaire Returned	%
Daura zone Strata 1	General hospital Kankia	14	08	4.4
	General hospital Mani	04	04	2.2
Funtua zone Strata 2	General hospital Malunfashi	16	11	6.1
	Malunfashi Maternity and Children Hospital	21	14	7.8
Katsina zone Strata3	General hospital Rimi	07	05	2.8
	General hospital Batsari	09	08	4.4
	General hospital Kurfi	05	04	2.2
	Turai Yar'adua Maternity & children hospitals Katsina	103	59	32.8
Total		**180**	**113**	**62.7**

Questionnaire Distributed = 180   Questionnaire Returned = 113

Table 4.1 revealed that Turai Yar'adua Maternity & children hospitals Katsina has the highest response rate of 59 (47.6%); while General hospital Mani and General hospital Kurfi has the least response rate 04 (7.1%) each. The variations in the response rate were due to the fact that the population size of the Midwives practicing in these hospitals is not of equal proportion; this is because some hospitals in urban areas are bigger in size and in number of clients compared to rural hospitals. Therefore, it is clear from the table that Turai Yar'adua Maternity & children hospitals Katsina have more population than other hospitals.

4.3 Data Analysis and Discussion

This section analysed and discussed data collected for the study. This is done through descriptive and inferential analysis. The descriptive statistics was used to present and analyse the responses of the respondents with respect to the research questions raised for the study while the inferential statistics was used to present and test the null hypotheses formulated for the study.

4.3.1 Descriptive Analysis

Under this section, the data collected with respect to research questions asked in the study were analysed and discussed as follows:

4.3.1.1 Types of Online Communities of Practice available for knowledge sharing among Midwives in Katsina State Hospitals.

The research question was aimed at identifying the types of Online Communities of Practice available for knowledge sharing among Midwives in Katsina State Hospitals. In order to achieve this objective, a list of Online Communities of Practice was outlined for the respondents to tick as many Online Communities of Practice available for knowledge sharing. Below is table 4.4 showing the type of Online Communities of Practice available for knowledge sharing in Katsina State Hospitals.

Table 4.2 Types of Online Communities of Practice available for knowledge sharing among Midwives in Katsina State Hospitals.

Types of Online Communities of Practice Platforms	**G.H. Kankia**	**G.H. Mani**	**G.H. M/fashi**	**G.H. Rimi**	**G.H. Batsari**	**G.H. Kurfi**	**M/fashi Maternity H.**	**Turai Yar'adua Maternity H. Katsina**	**Mean**	**Std**
Katsina Nurses Forum (Facebook)	3	2	6	2	3	3	9	31	**7.38**	**9.21**
National Association of Nigerian Nurses and Midwives (Facebook)	3	1	4	1	2	2	4	14	**3.86**	**3.98**
National Association of Nigerian Nurses and Midwives (Twitter)	3	1	4	1	2	2	4	14	**3.86**	**3.98**
International Confederation of Midwives (Facebook)	2	0	2	0	3	1	2	10	**2.50**	**3.21**
International Confederation of Midwives**(**Linkedln)	2	0	2	0	3	1	2	10	**2.50**	**3.21**
The Global Alliance for Nurses and Midwifery (ganm)	0	0	0	0	0	0	0	0	**0.00**	**0.00**
Postpartum Family Planning Communities of Practice **(pfpcp)**	0	0	0	0	0	0	0	0	**0.00**	**0.00**
Family Planning and Immunization Integration	0	0	0	0	0	0	0	0	**0.00**	**0.00**
RH Global	0	0	0	0	0	0	0	0	**0.00**	**0.00**
mHealth Working Group **(mHealth)**	0	0	0	0	0	0	0	0	**0.00**	**0.00**
MaternalYoung Child Nutrition &FamilyPlanning**(MIYCN-FP)**	0	0	0	0	0	0	0	0	**0.00**	**0.00**
Urban Reproductive Health **(urbanrh)**	0	0	0	0	0	0	0	0	**0.00**	**0.00**
Elimination of Mother-to-Child Transmission of HIV (I ATT)	0	0	0	0	0	0	0	0	**0.00**	**0.00**

KEY: **G.H. = General Hospital** **H. = Hospital**

For the purpose of discussing the above Table 4.2 a bench mark of 3.00 was used and the result revealed that Katsina Nurses Forum (Facebook) was the type of Online Communities of Practice Platform available for knowledge sharing among midwives in Katsina State Hospitals with highest mean of 7.38. Similarly the National Association of Nigerian Nurses and Midwives (Facebook, Twitter) was also available for knowledge sharing among Midwives in Katsina State Hospitals with a mean score of 3.86. The response rate recorded by Katsina Nurses Forum (Facebook) is due to the fact that, Midwives in Katsina State Hospitals perceived Katsina Nurses Forum (Facebook) which is a social networking site, as useful, engaging, easy to use, and popular platform for networking with peers. This confirmed Cooper et al. (2012) who reported that 60% of U.S. health professionals perceived social networking sites as useful and a good means for connecting with professionals for latest and high quality medical information.

