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UNIVERSITY OF GHANA EXPLORING SOCIAL MEDIA ADOPTION BY NURSES FOR NURSING PRACTICE IN CATHOLIC HOSPITAL BATTOR IN THE NORTH TONGU DISTRICT OF VOLTA REGION, GHANA.

EXPLORING SOCIAL MEDIA ADOPTION BY NURSES FOR NURSING PRACTICE IN CATHOLIC HOSPITAL BATTOR IN THE NORTH TONGU DISTRICT OF VOLTA REGION, GHANA.

BY

NATHAN GAMOR

(10262609)

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DECLARATION

I, Nathan Gamor, certify that this thesis is the result of the research I completed for the Master of Philosophy in Nursing Degree program at the University of Ghana, Legon, School of Nursing and Midwifery. Dr Gladys Dzansi of the University of School of Nursing and Midwifery, and Dr Kennedy Dodam Konlan, also of the School of Nursing and Midwifery, coordinated and supervised this study. This research has not been submitted to any other school for a degree. All writers and publishers whose works were referenced were properly credited.

NATHAN GAMOR	.....	08/08/2022
(STUDENT)	**(SIGNATURE)**	**(DATE)**
DR. GLADYS DZANSI	.....	08/08/2022
(SUPERVISOR)	**(SIGNATURE)**	**(DATE)**
DR. KENNEDY DODAM KONLAN, ESQ	.....	8/8/22
(CO-SUPERVISOR)	**(SIGNATURE)**	**(DATE)**

DEDICATION

This study is a tribute to God Jehovah for his mercy, power, and wisdom. I dedicate this work to my wife Malwine Esi Kpeli and my three children, Worlanyo Gamor, Kafui Mamane Gamor, and Dzidedi Mamavi Gamor, for their unwavering support and encouragement throughout the process. I also dedicate this work to my Brothers and my Sisters, especially, Afenyo Derrick Gamor, and Fafa Comfort for their unmeasurable support. Finally, I dedicate this research to all my childhood friends in Mafi Adidome and Mafi Wute, as well as my colleagues at Catholic Hospital Battor in the Volta Region, Ghana.

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LIST OF ABBREVIATIONS

CHAG	Christian Health Association of Ghana
GES	Ghana Education Service
GHS	Ghana Health Service
IDT	Innovation Diffusion Theory
MOH	Ministry of Health
MPCU	Model of Personnel Computer Utilisation
SM	Social Media
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
USA	United of States America
WHO	World Health Organisation

ABSTRACT

There is an ongoing social media technological revolution globally and this is impacting people's approach to work and organizational outputs. The health care industry is not left out of this intriguing, drastic, and far-reaching change that social media has brought forth. Healthcare organizations and individuals are said to be adopting social media for nursing care in Ghana. It remains largely undetermined the factors influencing nurses in the Catholic Hospital Battor to adopt social media to enhance nursing care. The study, therefore, seeks to explore social media adoption by nurses for nursing care in Catholic Hospital Battor using the technology acceptance model as the guiding framework. An exploratory descriptive qualitative study design with a purposive sampling technique was employed to recruit twelve (12) participants for the study. A semi-structured interview guide was used to conduct in-depth interviews which were audiotaped, transcribed verbatim, coded, and analyzed. Thematic analysis was used to analyze the data with NVivo. The findings revealed that nurses found social media to be useful for the accomplishment of nursing tasks, dissemination, and reception of information, professional development and enhanced referral networks. Apart from its usefulness, participants believe it is easy to navigate its apps, clear and understandable to use and its usage in nursing does not involve much mental effort hence their favourable attitude toward use. Notwithstanding, some participants also believe that inaccurate information, privacy and confidentiality concerns, distraction, and addiction were some potential risks that are associated with its usage in nursing practice. Due to this, some participants developed a negative attitude toward its usage as a result of the unpleasant experience they have with its usage. This study, therefore, recommends prudential use of social media in health institutions. It also advocates for the development of policies to govern its use in healthcare facilities.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter presents the background of the study, the statement of the problem, the purpose of the study, and the objectives of the study. It also contains research questions, the significance of the study, and ends with an operational definition of terms.

1.2 Background to the study

Globally, the internet is the backbone of our society with about 4.66 billion people globally using the internet today representing roughly 59.9% of the world's population (Kemp, 2021). Chaffey, (2021) and Kemp, (2021), also noted that more than half of the world's population is using social media, with the average user having almost nine accounts on different networking sites. These social media sites and platforms are accessed through connected devices like personal computers, digital video, and audio recorders, smartphones, webcams, and wearables like smartwatches to ensure that users who live virtually in any part of the world can create and share content (Heinrichs et al., 2012).

The social media user base has also become more reflective of the general population, as more people have embraced social media internationally (Berthon et al., 2012). Young adults were among the first adopters of social media and continue to use these platforms at high levels, although in recent years, the use by older adults has increased (Koiranen et al., 2020). A social media demographic survey study in the United States of America (USA) has shown that social media users appear to be younger and more qualified than the general population, with a more skewed distribution for Facebook, WhatsApp, and Twitter (Greenwood et al., 2016; Pew Research Center, 2021). Studies using geotagged USA Twitter data have shown that users of Facebook and

Twitter are more frequently found in urban areas (Pew Research Center, 2021) and younger communities in especially wealthier areas (Malik et al., 2015).

Social networking platforms provide the individual user with several characteristics that serve various purposes (Kircaburun et al., 2020). There are hundreds of social media sites and platforms in the world. Facebook, WhatsApp, Twitter, Instagram, Snapchat, Youtube, and Google are the most popular and widely recognized social media sites in the world (Alexa, 2017). Kung and Oh (2014) listed social media as mainly used by nurses. In their study, nurses showed high preferences for social networking sites (90.33 percent) and podcasts (76.24 percent), but the least used was SlideShare (9.92 percent). Lefebvre et al. (2020), also observed that Facebook, WhatsApp, Twitter, Instagram, Snapchat, YouTube, Tinder, LinkedIn, WikiAnswers, Google+, Yahoo! Answers, and Pinterest, as the most frequently used social media sites by nurses. Social networking site is a category of social media, also used by nurses. NurseBuff (2015), listed 30 social networking sites that are used by nurses. They included AllNurses, Mighty Nurse, EverydayNurses, Nurse.com, NurseZone, NursingLink, Nurse Practice Doctors, RNRounds, and NurseTogether among others.

While the purpose of an online social network remains the same as an offline social network that connects people and shares network resources, online networking also benefits users with its specific computer-mediated communication features that improve user interaction (Pang et al., 2018) They use them to interact with family members and friends, colleagues, meet new people, shared interests, and, most importantly, to deepen their understanding and awareness of different subjects and thus enhance their learning experience (Faizi et al., 2014; Faizi & El Fkihi, 2016).

Hospitals and health care professionals' use of social media have expanded dramatically. This is shifting the nature and pace of the health care partnership between individuals and health

organizations. The general public, patients, and health professionals use social media to interact about health problems (Panahi et al., 2016). Works of literature (Casella et al., 2014; Lee Ventola, 2014; Peck, 2014) show that social media has significant potential value for this wide area of emerging healthcare technology as they provide a new way of accessing and exchanging information (Barrett et al., 2012), encouraging social collaboration and stakeholder participation, as well as improving contact between people and allowing users to directly engage in health-related issues of concern (Heidelberger, 2011).

Nursing practice has been explained as a caring-based practice in which processes of assessment, diagnosis, planning intervention and evaluation are applied in the treatment of human experiences of health and illness. It includes direct and/or indirect care in clinical practice, nursing administration, education, research, or consultation in the speciality represented by the credential (ONCC, 2021). Its application necessitates not just scientific knowledge but also interpersonal, cognitive, and technical competencies and capabilities (Wilson, 2017). The impact of technology on nursing practice is one of the most significant developments that nurses encounter. Professional nursing must be included in the process of developing and implementing technology equipment that has a significant impact on health and well-being. Social media provided such technologies to advance nursing practice in many aspects.

Social media can promote the profession of Nursing in different ways. To further their personal and professional interests, nurses can use several social media programs. Ferguson (2013) gives nurses a call to action to move up and be pioneers in the use of social media. Nurses can access data for their workplace or personal lives, collaborate with peers, exchange best practice knowledge, and promote health by personal and professional means. Social networking is closely

related to the professional advancement of a nurse across four nursing fields: clinical practice, management, academia, and research.

In clinical practice, nurses can access information in real-time, allowing cutting-edge information to be unprecedentedly available (Jackson et al., 2014). Some research supports social media as an efficient method in a clinical setting for nursing students to improve their skills (Jackson et al., 2014). Social media can be used by nurses to access opportunities for continued education and tools to promote professional growth (Murray & Ward, 2019). The advantages of this can include reducing anxiety through offering expert access; building personal and professional self-image by sharing achievements and skills; and creating local support networks and practice groups.

The advantages of social media users are also experienced by nurses serving in the administration. For example, #hcsm (Symplur, 2021b) and also #hcldr (Symplur, 2021a) connect Twitter® users in health policy conversations, and the online communities of nurse administrators are linked to many social media networks and sites where they interact with other nurse administrators and team. Social networking helps nurses to interact with others through organizations and boundaries, to share knowledge and opinions in ways that only a few years ago would not have been possible.