However, a further observation from the table shows that Global Online Communities of Practice such as Global Alliance for Nurses and Midwifery, Postpartum Family Planning, RH Global, Maternal, Young Child Nutrition & Family Planning, Urban Reproductive Health, and Elimination of Mother-to-Child Transmission of HIV were completely unavailable for knowledge sharing in Katsina State Hospitals.

It was shocking and unhealthy to discover that only one local Online Communities of Practice Platform was available for knowledge sharing among Midwives in Katsina State Hospitals for the promotion of reproductive healthcare. This situation may be connected to lack of organizational acceptance and support, as earlier asserted by Pahani et al. (2012) that lack of work place acceptance and support was mentioned by the majority of the study participant as major challenges to creation of Online Communities of Practice Platform for knowledge sharing. The low availability of local Online Communities of Practice Platform for knowledge sharing among Midwives in Katsina State Hospitals call for serious concern as no much meaningful knowledge sharing can take place among Midwives practicing in various geographical locations of the state visa-a-vis the opportunity to equip themselves with a venue for ongoing discussions on local reproductive health outcomes on regular basis.

4.3.1.2 Awareness of Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals.

This question is concerned with Midwives' extent of Awareness of Online Communities of Practice for knowledge sharing in Katsina State Hospitals. A list of various Online Communities of Practice was outlined for the respondents to indicate the extent of their awareness using a modified five point likert scale of measurement ranging from Very much Aware, Aware, Slightly Aware, Not Aware, and Undecided as shown in table 4.3.

Table 4.3 Extent of Awareness of Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals

Types of Online Communities of Practice	**VA (5)**	**AW (4)**	**SA (3)**	**NA (2)**	**UD (1)**	**Mean**	**Std**
Katsina Nurses Forum (Facebook)	38	18	3	53	1	3.35	1.38
National Association of Nigeria Nurses and Midwives (Facebook)	11	10	10	81	1	2.55	1.01
National Association of Nigerian Nurses and Midwives (Twitter)	11	10	10	81	1	2.55	1.01
International Confederation of Midwives (Facebook)	7	2	11	92	1	2.31	0.80
International Confederation of Midwives (Linkedln)	7	2	11	92	1	2.31	0.80

KEY: **VA=Very much Aware. AW=Aware. SA=Slightly Aware. NA=Not Aware. UD=Undecided.**

The above statements were measured on a five (5) point scale: 5= very much aware, 4=aware, 3=slightly aware, 2=not aware, 1=undecided, and the table 4.3 revealed that Katsina Nurses Forum (Facebook) was the type of Online Communities of Practice that Midwives in Katsina State Hospitals were highly aware of with a mean score of 3.35. The high response rate recorded by Katsina Nurses Forum (Facebook) is not surprising, due to the fact that Katsina Nurses Forum (Facebook) is a local platform that provides the Midwives with a social space to socialize online and to network with peers who they know and who they have already met face to face in real time.

Correspondingly, none of the Midwives are aware of Global Online Communities of Practice such as Global Alliance for Nurses and Midwifery, Postpartum Family Planning, RH Global, Maternal, Young Child Nutrition & Family Planning, Urban Reproductive Health, and Elimination of Mother-to-Child Transmission of HIV in Katsina State Hospitals. This finding corroborates the finding of Mohammed et al.

(2013) who reported that only 5.3% of health professionals are aware of the existence of various Online Communities of Practice for knowledge sharing in Ethiopia due to lack of awareness.

It was disturbing to discover that Midwives in Katsina State Hospitals are not aware of Global Online Communities of Practice for knowledge sharing. The implication of the findings were signifying that the lack of awareness of Global Online Communities of Practice for knowledge sharing is prevailing among Midwives in Katsina State Hospitals which to a great extent may affects the level of utilisation of the platforms; this is because the adoption and utilisation of online technologies to a large extent depend on the knowledge about their existence. This point is in agreement with the finding of Mahe et al. (2000) who indicated that scientists do not hesitate to use online technologies when they feel they have sufficient knowledge about them. The above observation testifies that Midwives Katsina State Hospitals lack awareness of various Global Online Communities of Practice for knowledge sharing, which may affects proper and adequate use of the platforms. Thus, the design of awareness campaign programs on the existence and potentials of Global Online Communities of Practice for knowledge sharing across all the Hospitals will sensitize, motivate, and encourage the Midwives in Katsina State Hospitals to embrace the use of Global Online Communities of Practice for knowledge sharing

4.3.1.3 Utilisation of Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals

This question was concerned about Midwives' extent of utilisation of Online Communities of Practice for knowledge sharing in Katsina State Hospitals. To achieve this objective, a list of various Online Communities of Practice for knowledge sharing was outlined for the respondents to indicate the extent of their utilisation of the Online Communities of Practice for knowledge sharing on a five point modified Likert scale of measurement ranging from Very Often, Often, Occasionally, Never, and Undecided. Table 4.6 displays the responses of the respondents.

Table 4.4 Extent of Utilisation of Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals

Types of Online Communities of Practice	VO (5)	OF (4)	OC (3)	NV (2)	UD (1)	Mean	Std
Katsina Nurses Forum (Facebook)	30	18	11	53	1	3.20	1.30
National Association of Nigeria Nurses and Midwives (Facebook)	11	10	10	81	1	2.55	1.01
National Association of Nigerian Nurses and Midwives (Twitter)	11	10	10	81	1	2.55	1.01
International Confederation of Midwives (Facebook)	7	2	11	92	1	2.31	0.80
International Confederation of Midwives (Linkedln)	7	2	11	92	1	2.31	0.80

KEY: VO=Very Often, OF=Often, OC=Occasionally, NV=Never, UD=Undicided

The above statements were measured on a five (5) point scale: 5= very much aware, 4=aware, 3=slightly aware, 2=not aware, 1=undecided, and the table 4.5 shows that Katsina Nurses Forum (Facebook) was the type of Online Communities of Practice that was very often utilised for knowledge sharing among Midwives Hospitals in Katsina Hospitals State with a mean score of 3.20. This finding corroborate with the high level of awareness recorded by Katsina Nurses Forum (Facebook), and this is because, it is a platform that provide the Midwives with a social space where they can socialize and discuss their clinical issues freely; write and share their clinical stories in an interactive way with like-minded peers who they know and who they have already met face to face in real time. This high level of utilisation recorded by Katsina Nurses Forum (Facebook) goes to confirm Pahani et al. (2012) finding that, 59% of the surveyed health professionals mentioned that social networking sites are social space for expressing their clinical experience, asking clinical questions, and engaging in discussion with peers freely.

On the contrary, the table revealed that none of the Midwives in Katsina State Hospitals utilise Global Alliance for Nurses and Midwifery, Postpartum Family Planning, RH Global, Maternal, Young Child Nutrition & Family Planning, Urban Reproductive Health, and Elimination of Mother-to-Child Transmission of HIV for knowledge sharing. This finding is in agreement with the finding of Mohammed et al. (2013) who discovered that only 5.3% of the health professionals utilise Online Communities of Practice for knowledge sharing due to lack of awareness and management support.

The above observation testify that, the non use of Global Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals may be connected to lack management support and policy toward proper and adequate utilisation of Online Communities of Practice for knowledge sharing and lack of awareness of its existence and its potentials toward minimizing professional isolation and closing knowledge to practice gap. This non use of Global Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals call for serious concern as knowledge sharing on regular basis can not take place with out proper and adequate utilisation of both local and Global Online Communities of Practice for knowledge. Therefore, it is important for the management to establish proper policy for the enhancement of Online Communities of Practice for knowledge sharing

4.3.1.4 Reasons for the utilisation of Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals.

This question sought to find out the reasons for utilisation of Online Communities of Practice for knowledge sharing among Midwives Hospitals in Katsina State Hospitals. The respondents were asked to indicate their reasons for utilisation of Online Communities of Practice for knowledge sharing as shown in the table 4.7.

Table 4.5: Reasons for utilisation of Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals

Reasons	**G.H. Kankia**	**G.H. Mani**	**G.H. M/fashi**	**G.H. Rimi**	**G.H. Batsari**	**G.H. Kurfi**	**M/fashi M. H.**	**T. Y. M.H.**	**Mean**	**Std**
Networking with peers	2	2	4	1	5	2	6	15	4.63	4.24
Professional development	2	1	3	1	2	2	4	11	3.25	3.07
Continued medical education	2	1	2	1	2	2	3	7	2.50	1.80
Benchmarki	1	0	1	0	1	0	0	2	0.63	0.70
professional branding	1	0	1	0	1	0	1	3	0.88	0.93
Best practice demonstratio	3	1	0	1	2	1	1	3	1.50	1.00
interactive story telling	3	1	2	1	2	2	4	8	2.88	2.15
helping others	2	1	2	1	2	2	2	6	2.25	1.48
Easy to join and use	0	1	1	0	2	1	2	6	1.63	1.80
User-friendly interface & multimedia-oriented	2	1	2	1	3	1	5	9	3.00	2.60
Archiving articulated tacit knowledge	1	0	0	0	0	0	0	0	0.13	1.48

KEY: G.H. = General Hospital, M.H.= Maternity Hospital, T.Y.= Turai Yaradua.

Table 4.8 revealed that networking with peers (4.63), Professional development (3.25), and user-friendly interface and multimedia-oriented (3.00) were the major reasons for utilisation of Online Communities of Practice for knowledge sharing among Midwives in Katsina state Hospitals. This finding corroborates the finding of Pahani et al. (2012) who reports that health professionals utilised Online Communities of Practice because it gives them room for Professional development, continued medical education, and Networking with peers.

4.3.1.5 Challenges to Utilisation of Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals.

One of the objectives of this research is to identify the challenges to utilisation of Online Communities of Practice for knowledge sharing in Katsina State Hospitals. The respondents were asked to indicate their challenges in the utilisation of Online Communities of Practice for knowledge sharing as outline in the table below 4.8.