Social networks have been effective tools in the field of academic education to help improve the teaching-learning process, especially for undergraduate students (Tower et al., 2014), data evidence to corroborate the results of studies on the use of social networks in the teaching method of nursing education using social networking technologies as a learning tool is of growing interest to students (Tower et al., 2014). Studies indicate that social networks promote student engagement, communication, knowledge, resource sharing, and the development of critical thinking skills. It is vital to remember that social networking sites such as Facebook can allow students the ability to

engage in peer learning where they can direct and monitor their learning autonomously (Tower et al., 2014). (Tower et al., 2014). Social media has been used in rural areas to enhance and enrich the education of PhD students in nursing practice and to lessen the accompanying geographical isolation and pressure (Daly et al., 2013). Educators are discovering how social media can be utilized to support nurses during transition phases (e.g. entry to work, change in fields of practice) and improve nursing skills and patient outcomes.

Social media may be of benefit to nurses working in research environments. The willingness to communicate results from research is a crucial factor. The simplicity of using Twitter® to help disseminate study results is demonstrated by Archibald and Clark (2014). Social networking also provides opportunities to track health and promote the collection of data. More data is accessible to nurse researchers as more social media platforms enable health metrics to be monitored. Interventions can be studied at lower costs and with wider audiences, using social media.

Advances in this online technology can also assist nurses in the selection, management, and engagement of higher-quality services. In nursing fields, the use of social media platforms can also inform health patterns in real-time and promote information exchange for enhanced clinical outcomes (Rolls et al., 2016). They also facilitate programs for wellness campaigns and patient education and provide an impetus for knowledge exchange and the development of nursing networks. Bad information quality, patient confidentiality, and legal issues, however, are risks and barriers to the effective and efficient adoption of online platforms such as social media (Lee Ventola, 2014)

The creation of virtual practice groups is the main factor affecting the intention of nurses to participate in social media. Knowledge sharing between colleagues is enhanced, but because these

online communities are private, it restricts knowledge to specific users and prevents the information from being transmitted in a multidisciplinary setting to help boost productivity and results (Rolls et al., 2016b). In the nursing context, the use of social media is affected by ethical dilemmas and privacy problems that could prevent users from benefiting from this highly interactive communication process. The process of information transfer and interaction between different users is intended to be understood through study and trials (Dumas et al., 2018). The significant data provided by the participation of patients within social media groups would support nurses in different health care fields. Furthermore, it is possible to improve interpersonal contact and disseminate evidence-based information more effectively than through traditional networks.

The adoption of social media by nurses in their nursing practice has been well established. What remains widely unclear is what affects the decision of nurses to participate in their activities on social media. Cautionary aspects of the use of social media especially among Ghanaian nurses remain unknown. There are precautionary aspects of social media that need to be raised, especially because professionals employed in the country's health organizations now have daily access to social media most of the time. E-professionalism in healthcare highlights patient confidentiality concerns, low-quality data, lack of evidence-based advice, and blurring of personal-professional limits (Levati, 2014).

Many issues persist regarding policy, ethics, professionalism, privacy, and confidentiality, according to Grajales III et al. (2014)'s narrative study on the role of social media in the medical and health care industry. Social media conversation is usually led by beginners in the sector, as opposed to more senior healthcare authorities (Carroll et al., 2016). According to Ferguson (2013), the nursing profession must actively participate in social media if it wants to gain a full understanding of it. A current online solution, the usage of social media for nurses to continue their

professional development, and revalidation requirements now require particular rules from nursing regulatory authorities (Moorley & Chinn, 2014). Social media should be used in nursing school to help students better define their professional identities and meet their professional goals (Barnable et al., 2018).

There is a knowledge gap and a need for greater research in identifying the characteristics that promote the practical use of social media in nursing and the successful types of platforms (Moorhead et al., 2013). It is yet too early to tell whether or not social media will have a positive or negative impact on the health care industry, but early research suggests that it will have a positive impact on patient care. It is possible to enhance information about the appropriate integration of social media in health care by studying the traits, attitudes, and external factors of users who contribute to the usage purpose and frequency of use of social media. It is a challenge for this study to focus on what motivates nurses to use social media in their daily work.

1.3 Problem Statement

Globally, half of the world's population are social media users (Kemp, 2021) and this includes nurses who are using it both to enhance work performance and for personal related work. A study conducted in the United State of America revealed that the majority (93.41%) of nurses are active users of social media (Kung & Oh, 2014) for nursing practice. Barry and Hardiker (2012) disclosed that social media is gradually gaining root among nurses to enhance performance with more than 540,000 registered nurses and midwives on social media in the UK. These findings indicated that social media usage is considered a necessity and is being used routinely (Mukhtar et al., 2018) by nurses in their daily work activities. This clearly shows that nurses globally are adopting social media to enhance their work performance, but most works of literature on social media studies

globally are focused on the end-user of social media, with little or no attention to factors that influence the adoption process (Ainin et al., 2015).

In Africa, doubts have been raised about the general benefits of internet access and social media use. But in recent years, Africans actively using social media stood at 216 million (representing 17% penetration), and out of this number 202 million access social media on their mobile phone (Kemp 2021). The healthcare industries in Africa are also gradually adopting social media in their service delivery as a result of escalating competition and patient demand for the highest quality care (Britnell, 2012). While social media technology has the potential to improve nursing care, it is not without risks. Social media technology has been described as both part of the problem and part of the solution for safer health care, and some observers warned of the introduction of yet-to-be errors after the adoption of new technologies (Indra & Urmela, 2018). Privacy and confidentiality, unprofessional behaviour, and organizational risk are risks related issues that African face with the use of social media technology while at work (Barry & Hardiker, 2012). Understanding what influences nurses to adopt social media technology in nursing care will help to ensure that the nurses' focus on patient care is never lost as risks involved in using social media are being avoided. (Allen, 2012).

As of January 2020, there are 6 million social media users in Ghana representing 20% penetration (Kemp, 2020). Quite apart from this, there are more than 22 e-health projects in Ghana (Afarikumah, 2014) which are being used by nurses and midwives to facilitate their work and most of these e-health projects are supported by social media. Dwamena et al. (2016), also observed that the majority of nurses in Ghana are using social media for job-related work and professional development. There is enough evidence to suggest that majority of nurses in Ghana are adopting social media to engage in the promotion of health, patient education, outreach, professional

development, and other nursing-related activities. But little has been done in terms of evaluating the factors that impact the adoption of social media by Ghanaian nurses.

Nursing stakeholders have not all embraced social media despite its advantages. Inadequate technical expertise, ethical and privacy issues, a lack of policies and norms, as well as other negative moral and societal consequences associated with traditional social media use, are also probable explanations (Mariano et al., 2018; Ryan, 2016; Schroeder, 2017; Yunus et al., 2013). Regardless of the negative perspective on the adoption of social media, this study acknowledges its power in enhancing the practice of nurses. Though there have been several cautions to nurses by stakeholders in the nursing field about the pervasive of social media for non-worked related issues during working hours, its adoption is still on the increase without much evidence on factors mitigating its escalation among nurses in Ghana.

In Catholic Hospital Battor and other health care facilities in the North Tongu District, it has been anecdotally observed that nurses and midwives adopt social media in nursing activities and other personal issues. For instance, nurses, midwives, and doctors in the obstetric department in Catholic Hospital Battor adopt social media to enhance referral communication among themselves and their catchment areas. Likewise, nurses and other departments in the hospital adopt social media for the nursing process, client education, and professional communication among themselves. There are clear indications that nurses in Catholic Hospital Battor and other health care facilities in the North Tongu District are embracing this new internet-based technology to speed up and enhance their nursing care. The driving forces behind this technology acceptance remain unknown. Therefore, there is a need to understand the factors that flare the adoption of social media by nurses in Catholic Hospital Battor and other health facilities in the North Tongu District of the Volta Region.

1.4 Purpose of the study

The purpose of the study was to inquire into social media adoption by nurses for nursing practice in the North Tongu District in the Volta Region.

1.5 Objectives of the study

The research is intended to focus on the following objectives:

1. To explore nurses' perceived usefulness of social media in nursing practice.
2. To examine nurses' perceived ease of use of social media in nursing practice.
3. To assess nurses' attitudes toward the use of social media in nursing practice.
4. To explore nurses' behavioural intention to use social media in nursing practice.

1.6 Research questions

To address these issues, the study is intended to focus on the following questions:

1. How do nurses perceive social media to be useful in nursing practice?
2. How do nurses perceive ease of use of social media to enhance nursing practice?
3. What is the attitude of nurses toward the use of social media in nursing practice?
4. What is the behavioural intention of nurses to use social media in nursing practice?

1.7 Significance of the study

The study is important because of the benefits that the many healthcare industry stakeholders will get from the study's conclusions. Nurses in the North Tongu District are using social media more than ever before, according to the study's findings. The results of the study will show the difficulties that come with nursing's usage of social media. The study's findings will help nurses better utilize social media in their nursing care delivery, while also adding value to their personal

lives and boosting their sense of self-worth. As a result of the findings, health educators and promoters will be more equipped to use social media platforms for teaching and learning.