TABLE 4.6: Challenges to Utilisation of Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals

Challenges	**G.H. Kankia**	**G.H. Mani**	**G.H. M/fashi**	**G.H. Rimi**	**G.H. Batsari**	**G.H. Kurfi**	**M/fashi M. H.**	**T. Y/dua M.H.K**	**Mean**	**Std**
Fear of not Maintaining of patient privacy/ confidentiality	1	0	2	0	1	0	3	4	1.38	1.41
Lack of active participation of members	3	2	4	1	5	2	6	13	4.50	3.57
Lack of trust	4	1	2	2	4	2	6	8	3.63	2.23
Lack of time	6	1	2	1	4	1	7	9	3.88	2.93
Workplace acceptance and support	6	2	3	2	6	2	8	13	5.25	3.63
Difficulties in joining OCoP	4	1	4	1	3	1	3	4	2.63	1.32
Lack of internet access	5	2	3	2	7	2	7	14	5.25	3.90
Slow internet speed	5	1	2	1	4	1	6	10	3.75	2.90
Loss of knowledge power	0	0	2	0	3	0	2	3	1.25	1.30
Fear of losing face	0	0	1	2	3	1	2	3	1.50	1.12
Lack of Technology Awareness	7	3	6	3	7	2	10	36	9.25	10.41
Lack of Training & upgrading of IT skills	5	2	4	2	3	1	9	27	6.63	8.10

KEY: G.H. = General Hospital, M/fashi= Malunfashi, M.H.= Maternity Hospital, T.Ydua= Turai Yaradua.

Table 4.8 shows the challenges to utilisation of Online Communities of Practice for knowledge sharing in Katsina State Hospitals. The result indicates that majority of the items listed were considered as challenges to utilisation of Online Communities of Practice. Consideration from the table 4.9 shows that lack of awareness has the highest mean of 9.25, followed by lack of training and upgrading of IT skills with 6.63, Workplace acceptance and support and Lack of internet access with a mean score of 5.25 respectively. It was also observed that Lack of active participation of members has a mean of 4.50; Lack of time has a mean score of 3.88, slow internet speed with a mean score of 3.75, lack of trust with 3.63.

4.4.2 Inferential Statistical Analysis

This section deals with the result of the Inferential Statistical Analysis employed to test the three (3) null hypotheses generated for the study. The data collected for the inferential statistical analysis was primarily ordinal. This can be justified by the continuous/ordering nature of the data. One Way Analysis of Variance (ANOVA) was used to test Hypothesis one and Hypothesis two. The choice of One Way Analysis of Variance (ANOVA) is because the two Hypotheses met the assumptions of One Way Analysis of Variance (ANOVA) that: the dependent variable should be measured at continuous/ordinal level; the independent variable should contain two or more categorically unrelated groups; there should be independence of observation; the dependent variable should approximately normally distributed for each category of independent variables, and there should be homogeneity of variance of the distribution (Ostertagova, and Ostertag, 2013).

Chi-Square (X^2) was used to test Hypothesis three, this is because the Hypothesis met the assumptions of Chi-Square (X^2) that: one categorical variable measured at nominal or ordinal level; having two or more categorically unrelated variable; independence of observation; the groups of the categorical variable should be mutually exclusive; and there should be at least five expected frequencies in each group of the categorical variable distribution (Ostertagova. and Ostertag, 2013).. The research used 0.05 as the level of significance for testing the Hypotheses. This is because behavioral science researches that involve human beings and the 0.05 level of significance is generally accepted (Ibrahim, 2013). The findings are presented as follows:

Null Hypothesis One

There is no significant difference among Midwives in Katsina Slate Hospitals in their extent of awareness of Online Communities of Practice for knowledge sharing

In order to test this hypothesis, the data was subjected to One Way Analysis of Variance (ANOVA) test. The analysis of the data was presented in table 4.19a and 4.9b

Table 4.7a: Summary of Analysis of Difference in Extent of Awareness of Online Communities of Practice for Knowledge Sharing among Midwives in Katsina State Hospitals

Variables	**Sum of Squares**	df	**Mean Square**	**F**	**Sig.**
Between Groups	32.940	7	4.706	.200	.985
Within Groups	2473.928	105	23.561		
Total	**2506.867**	**112**			

Table 4.10b showed that the F-Calculated value of 0.200 was obtained and P value is 0.985 which is greater than α= 0.05. Hence, the null hypothesis that there is no

significance difference among Midwives in Katsina State Hospitals in their extent of awareness of Online Communities of Practice for knowledge sharing amongst them is retained. This established that there is no significant difference among Midwives in Katsina State Hospitals in their extent of awareness of Online Communities of Practice for knowledge sharing.

Table 4.7b: Descriptive Information

Variables	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	8	35.5000	5.45108	1.92725	30.9428	40.0572	32.00	45.00
2.00	4	34.0000	2.82843	1.41421	29.4993	38.5007	32.00	38.00
3.00	11	35.5455	3.98406	1.20124	32.8689	38.2220	32.00	42.00
4.00	5	34.2000	3.89872	1.74356	29.3591	39.0409	32.00	41.00
5.00	8	34.8750	4.79397	1.69492	30.8671	38.8829	32.00	45.00
6.00	4	37.0000	4.69042	2.34521	29.5365	44.4635	32.00	43.00
7.00	14	36.0000	5.09902	1.36277	33.0559	38.9441	32.00	47.00
8.00	59	35.3559	5.01296	.65263	34.0495	36.6623	32.00	47.00
Total	**113**	**35.3894**	**4.73104**	**.44506**	**34.5076**	**36.2712**	**32.00**	**47.00**

KEY: 1.00= General Hospital Kankia, 2.00= General Hospital Mani, 3.00= General Hospital Malunfashi, 4.00= General Hospital Rimi, 5.00= General Hospital Batsari, 6.00= General Hospital Kurfi, 7.00= Malunfashi Maternity Hospital, 8.00= TuraiYar'adua Maternity Hospital Katsina

The descriptive output provides each group's sample size (N), mean, standard deviation, the standard error of the mean (the standard deviation divided by the square root of N, which estimates the potential for sampling error), and the minimum and maximum scores. Also, this part of the output presents the confidence interval within which we are 95% confident that the true population mean for this group would fall.

Null Hypothesis Two

There is no significant difference among Midwives in Katsina State Hospitals in their extent of utilisation of Online Communities of Practice for knowledge sharing

One Way Analysis of Variance (ANOVA) was also used to test the above null hypothesis and the summary table is presented in table 4.10a and 4.10b

Table 4.8a: Summary of Analysis of Difference in Extent of Utilisation of Online Communities of Practice for Knowledge Sharing among Midwives in Katsina State Hospitals

Variables	**Sum of Squares**	**df**	**Mean Square**	F	**Sig.**
Between Groups	22.624	7	3.232	.407	.896
Within Groups	833.057	105	7.934		
Total	855.681	112			

Table 4.11b revealed that the F-Calculated value of 0.407 was obtained and P value is 0.896 which is greater than a = 0.05. Hence, the null hypothesis that there is no significance difference among Midwives in Katsina State Hospitals in their extent of utilisation of Online Communities of Practice for knowledge sharing among them is retained. This implies that there is no significant difference among Midwives in Katsina State Hospitals in their extent of utilisation of Online Communities of Practice for knowledge sharing.

Table 4.8b: Descriptive Information

Variables	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	8	33.000	1.77281	.62678	31.5179	34.4821	32.00	37.00
2.00	4	33.500	1.91485	.95743	30.4530	36.5470	32.00	36.00
3.00	11	33.909	2.30020	.69354	32.3638	35.4544	32.00	39.00
4.00	5	33.800	3.03315	1.35647	30.0338	37.5662	32.00	39.00
5.00	8	33.000	1.92725	.68139	31.3888	34.6112	32.00	37.00
6.00	4	33.750	2.36291	1.18145	29.9901	37.5099	32.00	37.00
7.00	14	34.571	2.90131	.77541	32.8963	36.2466	32.00	41.00
8.00	59	34.118	3.10219	.40387	33.3102	34.9271	32.00	41.00
Total	**113**	**33.946**	**2.76406**	**.26002**	**33.4317**	**34.4621**	**32.00**	**41.00**

KEY: 1.00= General Hospital Kankia, 2.00= General Hospital Mani, 3.00= General Hospital Malumfashi, 4.00= General Hospital Rimi, 5.00= General Hospital Batsari, 6.00= General Hospital Kurfi, 7.00= Malunfashi Maternity Hospital, 8.00= TuraiYar'adua Maternity Hospital Katsina

The descriptive output provides each group’s sample size (N), mean, standard deviation, the standard error of the mean (the standard deviation divided by the square root of N, which estimates the potential for sampling error), and the minimum and maximum scores. Also, this part of the output presents the confidence interval within which we are 95% confident that the true population mean for this group would fall.

Null Hypothesis Three

The challenges to Online Communities of Practice utilisation for knowledge sharing have no significant effect on their extent of utilisation among Midwives in Katsina State Hospitals

Chi-Square (X^2) was used to test the above null hypothesis and the summary tables are presented in table 4.12a and 4.12b

Table 4.9a: Summary of Analysis of Effect of the Challenges to Online Communities of Practice Utilisation for Knowledge Sharing on their Extent of Utilisation among Midwives in Katsina State Hospitals

	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	167.195[a]	11	.000
Likelihood Ratio	170.465	11	.000
Linear-by-Linear Association	24.050	1	.000
N of Valid Cases	1356		

Table 4.12a showed that the X^2 Cal is 167.195; the Degree of Freedom (df) is 11, and the P-Value is 0.000 which is less than $\alpha = 0.05$. Hence, the null hypothesis that the challenges to Online Communities of Practice utilisation for knowledge sharing have no significant effect on their extent utilisation among Midwives in Katsina State Hospitals is rejected. This implies that the challenges to Online Communities of Practice utilisation for knowledge sharing have significant effect on their extent of utilisation among Midwives in Katsina State Hospitals. Continues existences of these challenges can lead to difficulties in sharing knowledge, thereby creating knowledge to practice gap among Midwives in Katsina State Hospitals.