Other healthcare professionals will benefit from the study's findings as well since it could help guide their usage of social media when interacting with patients. Additionally, the findings of this study will have implications for policy development on the use of personal communication devices in healthcare settings for social media, theoretical advancement/refinement, and scientific publication. Finally, the research will serve as a springboard for further investigation into the challenges surrounding the use of social media in Ghana's health care sector.

1.8 Operational Definitions

Social media: networking with other people to share information via an electronic communication medium such as Facebook, WhatsApp, Snapchat, telegram, etc.

Perceived Usefulness: Relevance associated with the use of social media usage

Perceived Ease of use: When a person believes that the use of social media is not difficult or requires little effort.

Attitude Toward use: An individual's positive or negative feelings using social media.

Behavioural Intention to use Social Media: An intention of an individual to perform in a specific way toward someone or something.

Nurse: a person who cares for the sick or infirm specifically a licensed healthcare professional who practices independently in a health institution to promote and maintain health.

Nursing Practice / Nursing care: This encompasses services offered by nurses such as health promotion and prevention; care of the sick and disabled; end-of-life care; education; advocacy; research; engagement in defining health policy and in-patient treatment; and research.

1.9 Organisation of the Research

The following are the chapters that make up this research. The study background, problem statement, purpose of the study, study objectives, research questions, and significance of the study, as well as definitions of key terms, are all presented in Chapter One. Chapter Two dealt with the theoretical framework, a review of related literature based on the constructs of the theory used, and the research objectives. The research approach was provided in the third chapter. The study's findings were given in Chapter four. The important findings were discussed in Chapter five. The study's summary, implications, limits, conclusions, and recommendations were discussed in Chapter six.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature review for the study focuses on the theoretical framework of the Technology Acceptance Model (TAM) and literature on social media. The searches were made from Google Scholar, PubMed, Science Direct, African Journals Online (AJOL), EBSCOhost, CINAHL, and MEDLINE. Key terms such as "social media", "social media and nurses", "social media and nursing practice", "social media adoption by nurses", "social media adoption by health professionals", "perceived usefulness", "perceived ease of social media", "attitude toward the use of social media" and "behavioural intention to use social media" were used for the search. Relevant pieces of literature written in the English language from 2012 to 2021 were retrieved and used.

2.2 Justification of Models / Theoretical Frameworks of the Study

The use of psychological, social, and behavioural science theory/models provided the foundation for comprehending human behaviour as it relates to technology acceptance. Several behavioural models or theories guide to explain and predict the adoption of technology by people. Four frameworks could be related to this research. They are:

1. Theory of Reasoned Action (TRA) by Ajzen and Fishbein (1980),
2. Innovation Diffusion Theory (IDT) by Rogers (1995)
3. Model of Personnel Computer (PC) Utilization by Thompson et al. (1991) and
4. Technology Acceptance Model (TAM) by Davis (1989)

Only, one of these frameworks was selected for this current study due to its applicability to the study objectives.

2.2.1 Theory of Reasoned Action (TRA)

Research on the Theory of Reasoned Action (TRA) has been done by Fishbein (1967), however, it is unrelated to the study because it was revised and tested by Fishbein and Ajzen (1975). According to TRA, three general components exist, namely: (1) behavioural intention; (2) attitude; and (3) subjective norm (Otieno et al., 2016). According to the notion, a person's behavioural intentions are influenced by their views and subjective norms (Yzer, 2017). There is no way to tell whether individual behaviour like using innovation is driven by behavioural intentions unless you use the TRA to find out. This is because behavioural intentions are determined by an individual's attitude toward behaviour, by subjective norms surrounding behaviour, and by their perceptions of how easy it is to carry out a particular behaviour (Otieno et al., 2016).

However, Otieno et al., (2016), disclosed that the TRA does not fit for evaluating studies such as technology adoption and diffusion. TRA also lacks the credibility of addressing the role of habit in addiction and cognitive deliberation (Taherdoost, 2018).

2.2.2 Innovation Diffusion Theory (IDT)

Innovation Diffusion Theory was proposed by Rogers (1995). He proposed that innovation is an individual, a group, or an organization's perception of a new idea, practice, or objective. Diffusion is a social change process in which an innovation is conveyed to members of a social system over time through certain channels (mass media or interpersonal). The choice to adopt or reject a new technology is conceptualized in numerous stages. He or she begins by being aware of an innovation and then forming an opinion about it based on that perception (its characteristics). The individual next decides whether to adopt or reject the innovation, puts it into practice, and then verifies his or her decision. The relative advantage, compatibility, complexity, trialability, and observability of innovation are all perceived features (Rogers, 1995). Perceived attributes, according to Rogers

(1995), are the characteristics of an innovation that make it more or less appealing to the individual. The perceived relative advantage of an invention is the degree to which it is regarded to be superior to the current idea or practice; the larger the perceived relative advantage of an innovation, the faster it will be adopted. The degree to which an innovation is seen to be compatible with an individual's current values, beliefs, past experiences, and requirements is referred to as compatibility. The degree to which an innovation is seen as difficult to comprehend or use is called complexity. The degree to which users can alter or apply an innovation on a small scale is referred to as trialability. The degree to which the outcomes of an innovation are visible to others is known as observability. Innovations with obvious results are more likely to be adopted than those with less obvious outcomes (Rogers, 1995).

The current version of the theory does not effectively describe what we see in the behaviours of individuals and organizations when making decisions about innovation adoption, hence it is unsuitable for the current study. Diffusion theory's relevant drawbacks include the following;

1. Much of the evidence for this theory, including the adopter types, did not come from the health field, and it was not created to specifically apply to the adoption of new behaviours or health innovations.
2. It does not consider an individual's resources or social support when deciding to adopt a new behaviour (or innovation).
3. Failure to provide precise conceptual and operational definitions of adoption.
4. It is more effective with behaviour adoption than with behaviour cessation or prevention.

2.2.3 Model of Personal Computer Utilization (MPCU)

Thompson et al. (1991) established the Model of PC Utilization based on Triandis' (1979) theory of interpersonal behaviour (MPCU). Triandis' research yielded a theoretical framework for describing how human behaviour occurs and the factors that influence it (Triandis, 1979). "Action is determined by what people would like to do (attitudes), what they think they should do (social norms), what they have usually done (habits), and the expected consequences of their behaviour," according to Triandis' paradigm.

As time went on, Thompson et al. (1991) developed and adapted Triandis' theoretical model for the information systems setting to forecast PC use (Venkatesh et al., 2003). Although it is difficult to forecast human acceptance and usage of new information technologies, the nature of this theoretical model allows it to be particularly useful. Six core constructs are mentioned in the MPCU as having the potential to influence PC usage behaviour. These include people's feelings (affect) toward the use of PCs, social norms surrounding the use of PCs at work, general computer usage habits, expected consequences of PC usage by individuals, and the degree to which facilitating conditions are available at the workplace (Thompson et al., 1991).

The Personal Computer Use Model is likewise inappropriate for this research. The model was criticized for having a successful theoretical foundation for explaining and analysing computer usage behaviour in a voluntary situation. Furthermore, this model's ability to adequately convey the subject matter to which it belongs is quite limited.

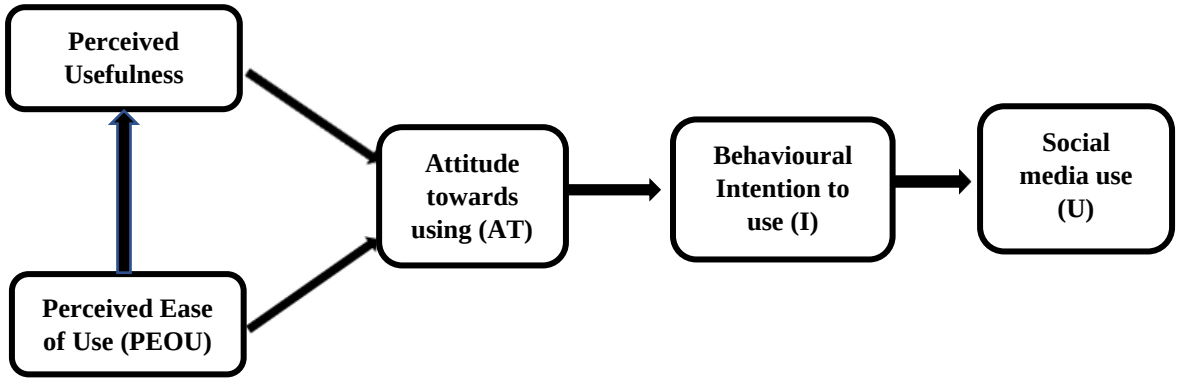
2.2.4 Technology Acceptance Model (TAM)

Lastly, Fred Davis' Technology Acceptance Model (TAM) was considered for inclusion in the analysis. Taking into account the study's goals, this framework is ideal. This method was better suited to qualitative research due to its five simple constructs. Because of its structure, TAM is ideal for simulating how users will accept new information systems or technologies. To motivate a user to accept new technology, TAM uses core variables such as perceived utility, perceived ease of use, and attitudes toward new technology. Outcome variables are then used to measure whether or not a user has accepted the technology. One way or another, perceived usefulness (PU) and perceived ease of use (PEU) explain the results.