Table 4.9b: Cross tabulation

		Yes	No	Total
1.00	Count	11	102	113
	Expected Count	32.6	80.4	113.0
2.00	Count	36	77	113
	Expected Count	32.6	80.4	113.0
3.00	Count	29	84	113
	Expected Count	32.6	80.4	113.0
4.00	Count	31	82	113
	Expected Count	32.6	80.4	113.0
5.00	Count	42	71	113
	Expected Count	32.6	80.4	113.0
6.00	Count	21	92	113
	Expected Count	32.6	80.4	113.0
7.00	Count	42	71	113
	Expected Count	32.6	80.4	113.0
8.00	Count	30	83	113
	Expected Count	32.6	80.4	113.0
9.00	Count	10	103	113
	Expected Count	32.6	80.4	113.0
10.00	Count	12	101	113
	Expected Count	32.6	80.4	113.0
11.00	Count	74	39	113
	Expected Count	32.6	80.4	113.0
12.00	Count	53	60	113
	Expected Count	32.6	80.4	113.0
Total	Count	391	965	1356
	Expected Count	391.0	965.0	1356.0

X^2 Cal = 167.195; Degree of Freedom (df) = 11; P-Value = 0.000

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CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The chapter presents the summary of the study, summary of findings, conclusion and recommendations drawn for the study.

5.2 Summary of the Study

The study was set out to investigate the extent awareness and utilisation of Online Communities of Practice for knowledge sharing among practicing Midwives in Katsina State Hospitals. In view of this, five (5) research questions were drawn and three (3) null hypotheses were formulated and tested. The literature was reviewed in line with the objectives of the study.

A cross sectional survey research method was adopted for the study. The population of the study comprised of 401 midwives from twenty (20) Hospitals Katsina State under Katsina State Health Service Management Board. Cluster sampling techniques was used for the selection of 40% (8 hospitals) sample from each of the three clusters. That is 180 practicing Midwives were selected for the study.

The instrument used for data collection was questionnaire; the data collected for the study were organized and analysed using descriptive statistics for the research questions and Inferential Statistics for the hypotheses. Mean and standard deviation were used for the descriptive analysis while One Way Analysis of Variance (ANOVA) and Chi-Square (X^2) were used to test the hypotheses.

5.3 Summary of Major Findings

Based on the data collected and analysed for the study, it was found that:

1) The types of Online Communities of Practice available for knowledge sharing among Midwives in Katsina State Hospitals were Katsina Nurses Forum (Facebook), National Association of Nigeria Nurses and Midwives (Facebook, Twitter), and International Confederation of Midwives (Facebook, Linkedln).
2) Majority of the Midwives are aware of Katsina Nurses Forum (Facebook), as all of the Midwives in Katsina State Hospitals are not aware of the existence of Global Online Communities of Practice such as Global Alliance for Nurses and Midwifery, Postpartum family Planning, RH Global, Maternal, Young Child Nutrition & Family Planning, Urban Reproductive Health, and Elimination of Mother-to-Child Transmission of HIV.
3) Majority of the Midwives in Katsina State Hospitals acknowledged that Katsina Nurses Forum (Facebook) was the most utilised Online Communities of Practice for knowledge sharing. Whereas none of the Midwives utilise Global Online Communities of Practice such as Global Alliance for Nurses and Midwifery, Postpartum Family Planning, RH Global, Maternal, Young Child Nutrition &Family Planning, Urban Reproductive Health, and Elimination of Mother-to-Child Transmission of HIV for knowledge sharing.
4) The reasons for the utilisation of Online Communities of Practice for knowledge sharing among Midwives in Katsina State Hospitals include networking with peers, professional development, and user friendly interface and multi media

oriented.

5) The major challenges to associated in using Online Communities of Practice ware lack of awareness, lack of training and upgrading of IT skills, lack of trust, Workplace acceptance and support, Lack of internet access, Lack of active participation of members, Lack of time, and slow internet speed.
6) There is no significant difference among Midwives in Katsina State Hospitals in their extent of awareness of Online Communities of Practice for knowledge sharing amongst them.
7) There is no significant difference among Midwives in Katsina State Hospitals in their extent of utilisation of Online Communities of Practice for knowledge sharing among them.
8) The challenges to Online Communities of Practice utilisation for knowledge sharing have significant effect on their extent of utilisation among Midwives in Katsina State Hospitals.

5.4 Conclusion

From the analysis and summary of findings it could be said that Katsina Nurses Forum (Facebook) is predominantly utilised for knowledge sharing among Midwives in Katsina State Hospitals because it is a local platform that the Midwives perceived as useful, engaging, and popular platform for networking with peers who they know and who they have already met face to face in real time. However, none of the Midwives in Katsina State Hospitals embraces the use of Global Online Communities of Practice such as Global Alliance for Nurses and Midwifery, Postpartum Family Planning, R.H Global, Maternal, Young Child Nutrition & Family Planning, Urban Reproductive Health, and Elimination of Mother-to-Child Transmission of HIV for knowledge sharing. This is largely attributed to the fact that no management acceptance and support and formal awareness campaign program is in place to sensitize the Midwives on the availability of Online Communities of Practice for knowledge sharing.

The low level awareness and lack of management acceptance and support were majorly responsible for underutilization of Online Communities of Practice for knowledge sharing in Katsina State Hospitals. Thus, the design of awareness campaign programs, formulation of policies that support the use of Online Communities of Practice for knowledge sharing, use of consultancy services to mount training, and creation of local platforms using social networking sites across all the Hospitals will sensitize, motivate, and encourage the Midwives in Katsina State General and Maternity Hospitals to embrace the use of both local and Global Online Communities of Practice for knowledge sharing

5.5 Recommendations

Based on the findings arising from the study the following recommendations were made:

1) Katsina State Health Service Management Board should create more local Online Communities of Practice for Midwives using Social Networking Sites such as Facebook, Linkedln, MySpace, Google Plus and Twitter This would allow greater visibility of the Online Communities of Practice, thus making it more readily available for the Midwives to make use of them. In creating the platforms, the Management should consider the attributes of Communities of Practice:

- ✓ clear purpose: knowledge sharing
- ✓ central topic of discussion (Domain): Postpartum experiences
- ✓ membership should be diverse
- ✓ leadership must be strong
- ✓ emphasis on participation and community building
- ✓ a clear policy on membership, codes of conduct, community governance, security, level of free speech, privacy, and copyright law
- ✓ Ease of use of technologies such as navigation, prompts feed back and access

2) The Management should organize awareness campaign to sensitize the Midwives Katsina State in Hospitals on the existence of Global Online Communities of Practice for knowledge sharing and its potential benefits for promotion of reproductive healthcare by employing proactive marketing strategies such as the use of Calendars, Posters, Flyers, and Brochures. Such promotional materials should be widely distributed in the Midwives offices and also be publicized during graduation ceremonies, conferences, and other fairs. The promotional materials should contain the features, potential benefits, and how to access the Online Communities of Practice for knowledge sharing.
3) 3. The early adopters of Online Communities of Practice should encourage their colleagues to embrace the use of Online Communities of Practice by enlighten them about the benefits of Online Communities of Communities for knowledge sharing through:

- ✓ Workshops/training sessions

- ✓ meetings
- ✓ story telling during lunch

4. The Management should consider preparing appropriate policies to support the development and use of Online Communities of Practice. Policies that support recognition of knowledge using Online Communities of Practice can play a major role in encouraging the Midwives to share their experiences and skills through Online Communities of Practice. Foe example:

- ✓ A midwife who shares relevant knowledge in an Online Communities of Practice should deserve a point for the award of staff of the month or year.
- ✓ The Management should look in to the possibility of collaborating with other health agencies to require Midwives to disseminate or share their experiences and skills in an Online Communities of Practice as a way of accounting for the award for their international seminars, conferences, and research grants.

5. The Management should also use consultancy services to mount regular training programs like seminars and workshops to help the Midwives acquire skills in the use of Online Communities of Practice and upgrade the skills of those who had already acquired such skills. More so, the consultancy service should engage in advocacy program on the availability of Online Communities of Practice for knowledge sharing.

5.6 Contribution of the Research

1. The research work has succeeded in creating awareness of Online Communities of Practice for knowledge sharing among information professionals of Ahmadu Bello University, Zaria and Midwives practicing in Katsina State.

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APPENDIX

Department of Library and Information Science,

Faculty of Education,

Ahmadu Bello University, Zaria.

23th March, 2016.

Dear Respondent,

INTRODUCTORY LETTER FOR A SURVEY ON UTILISATION OF ONLINE COMMUNITIES OF PRACTICE FOR KNOWLEDGE SHARING AMONG PRACTICING MIDWIVES IN KATSINA STATE HOSPITALS

I am a Master student of Department of Library and Information Science at the Ahmadu Bello University Zaria, conducting a research entitled "Utilisation of Online Communities of Practice for Knowledge Sharing among Practicing Midwives in Katsina State." This research is essentially for academic purposes. You are one of those selected in your hospital for this exercise. Kindly assist to respond to the questions in this questionnaire.

All the information given will be used strictly for the research purpose only.

Thank you for your anticipated cooperation.

Yours sincerely,

Mannir Mustapha.

SECTION A: Personal Background Information

1. Please indicate your Gender: Male [ ] Female |]

2. State the name of your hospital ....

3. Indicate the type of the hospital

Materiality hospital [ ] General hospital [ ]

4. Educational Qualification (please tick the relevant options)

Midwifery only [ ]Nurse-midwifery [ ]

SECTION B: Awareness of Online Communities of Practice for knowledge sharing

5. Please tick as many as relevant the type of Online Communities of Practice available and being aware for knowledge sharing among midwives in your hospitals?