Directionally, perceived usefulness and perceived ease of use of technology determined an individual's attitude toward the use of that technology. Whiles both perceived usefulness and perceived ease of use influence one attitude, perceived usefulness can directly influence individual behavioural intention to use a technology (Rafique et al., 2020). Attitude toward use also determines behavioural intention to use. In short, these two behavioural beliefs, perceived usefulness and perceived ease of use, directly determine individual attitude toward use which intend also influence one behaviour intention and actual use of that technology. The direction of the flow of constructs in the TAM is illustrated in Figure 2. 1. Perceived usefulness is the strongest predictor of an individual's intention to use information technology (F. D. A. Davis, 1986).

Literature on the model's constructs was primarily reviewed, but literature on social media and social media in nursing had previously been examined.

Figure 1: Technology Acceptance Model (TAM)



Technology Acceptance Model (TAM) Adapted from Davis (1989).

2.3 Social Media

The phrase "social media" has a wide range of definitions that are always changing. Individuals and communities can use the phrase to refer to Internet-based tools that allow them to gather and communicate, exchange information, ideas, personal messages, photographs, and other content, and, in some cases, collaborate with other users in real-time (Peck, 2011). Kaplan and Haenlein (2012) also defined social media as "a group of Internet-based applications that allows users to create and exchange user-generated content". The establishment of profiles for social connectivity and information sharing, as well as search algorithms and privacy features, are enabled by social media (Chang & Hsiao, 2013). Users can then articulate a list of other users with whom they share and interact (Kane, 2014).

Carr and Hayes (2015), observed that social media is composed of three parts. They defined them as devices that create and distribute content, devices that retrieve content, and individuals who use the information for official and personal purposes. These three parts tie its users to one platform (Varotto et al., 2016). According to Gao et al. (2019), these platforms facilitate users to send and share information without any time and space constraints. van Zoonen et al. (2017), observed

social media from an organizational behaviour perspective is divided into two categories: enterprise social media and public social media. Web-based platforms for enterprise social media allow employees to: (1) communicate private messages with co-workers or broadcast messages to the entire organization; (2) explicitly indicate or implicitly instruct specific co-workers as communication partners; (3) post, edit, and sort texts and files linked to themselves or others; and (4) view the messages, connections, texts, and files linked to themselves or others. (Leonardi et al., 2013). Commercial providers (e.g., Facebook, Linked In, WhatsApp, and Twitter) create and administer public social media, which is frequently supplied for free. (Moqbel et al., 2013).

There are numerous social media apps and social networking sites that are always open for social interaction. (Gao & Feng, 2016). SNSs are web-based platforms that incorporate a variety of computer-based communication tools. As a result, different social networking (SN) applications provide users with diverse functions. Kaplan and Haenlein (2012), divide social media into six categories: collaborative projects (e.g., Wikipedia); blogs and microblogs (e.g., Twitter); content communities (e.g., YouTube); social networking sites (e.g., Facebook); virtual gaming worlds (e.g., World of Warcraft); and virtual social worlds (e.g., Second Life). Social media has become an integral part of our information gathering and sharing tactics, and it is changing the way we interact.

2.4 Perceived usefulness of social media

According to the TAM, perceived usefulness and ease of use of technology determine attitude and usage intention, which leads to acceptance and usage of the given technology. Perceived usefulness is defined as an individual's belief that utilizing new technology will improve or enhance his or her performance. (F. D. Davis, 1989). In another word, it is the benefits or the advantages the user derives from the use of the technology.

In the context of nurses' social media adoption for nursing practice enhancement, usefulness refers to the extent to which nurses feel that utilizing social media would improve their nursing care or productivity, hence improving the health institution's outcome. A technology system is highly perceived as useful if the user believes that its existence will positively enhance the user practices hence the user perceives the system to be an effective way of practising the tasks (Henderson et al., 2017). An individual's assessment of the outcome of their conduct in terms of the anticipated advantages is based on the desirability of usefulness. (Al-Daihani, 2010; Verhoef et al., 2014). Most users reject technology if they perceived it not to be useful even if the technology was easy to use (Dzandu et al., 2016). It has also been established that the reason cited for the rejection of social media by young non-users is related to perceived usefulness, specific social practices, and self-presentation and identity of the social media (Laranjo et al., 2015; Muslichah, 2018). Findings from the literature have shown that perceived usefulness has a significant effect on user adoption and satisfaction across a range of technologies including social media (Plewa et al., 2012).

A study conducted by Muslichah (2018), on students, revealed an indirect effect of self-efficacy on behavioural intention to use academic information systems though perceived usefulness is not significant. Perceived usefulness does not always influence the intention to use social media (Boon-itt, 2019; Kim, 2014). Ismail (2016), cited the reason that owning a social media tool and accessing social media sites or platforms can be for prestigious reasons rather than for job practices and, mostly the user does not comprehend the enormous benefit for its usage for nursing practices. The degree of technology's perceived usefulness and asymmetric information flow also can be affirmative factors (Ismail, 2016).

2.5 Perceived Ease of Use of Social Media

The degree to which a person believes that utilizing a system will be simple is characterized as perceived ease of use. (F. D. Davis, 1989). Perceived ease of use of social media in the context of this study refers to the extent to which users believe that using social media to improve performance is effortless. Furthermore, because human effort is a finite resource, users are more likely to adopt an application that is seen to be easier to use than another. (F. D. Davis, 1989). The point of view of the user on the ease of understanding greatly aids to determine the potency and the degree of the user's adaption to new technology (F. D. Davis, 1989). Dzandu et al. (2016), discovered that if a system is very simple to use, people will go to great lengths to learn about its capabilities and eventually desire to keep using it. Numerous studies have revealed that perceived ease of use is a major causal factor of attitude towards a technology (Acarli & Sağlam, 2015; Al-Rahmi & Zeki, 2017; Setterstrom et al., 2013). In support of this, (Sago, 2013), proposed that the perceived ease of use of social networking services is the driving factor behind their popularity. Furthermore, numerous research has found that perceived ease of use has a favourable association with behavioural intention to use social media, both directly and indirectly. (Al-Rahmi et al., 2015; Chang & Yang, 2013; Dumpit & Fernandez, 2017).

Initial drivers of system-specific (social media) perceived ease of use are individual differences and situational circumstances, with the effect becoming greater with experience. Characteristics of the user-system interaction play a role in driving the perceived ease of use of the target system as the user experience with the target system (social media) grows. The perceived ease of use of social media is also influenced by internet reliability and speed. Dumpit and Fernandez (2017), observed that social media can be adopted to enhance performance if the internet and the speed are reliable.

Chow et al. (2012) discovered that computer self-efficacy only explained 7% of the variance in perceived ease of use in a study to investigate the intention to utilize Second Life (virtual environment) for boosting healthcare education. Even though students were generally confident in their computer skills, the data demonstrated that they did not find the virtual ward easy to use, with just 7% of the variance explained by the perceived ease of use construct. (Chow et al., 2012). Similarly, Djamasbi et al. (2016) discovered in their study that there is no significant relationship between the system's ease of use and the users' attitude.

In another study, Wiid and Cant (2013) revealed that perceived ease of use of a technological system (social media) is strongly linked to clarity and understandability of the system. If a system's applications are very clear and users can understand how it works, it will be perceived as easy to use hence its adoption by workers but if its usage is complex, workers will feel reluctant to use it (Wiid & Cant, 2013). Similarly, Moslehpour et al. (2018), opined that a social media application will be more favourable to use than another if it is most likely to be clear and understandable. In a study conducted in Germany, it has been revealed that the understandability and clarity of social media are dependent on digital literacy (Festl, 2021).

Some technology demands deep thinking before it can be applied to work. Mitzner et al. (2016) observed that technology is perceived to be easy to use if it does not demand much thinking in the working setting. Deng et al. (2018), also stated that employees' perceptions of using a specific technology that will be free of physical or mental effort will lead to its perceived ease of use, and thus technology adoption. Shaw et al. (2018) and Setterstrom et al. (2013), also linked perceived ease of use of technology to its ability to be navigated. They discovered that people accept certain technologies because they are easier to use. People, on the other hand, will not use or adopt technology if it is difficult to use or requires a specific skill to operate (F. D. Davis et al., 1989).