Online Communities of Practice	YES	NO
The Global Alliance for Nurses and Midwifery **(ganm)**		
Postpartum Family Planning Communities of Practice **(pfpcp)**		
Family Planning and Immunization Integration **(fpimmunization)**		
RH Global		
mHealth Working Group **(mHealth)**		
Maternal,Young Child Nutrition &FamilyPlanning **(MIYCN-FP)**		
Urban Reproductive Health **(urbanrh)**		
Elimination of Mother-to-Child Transmission of HIV **(IATT)**		
Katsina Nurses Forum **(Facebook)**		
World Midwives Community **(Facebook**)		
World Midwives Community **(Twitter**)		
World Midwives Community **(YouTube**)		
National Association of Nigeria Nurses and Midwives (Facebook)		
National Association of Nigerian Nurses and Midwives **(Twitter)**		
International Confederation of Midwives **(Facebook**)		
International Confederation of Midwives **(Linkedln**)		
Any other specify		

6. Indicate the extent to which you are aware of Online Communities of Practice for knowledge sharing in your hospital?

VA=Very much Aware, AW= Aware, SA= Slightly Aware, NA=Not Aware, UD= Undecided

Online Communities of Practice	VA	AW	SA	NA	UD
The Global Alliance for Nurses and Midwifery (ganm)					
Postpartum Family Planning Communities of Practice **(pfpcp)**					
Family Planning and Immunization Integration					
RH Global					
mHealth Working Group **(mHealth)**					
MaternafYoung Child Nutrition &FamilyPlanning**(MIYCN-**					
Urban Reproductive Health **(urbanrh)**					
Elimination of Mother-to-Child Transmission of HIV (I ATT)					
Katsina Nurses Forum (Facebook)					
World Midwives Community (Facebook)					
World Midwives Community **(Twitter**)					
World Midwives Community **(YouTube**)					
National Association of Nigeria Nurses and Midwives					
National Association of Nigerian Nurses and Midwives					
International Confederation of Midwives (Facebook)					
International Confederation of Midwives **(Linkedln)**					

7. If you are not aware, which of the following is responsible for that?

(Please Tick the relevant options)

Reasons	YES	NO
Lack of publicity on them		
Lack of Internet access		
Internet phobia		
Lack of interest		
Lack of information literacy skills		
Busy schedules		
Any other specify..		

8. How do you get to be aware of the Online Communities of Practice for Knowledge sharing?

(Please Tick the relevant options)

Sources	**YES**	NO
Through Internet search		
Through Conferences and workshops		
Through Colleagues		
Through professional body website		
Through Professional literatures		
Through Libraries		
Through mass media channels		

SECTION C: Utilisation of Online Communities of Practice for knowledge sharing?

9. How often do you use the Online Communities of Practice for knowledge sharing? (Please Tick the relevant options)

VO=Very often, OF= Often, OC= Occasionally, NV=Never, UD=Undecided

Online Communities of Practice	VO	OF	OC	NV	UD
The Global Alliance for Nurses and Midwifery (ganm)					
Postpartum Family Planning Communities of Practice **(pfpcp)**					
Family Planning and Immunization Integration					
RH Global					
mHealth Working Group **(mHealth)**					
MaternafYoung Child Nutrition &FamilyPlanning**(MIYCN-**					
Urban Reproductive Health **(urbanrh)**					
Elimination of Mother-to-Child Transmission of HIV (I ATT)					
Katsina Nurses Forum (Facebook)					
World Midwives Community (Facebook)					
World Midwives Community **(Twitter**)					
World Midwives Community **(YouTube**)					
National Association of Nigeria Nurses and Midwives					
National Association of Nigerian Nurses and Midwives					
International Confederation of Midwives (Facebook)					
International Confederation of Midwives **(Linkedln**)					

10. Which of the followings are the means of using the Online Communities of Practice for knowledge sharing in your hospital? (Please Tick the relevant options)

Means of accessing Online Communities of Practice	YES	NO
Internet (Cable and wires)		
GSM Network		
Internet Cafe		
Modem		
Any other specify...		

11. Please tick as many as they are relevant the reasons for utilising the Online Communities of Practice for knowledge sharing?

Reasons	YES	NO
Networking with peers		
Professional Development		
Continued medical education		
Benchmarking		
professional branding		
Best practice demonstration		
interactive story telling		
helping others		
Easy to join and use		
User-friendly interface & multimedia-oriented		
Archiving articulated tacit knowledge		
Any other specify.....................................		

12. Please indicate as many as relevant the challenges you encounter while utilising online Communities of Practice used for knowledge sharing?

Challenges	YES	NO
Fear of not Maintaining of patient privacy/ confidentiality		
Lack of active participation of members		
Lack of trust		
Lack of time		
Workplace acceptance and support		
Difficulties in joining OCoP		
Lack of internet access		
Slow internet speed		
Loss of knowledge power		
Fear of losing face		
Lack of Technology Awareness		
Lack of Training & upgrading of IT skills		
Any other specify.....................................		