2.6 Attitude towards using social media

Attitude toward the usage of technology refers to a physical propensity that is shown by appraising a specific entity favourably or unfavourably. (Davis, 1989). According to TAM, personal attitudes regarding technology influence the adoption and use of that technology (Bogea & Brito, 2018). Similarly, attitude toward social media use has a direct effect on user intention (Rolls et al., 2016). Al-Shdayfat (2018), revealed in a study on undergraduate student nurses' attitudes toward utilizing social media websites that the majority of nurses students have good attitudes regarding social media use for educational and professional objectives, even though just a minority use it for professional purposes. Oducado et al. (2019), also stated that nurses had a favourable attitude and impression of using social media properly for professional purposes. The leadership of nurses influences their attitudes on social media usage. In encouraging and supporting a positive attitude toward social media usage by nurses, the hospital plays a leadership role; thus, leadership and support in developing a Web 2.0 environment are important to the decision-making process, including the exchange of information, education, social engagement, and mutual intelligence development (Lau, 2011). The attitude of the hospital is therefore a major concern of nurses connected with the implementation of Web 2.0software (Lau, 2011).

Evidence-based medical-surgical knowledge is a valuable resource for nurses in healthcare systems. Nurses generally use social media for this purpose. The general attitude of nurses toward the use of social media as their primary source of medical and surgical knowledge was much more hopeful when compared to those who do not utilize social media as a source of medical and surgical information. (Zigdon et al., 2020). Nurses who used mobile phones to acquire health information had considerably higher attitudes toward the ease of using social media platforms for

health requirements than those who did not use mobile phones to access information. (Zigdon et al., 2020).

Wai-Yu Lee and Mei-Kwan Cheung (2014), said the attitude toward the use of technology depends on individual experience with the technology. Individuals who have a pleasant experience with social media are more likely to use it again. Lee et al. (2012), also disclosed that people demonstrate a pleasant or feeling-good state when they require minimal effort but can achieve a satisfying goal through the use of technology hence developing a positive attitude toward technology.

Notwithstanding these observations, people have an unpleasant experience with technology use hence their negative attitude toward technology use is unfavourable. Terzi et al. (2019), observed that socially isolated students have a negative attitude toward social media. In Leist (2013)'s study, data privacy protection, a lack of a social media code of conduct, different forms of self-unveiling and self-reporting on social media, a lack of personal germane on social networks, and disorder of managing registration were identified as troubling reasons for negative attitudes toward social media use among adult novices.

2.7 Behavioral intention to use social media

The motivational elements that drive a specific behaviour to utilize technology or the desire to use technology that is propelled by certain underlying variables are referred to as behavioural intentions. (Chao, 2019). The stronger the motivation to use the technology, the more likely the technology will be used (Chao, 2019). In the technology acceptance model, behavioural intention to use technology leads to the actual use of the technology (F. D. Davis, 1989)

Bogea & Brito (2018), proposed that personal attitudes regarding technology influence the adoption and use of technology. As a result, the perceived utility, perceived ease of use, attitude toward usage, and behavioural intention to use the technology acceptance model predict nurses' adoption of new technologies. (Lederer et al., 2012).

Results from the multivariate regression analyses revealed that social influence, performance expectancy, facilitating conditions and voluntariness of use social media were positively associated with behavioural intentions to use the technology (Bogea & Brito, 2018). Social influence is the mechanisms by which people affect the beliefs, feelings, and actions of others, either directly or indirectly (Turner, 1991). Abbas Naqvi et al. (2020)'s work identified social influence processes as having a significant impact on long-term social media intention. Likewise, Pahnila et al. (2011) showed that enabling conditions, such as the availability of strong networks and fast internet, had a direct impact on behavioural intention to use social media.

Another factor that influences behavioural intention to use technology is knowledge or information-seeking behaviour (Ghazavi-Khorasgani et al., 2018). Knowledge or information-seeking behaviour is a deliberate effort to find information and use that information to meet needs that arise out of necessity to achieve a goal. (Ghazavi-Khorasgani et al., 2018). Nurses and other health professionals are said to prefer social media and other online resources when looking for information about their jobs (Sarbaz et al., 2016). Similarly, a study undertaken in the United States, Canada, Taiwan, and Nigeria discovered that social media, internet resources, and peers are the top sources of evidence-based knowledge for hospital nurses. (Alving et al., 2018).

Many previous types of research on technology adoption have suggested a significant indicator in the use of social media (Al-Rahmi et al., 2015). Lulin et al. (2020) show that the optimistic mindset of users contributes to a greater intention to use the technologies of social media. To better

understand the usage of these social media, Altawallbeh et al. (2015) postulated in their study that there is a likelihood of contradictory intent and actions because unexpected events will affect the intention to embrace social media. Another research by Dlalisa and van Niekerk (2015),) investigated the user's purpose and found no significant association between their actual use of social media for learning.

Hazzam and Lahrech (2018) revealed that perceptions, perceived utility, habits, and behavioural goals are key factors that affect the frequency of social media usage by health professionals to improve efficiency. Furthermore, the ease of use of social media has a positive impact on behavioural intent, as evidenced by easy access and navigation among social media networks. Again, Hazzam and Lahrech (2018) suggested that the image of health professionals was negatively affected by the intention to use it. Confidentiality, personal information, and the transparency of social networking platforms could all help to explain such a bad association. (Hazzam & Lahrech, 2018).

2.8 Actual use of social media

The actual technology use is the end-point where people put into use the new technology and this is manifested through the frequency of use and accumulated time spent using the new technology (Mariano et al., 2018). In the context of this study, actual social media use is manifested through the cumulated number of hours spent on social media, frequency of use, and types of social media application use. Turner et al. (2012), observed that due to the need to use computer-recorded forms of new technology usage, it is likely that qualitative measures of actual usage are used because it is much more difficult to measure actual usage quantitively than qualitatively.

In a study to show the actual use of social media, Kung and Oh (2014) observed that on a daily or weekly basis, nurses spent over five hours per day on social media, looking for health information, and they felt comfortable doing so. In a similar study conducted by Surani et al. (2017) and Wang et al. (2019), they revealed that nurses spent five hours or less on daily basis connecting with colleagues, clients, family, and friends discussing professional or social issues.

In a related study, Marin-Gomez et al. (2018), Nikolic et al. (2018), and Torrejon et al. (2020) indicated that nurses and other health professionals prefer WhatsApp as their first-choice social media application followed by Facebook, Youtube before Instagram and Twitter.

2.9 The Benefits of social media in Nursing

The growth of online communities in nursing via social networks has emerged as a driving factor in health care (Moorley & Chinn 2014). The advantages of such technology are well-known, including real-time exchange of health-related information, access to research data, the ability to maintain contact with patients and their families, reaching new audiences for education and health services, and disseminating organizational achievements, among others. (Reinbeck & Antonacci, 2019a) also, some of these benefits range from enhanced professional networking, professional education and continuous professional education, patients care, and patient education (Lee Ventola, 2014).

Some of the most popular social media sites for nurses include those that allow them to join online groups, listen to experts, network, and interact with colleagues about patient issues. (Courtney, 2013). Nurses' social-networking platforms for professional networking are generally restricted to specific nursing specializations and cadres (MacMillan C., 2013). These sites cover a wide range

of themes, including ethics, politics, biostatistics, practice administration, career planning, and even medical dating, in addition to clinical problems (Grajales III et al., 2014).

Another type of professional networking among nurses is using crowdsourcing to solve problems or gather information and opinions. (Chretien & Kind, 2013; Dizon et al., 2012). Sociable networks can also be used to connect nurses in developing nations to medical experts who are based in more developed ones (MacMillan C., 2013). A surgical procedure can be streamed via Youtube, and Twitter can be used to ask real-time questions about it (MacMillan C., 2013). A new communication channel has opened up for nursing professionals to network and share medical information in ways that were previously impossible (Dizon et al., 2012)

Professional education is one area in which social media is very useful to connect with students in a real life. These social media's communication capabilities are also being used to improve clinical education (von Muhlen & Ohno-Machado, 2012) Clinical curricula are being updated to meet the changing habits and culture of new students as a result of the high percentage of social media use among 18- to 30-year-olds. (Grindrod et al., 2014; von Muhlen & Ohno-Machado, 2012) Numerous studies have demonstrated the use of social media platforms to improve clinical students' understanding of communication, professionalism, and ethics. (Peck, 2014). Universities are also utilizing social media to attract students, offer access to academic resources, and establish virtual classes and office hours, among other unique educational opportunities. (Peck, 2014).

Online social networking platforms have also altered nurses' educational experiences, with one survey suggesting that fifty-three percent of nursing schools now employ these techniques. (Peck, 2014). Nursing students, for example, have used Twitter to improve their clinical decision-making skills in critical care settings (Peck, 2014). Again, Peck (2014) stated that clinical professors

instructed students to examine films of clinical scenarios and tweet their thoughts on the condition of the patient to receive feedback from their peers. Using a class hashtag to share resources such as podcasts, websites, articles, and photographs, or offering a live stream of student insights throughout the class, are two other ways Twitter is used in nursing education. (Peck, 2014). YouTube and other video-sharing websites can be used in the classroom to stimulate discussion, explain a point, or reinforce a concept. Students can see a video before answering clinical reasoning problems (Peck, 2014).

The use of social media in clinical education, on the other hand, has gotten mixed reviews. Courses that use such tools have typically received an excellent response, although some students are concerned that using Facebook for instructional purposes is invading their personal lives (von Muhlen & Ohno-Machado, 2012). Balancing the benefits of increased communication provided by social media with the negatives of increasing distraction is also an issue in an educational context. Regrettably, standards for the appropriate use of social media platforms in education are still in their early stages. (Peck, 2014).

In nursing, Continuous professional development is key to new skills acquisition and knowledge update. Social media sites have helped to connect nurses through online social media applications like Facebook and Twitter, as well as more professional-oriented networks like LinkedIn and ResearchGate for teaching nurses in their particular specializations. (George et al., 2013). In recent years, several nurse-specific networks have emerged, such as WeNurses, Evidence-Based Nursing Journal Chat, and WeMidwives, to serve as an online meeting point for nurses to learn from peers, communicate clinical issues, and manage problems, consult about specific patients, and even coordinate care team interactions. (Moorley & Chinn, 2015). Maloney et al. (2017) observed that health professionals are increasingly using social media platforms to maintain their professional

progress, which is becoming acknowledged and financially viable hence social media have been established as useful for training nurses and midwives irrespective of their geographical location (Mather et al., 2017; Mather & Cummings, 2015; Murray & Ward, 2019)

Although there has been a hesitation among healthcare practitioners to use social media for direct patient care, physicians and healthcare facilities are steadily accepting this practice. (Dizon et al., 2012). Nurses are becoming more interested in connecting with patients online, according to recent studies (Larson, 2020). Twitter, YouTube, and Facebook are just a few of the social media tools nurses are using to communicate with patients (Paton, 2020). The majority of nurses believe that social media may be used to educate and monitor patients, as well as urge changes in behaviour and medication compliance, with the goal of "improved outcomes."(Larson, 2020) according to a recent survey.

According to Santoro and Quintaliani, (2013), smart gadgets and social media apps have made it easier to retrieve educational resources, allowing for point-of-care education to take place. In a similar study, Rolls et al. (2016) noted that virtual communities on YouTube are viewed as important knowledge gateways by health care practitioners for accessing clinically meaningful and high-quality information that helps them make better practice decisions. It was concluded by Piscotty et al. (2016) that immediate access to important health information can contribute to better patient outcomes. Other research, however, has revealed that there is still considerable opposition to using social media to communicate with patients. (Dizon et al., 2012). According to Org et al. (2017), technical challenges associated with social media use can slow down its utilization for nursing activities.

Another benefit of social media in nursing is its ability to generate, disseminate and share health and other relevant information promptly among nurses and patients. This has given nurses a new

communication channel through which they may share and discuss health information in previously impossible ways (Farsi, 2021; Org et al., 2017b; Piscotty et al., 2015). Ng et al. (2019), discovered that the usefulness and efficiency of using social media to actively communicate a clinical and educational patient safety message to a specific target audience are increasing as web 2. technology improves. This has made it more effective for nurses to use a coordinated social media strategy to share health evidence with a geographically diversified audience of healthcare practitioners, researchers, and healthcare organizations. can be effective. (Burke-Garcia et al., 2018; Dyson et al., 2017; Sibley et al., 2020).

Again, Loeb et al. (2017) revealed that the European Association of Urology used Twitter to distribute clinical procedures to its members. In comparison to traditional techniques, the study found that social media is an effective instrument for clinical practice guideline dissemination and adherence. This contradicts a study by Narayanaswami et al. (2015) who discovered no difference in the importance of social media-based interventions for disseminating clinical guidelines when compared to traditional techniques, even though social media was effective in reaching a huge number of participants. Social media can also be used to expand the health referral network. According to Joshi et al. (2018), the WhatsApp application is a powerful tool for neurosurgical referrals. It is a low-cost, dependable, and user-friendly program that enables the smooth transfer of clinical videos and scan pictures to the on-call neurosurgical team. Solely on medical data and imaging tests, Othman and Menon (2019) concluded that the WhatsApp chat interface looks to be an excellent tool for inter-hospital referral and gaining rapid responses from hospitals' referee centres.

2. 10 Risks of using social media in nursing

Social media adoption by nurses has many perceived benefits, but the literature study found that several obstacles made it difficult for nurses to use social media in their nursing practice. Maintaining professional integrity when using social media is exceptional for working nurses.

Panahi et al., (2016) indicated that inaccurate information is one of the primary issues social media users are faced with. They opined that information anarchy and inaccurate information are characterized by a situation in which locating relevant information is difficult due to the less ordered, unauthenticated, and uncontrolled nature of information created and share(Panahi et al., 2016a). Mostly, if there is no information anarchy and the information is accurate, most professional discussions are intermingled with both social and professional conversations (Panahi et al., 2016a). Moorhead et al. (2013) also observed that the biggest issue with health information found on social media or other internet sources is a lack of quality and reliability. Authors of medical material published on social media sites are frequently unknown or just have insufficient information to identify them. Furthermore, medical information could be unreferenced, incomplete, or informal (Pirraglia & Kravitz, 2013). Meanwhiles, Learmonth et al. (2017), indicated that because of the professional expertise and qualifications of health professionals, health information transmitted by them through any health-related websites are preferable sources of health information for patients and the general public.

With the advent of information technology, laws for the protection of privacy were developed, and they have since been accepted all over the world (Green, 2017). The concept that individuals should have control over their personal information is at the heart of data protection legislation (Green, 2017). Nurses' concerns about using social media typically revolve around the possibility of negative consequences coming from a breach of patient confidentiality (von Muhlen & Ohno-

Machado, 2012). Under state privacy laws, such transgressions might expose nurses and healthcare organizations to liability (Chretien & Kind, 2013). This patient's charter, according to Petrie and Bennington (2014), describes the privacy, rights, and expectations that patients have as part of their human basic rights. Patients may feel they have lost their dignity when their privacy is violated, even if it is done inadvertently, according to Spector and Kappel (2012), damaging the therapeutic relationship that occurs between nurses and patients. These unethical practices may jeopardize the professional reputations of nurses as well as the reputations of healthcare facilities (Lee Ventola, 2014). According to Ghana Health Service (2018), health practitioners, such as registered nurses, must conform to the professional standards of the code of professional conduct when using social media. Patient information must always remain confidential and only be used for professional purposes (Ghana Health Service, 2018).

Distraction and task interruption are other potential risks associated with social media in nursing. According to Kushlev et al. (2016), Phone alerts draw users' attention away from other tasks; phones may raise cognitive burden by rendering people more susceptible to distractions, and increased mental load can lead to inattention and hyperactivity. People were more upset and frustrated, felt more time pressure, and expended more mental effort when they were interrupted by social media notifications than when they were not. (Kushlev et al., 2016). Thus, not all digital interruptions are created equal: People are more likely to incur attentional and emotional costs when they are interrupted by the unexpected arrival of a new notification.

Distractions from the social media alert have been shown to have an impact on nurses' and other health professionals' decision-making processes (Reed et al., 2018). Nurses who are constantly distracted by social media can make mistakes in medication calculations and administration, resulting in significant harm to patients, or even death (Thomas et al., 2017). According to

research, the social media application on smartphones is a stimulator that can divert nurses' attention away from their nursing procedures and absorb cognitive resources that are useful for these activities (Fiorinelli et al., 2021).

Another setback with social media usage in nursing is its addictive nature. Social media addiction is characterized by a compulsive need to use social media at the expense of other activities and is characterized by clinical features such as loss of attention, tolerance, and control; mood disorders; and withdrawal symptoms (Lee et al., 2014; Zivnuska et al., 2019). The prevalence of social media use among younger people and its association with addictive behaviour is a common theme in studies on social media (Davey & Davey, 2014; Kim et al., 2014). Because young people use social media more frequently, they are more vulnerable to the negative consequences of excessive use, and social media addiction is seen as a particularly high-risk factor for young people (Kim et al., 2014).

There is evidence that nurses who use social media too much both at home and work, delay nursing tasks and struggle to meet their standard of care (Duke & Montag, 2017; Priyadarshini et al., 2020; Zivnuska et al., 2019). According to Hoşgör et al. (2021), excessive use of social media by health professionals during working hours had negative consequences such as the inadequate provision of health care to patients, not using their time in a patient-centred manner, (McBride et al., 2015) using their energy for socializing and recreational purposes, and thus lowering their working performance. Hoşgör et al. (2021) concluded that health professionals, particularly nurses, play an important role in providing and maintaining the healthcare that patients require. At work, nurses think, plan their actions, and contribute to the healing process on behalf of and with the patient, hence, addictiveness to social media could impede the healing process.

CHAPTER THREE

METHODOLOGY

This chapter addresses the study designs used, the research setting, the target population, and the sampling strategy used to achieve the specified objectives. It also looked at the tools that were used, as well as the data collection, analysis, and management methods. It also includes details on how ethical requirements were met and the study's trustworthiness.

3. 2 Philosophical paradigms

The constructivism philosophical paradigm underpinned the methodological approach of this study. According to this philosophical paradigm, people develop their understanding and knowledge of the universe by experiencing the world and reflecting on those experiences. (Kivunja & Kuyini, 2017). It is based on the analogy or basis that people form or construct much of what they learn through experience (Mittwede, 2012).

The researcher believes nurses' experience with social media usage in their nursing practices is a phenomenon with several meanings and interpretations. As a result, the constructivist paradigm, which underpins qualitative inquiry, was employed. As a result, an exploratory qualitative approach was suited for the study because it allowed participants to express themselves freely and honestly.

Reality can be viewed from a variety of philosophical perspectives. Qualitative and quantitative paradigms both seek to discover the truth. Because of the positivist orientation, social observations are treated as physical phenomena in the quantitative research paradigm. The qualitative research paradigm argues that genuineness is subjective, multifaceted, and socially constructed by

participants. Mixed methods are a synthesis of both paradigms, even though the level of mixing is still a source of contention in the literature (Creswell, 2014).

3. 3 Research Design

An exploratory descriptive qualitative design was employed in understanding social media adoption for nursing care among nurses in North Tongu District. Situating the in-depth exploration of this phenomenon within the technology adoption model; the usefulness, ease of use, attitude, and behaviour towards social media use was explored. Interviews were conducted within the natural environment of participants and their narratives were recorded, transcribed, and analyzed for patterns.

Bradshaw et al. (2017), noticed that qualitative research is founded on a global, holistic perspective; it believes that there are various built realities in life where the known and the unknown cannot be separated; the inquiry is also value bound, and all of its application is time-bound and time context. The naturalistic approach is used in qualitative research to gain an understanding of a phenomenon by accessing the meanings that participants attach to it (Bradshaw et al., 2017).

When little is known about a phenomenon, scenario, or problem, an exploratory qualitative design is utilized. (Polit & Beck, 2013). An exploratory qualitative approach was then suited for the study since it allowed participants to express themselves more freely than closed-ended questions utilized in quantitative methodologies. This method was used to explore factors that influence social media adoption by nurses in the Catholic Hospital Battor in the North Tongu District because little is known about the factors influencing its adoption by nurses for practice enhancement in the Catholic Hospital Battor in North Tongu District.

3.4 The setting of the study

The research was carried out at the Catholic Hospital Battor in the Volta Region's North Tongu District. The district is one of the Volta Region's twenty-five districts. The North Tongu District, which was founded in 2012, is one of the newest District Assemblies, with its capital in Battor. The North Tongu District Assembly was established in July 2012, carved out of the former North Tongu District, which is now Central Tongu, by Legislative Instrument (L.I 2081).

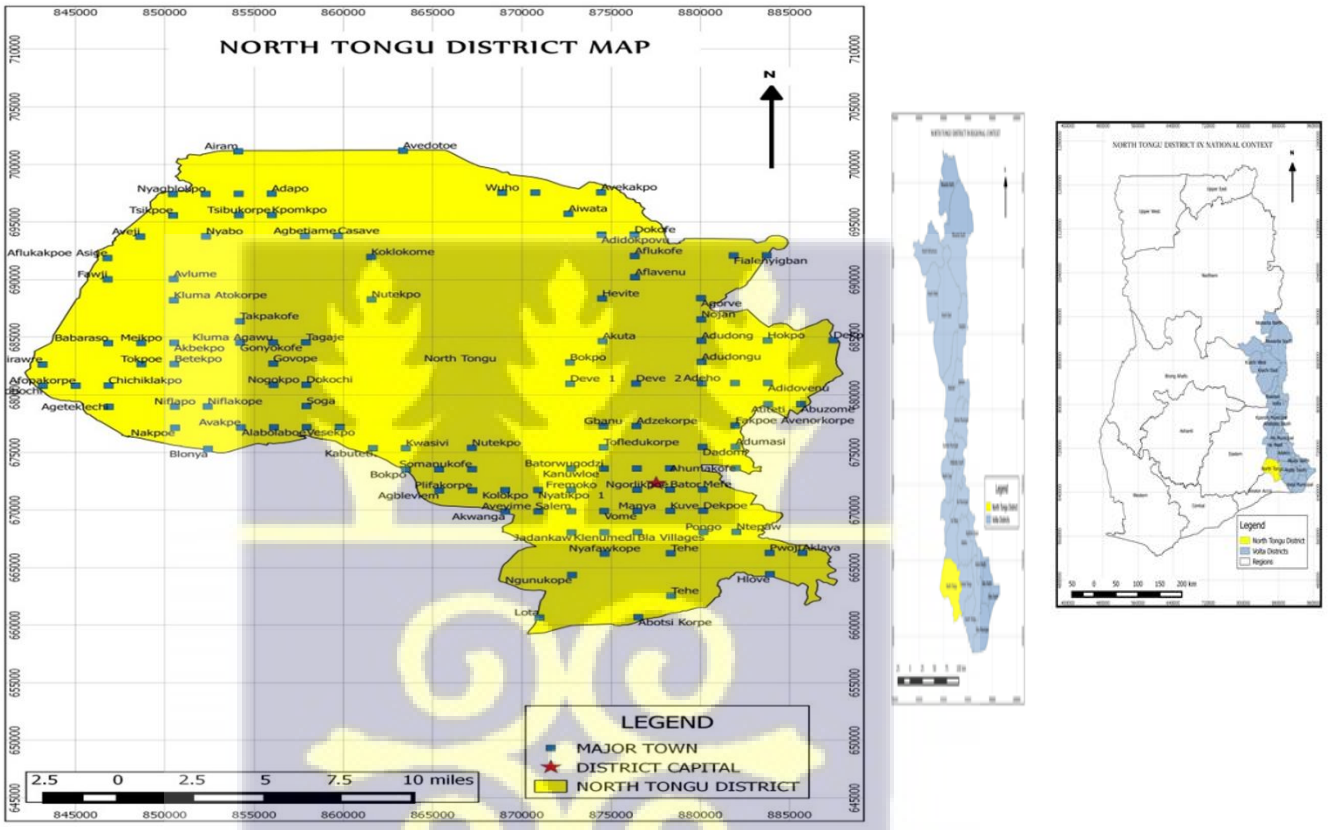
The district shares borders with the Central and South Tongu districts to the east, to the west with the Asuogyman district and Dangme West district, Adaklu district and Ho municipality to the north, and to the south with the Dangme East District. The population of The District is 89,777 of which 42,492 are male (representing 47.3 percent) with 47 females, 285 representing 52.7 percent. The district contributes 4.2% of the total population of the Volta Region and 0.4% of the total population of Ghana (Ghana Statistical Service, 2013).

There are twenty-eight health facilities in the North Tongu District Assembly, including one hospital (Catholic Hospital Battor), six health centers, twenty CHPS zones, and one private clinic. These establishments, which provide health services to citizens, are Ghana Health Service and the Christian Health Association of Ghana. Because it is the largest and only hospital in the district, Catholic Hospital Battor was purposefully chosen for the participants' recruitment. Furthermore, Battor has two internet network providers (MTN and Tigo) with good coverage.

According to Ghana Statistical Service, (2013), 37.3 percent of the district's population aged 12 and up owns a mobile phone. Males account for 43.4 percent of mobile phone owners, while females account for 32.1 percent. This suggests that males are more likely than females to own a mobile phone. In the District, 2.2 percent of the population aged 12 and up uses the Internet. According to the report, males account for 3.3 percent of internet users, while females account for

1.2 percent. Furthermore, the survey shows that 444 houses have desktop/laptop computers, accounting for 2.4 percent of the district's total households. Male-headed households account for 3.1 percent of those with desktop/laptop computers, while female-headed households account for 1.3 percent.

Figure 2: Map of Ghana showing North Tongu District



3.5 Target population

The study's target group was all nurses working at Catholic Hospital Battor in the Volta Region's North Tongu District.

3.6 Inclusion and Exclusion Criteria

3.6.1 Inclusion Criteria

The criteria for inclusion in this study were nurses (RGN, EN, RM) working in the North Tongu District at the time of data collection who:

1. Voluntarily consented to participate in the study.
2. Have been working as a permanent staff for more than six months (this is to enable new staff to be well integrated into the working environment) in Catholic Hospital Battor in the North Tongu District uninterrupted.
3. Have ever used a smartphone or any other personal communication device to access social media before.

3.6.2 Exclusion Criteria

1. Student nurses were not part of the study
2. Nurses on any form of leave were not part of the study.

3.7 Sampling Technique and Sample Size

Sampling is a strategy for selecting a subset of a population of interest to collect information that will be used to analyze the features of the population under study. (Hossain, 2014). A purposive sample technique, also known as a judgmental sampling technique, was used to elicit a wide range of opinions from participants. Purposive sampling was chosen to attract informants who possessed the information required by the researcher. (Etikan, 2016; Palinkas et al., 2015). A good informant is well-versed in the phenomenon under investigation. He or she will be able to reflect, will be available, will have time to be questioned, and will be willing to engage in the study.

The purposive sampling allowed the researcher to include participants with the required experience. That is, the interviewees were not chosen at random. They were purposefully picked

because they might provide useful insights into the understanding of social media use and adoption. Wards and other unit managers were contacted to help identify nurse participants who fall within the inclusion criteria and can provide relevant perspectives on how social media are used. As a result, participants were informed of the study's goal and ensured their anonymity and privacy by the researcher. In addition, the researcher obtained their contact information and paid them a visit on the agreed-upon day, time, and location for an interview. Since information saturation was reached by the time the researcher concluded interviewing the 12th participant, a total of twelve (12) nurse participants were recruited. The last information provided by the 12th participant was analyzed, informing the researcher that no new information was being generated, indicating that data saturation had been reached, which is critical in qualitative research for the study's legitimacy. Polit and Beck, (2013) define data saturation as a state in which no additional knowledge arises throughout the interviewing process, prompting participants to repeatedly repeat the same information.

3.8 Data Generation Tool

The main research instrument was a semi-structured interview guide as evidenced by Appendix E. The constructs of the model employed and the study's aims were used to produce open-ended questions. The semi-structured interview guide increased the researcher's flexibility by allowing for the reshuffling of the manner of questions and enhancing discourse in the interview. In addition, the interview guide, which included the study's research questions, covered all of the study's relevant areas. This enabled more in-depth questioning of the participants to extract more relevant information for the study, while also keeping the researcher focused on the study's goals. There were two components to the interview guide. The demographic data was in section A, while the primary questions about social media adoption in nursing care were in section B. To eliminate any

ambiguity, the interview guide was pre-tested at Richard Novati Hospital in the South Tongu District. The results of the pre-test did not form part of the main study.

3.9 Data Collection Procedure

The proposal for this study was reviewed by the Christian Health Association of Ghana's Institutional Review Board. To acquire authorization to gather the data, an introductory letter from the school of nursing and midwifery was collected and delivered to the management of Catholic Hospital Battor, District Director of Health Services, North Tongu. The researcher went to all of the nursing units to meet the nurses and be introduced to them by the ward managers or unit heads. Nurses who met the study's requirements were approached and given information papers to read. Contact numbers/house addresses were collected from participants for the researcher to contact them later to schedule the time and venue for the interviews. Before being interviewed, those who agreed to participate were given informed consent forms to sign. The researcher asked permission to tape-record the interviews and take field notes. All of the interviews were conducted in English and lasted between 30 and 45 minutes apiece. The interview began with major and probing questions from the researcher. This provided enough foundation for the participants to make extensive and convincing responses. Other follow-up questions aimed to elicit more information about the participants' experiences with social media. Other probing questions were used to bring the participants back on track when they lost track of the question.

3.10 Data Management and Analysis

The electronic copy of each interview transcript was labelled with a participant interview number to serve as a pseudonym, and it was saved in an identifiable folder with a security code to keep it inaccessible to anybody but the researcher and supervisors. The consent form, field notes, and the transcript printed out for each participant were kept in a well-labelled file. The researcher used the

codes BN (Battor Nurse) to represent participants and numbers 1-12 to represent interviews. The participant interviewed first will be represented by the label "BN001". The labelled files, as well as the tape recorder used for data collection, were kept in a drawer in the supervisor's office under lock and key. Only the researcher and his supervisors have access to these documents. The information would be retained for five years before being destroyed.

Data were analyzed using thematic analysis with NVivo software. The researcher transcribed the recorded interview verbatim into a personal computer at the end of each day of the interview, taking into consideration the field notes. The transcripts were matched to the audio recordings and missing connections were filled in to guarantee that the transcripts were accurate. The supervisors were given copies of the transcripts to read and comment on. The actual analysis entailed reading and re-reading the transcripts to detect common sentences or concepts, which were then differentiated by assigning codes. Based on their similarities, these codes were divided into subgroups. Subcategories with comparable meanings were put together into categories, which were then further divided into themes. The themes were modified several times until they were suitable for presenting the findings per the study's aims.

3.11 Methodological Rigor

In qualitative research, methodological rigour investigates the degree to which the research results truly reflect the participants' experience or state of being extremely precise, meticulous, or precise, or the quality of being thorough and accurate. (Cypress, 2017). Guba & Lincoin (1982) offered 4 sets of standards that can be used for this purpose to improve the trustworthiness of a sample. These include credibility, dependability, confirmability, and transferability.

Credibility: This entails believing in the veracity of the research findings(Guba & Lincoin, 1982; Murphy & Yielder, 2010). To establish credibility in this study, the researcher made sure that participants met the inclusion criteria. The pre-test of the interview guide, which helped to adjust some of the questions, also contributed to the research's credibility. Before completing the interviews, the researcher met with the participants twice to get to know them. This made the interviewees feel more at ease on the day of the interview. Seven (7) of the interviews were face-to-face, and five (5) were conducted over the phone, allowing the researcher to conduct additional research and provide more in-depth information. The data was audio-taped and transcribed, with the participants' voice tones noted. To further verify the study's credibility, participant tracing was used to confirm the accuracy of the transcribed data and emergent themes. Finally, debriefing sessions with supervisors were undertaken to confirm that the questioning and interviewing styles were appropriate.

Dependability: This is concerned with the consistency of findings across time and under different settings (Polit & Beck, 2013). It also investigates if identical results could be produced if a different researcher outside the data collection and data analysis team conducts an investigation audit of the techniques utilized to arrive at the results. Dependability necessitates that the research process is sound, traceable, and documented in terms of the researcher's judgments (Carcary, 2020). The process utilized for data collection, analysis, and interpretation was documented in the report to assure this. The findings of this study were also distributed to peer review experts in the fields of technology and, in particular, social media.

Confirmability: This refers to the extent to which other researchers can corroborate that the study's conclusions reflected the voices of the participants rather than the researcher's prejudice or attitude (Polit & Beck, 2013). To that end, the researcher kept an audit trail of field notes, audio

recordings, analytical notes, and coding details. A personal notebook was also kept, and any motivations, preferences, and assumptions that might impact the research process were recorded.

Transferability: This refers to the capacity to transfer findings from one study with a similar group of participants to another (Petty et al., 2012). Complete documentation of the entire inquiry process ensured transferability (Anney, 2014). To do this, the researcher offered a full explanation of the setting and the processes observed throughout the study, as well as a clear description of the technique for selecting participants.

3.12 Ethical Considerations

Before carrying out the study, the researcher sought ethical approval from the Institutional Review Board (IRB) of the Christian Health Association of Ghana. A copy of the letter of approval and an introductory letter from the School of Nursing and Midwifery was sent to the management of the Catholic Hospital Battor and the District Director of Health Services, North Tongu District, to obtain permission before the nurses were recruited for the study. Ethical principles of research involving human participants such as anonymity, respect for human dignity, well-being, and justice (Polit & Beck, 2013) have been adhered to.

Anonymity: The nurses' anonymity was maintained by removing identifiable personal information from the interview. To assist safeguard their identities, participants were given pseudonyms. The researcher's personal computer was used to keep participant information, and a password was employed to prevent anybody else from accessing it. The participants' privacy was protected by conducting interviews at their homes or any other location of their choice, such as a hospital setting. The researcher informed the nurses that they might opt out of the interviews at any point if they thought their privacy was being violated.

Respect for human dignity: Each participant was given a consent form before being recruited, which also included general information about the study to be read (Appendix C). Participants were advised that their participation was entirely voluntary and that they might opt out of the study at any moment. Before interviews, those recruited were given voluntary agreement sheets to sign or print thumbs. The participants' consent also included permission for audio recording, transcribing, taking notes, and eventually reporting the participants' descriptions. Participants were free to choose the dates, times, and locations of their interviews.

Benefit: Participants were advised that there would be no direct reward for their participation in the study, but the findings will teach nurses and midwives management, as well as human resource managers, to include social media usage when evaluating nurses' performance.

Justice: The criteria for inclusion and exclusion were strictly followed in the selection of participants. All participants were treated similarly, regardless of age, religion, or educational level. Participants were not compelled to share anything they did not choose to discuss.

CHAPTER FOUR

FINDINGS OF THE STUDY

4.1 Findings

The chapter presents the findings from an exploratory descriptive study of social media adoption by nurses for nursing practice in Catholic Hospital Battor in the North Tongu District of the Volta Region. The chapter opens with a discussion of the demographic features of the study's participants, followed by a participant profile, a table of the themes, and sub-themes. The study's findings have been presented thematically based on the objectives of the study, which were created from the model's components that supported the investigation.

4.2 Socio-Demographic Characteristics of Participants

Demographic variables characterize the study participants' profiles. Gender, age, the greatest degree of education, years of clinical experience, and nursing grade were all gathered. Overall, twelve (12) participants were involved in the study. Eight out of the twelve participants were females, and the remaining four were male. Participants were aged between twenty-three (23) years and forty-three (43) years. The work experience of participants ranges from one (1) to eleven (11) years

Two (2) out of the twelve participants had a Master's Degree. Nine (9) with a Bachelor of Science Degree, and one (1) with a Diploma in Nursing. Four (4) out of the twelve (12) participants were Senior Nursing Officers, five (5) were Nursing officers, two (2) were Senior Staff Nurse and one (1) was a staff Nurse. The distribution of the participant by speciality showed that seven (7) out of the twelve (12) were registered general nurses, two (2) were specialized in midwifery, and one (1) each was specialized in ophthalmic, critical, and neonatal nursing. Pseudonyms (numbers) were assigned to each participant to ensure anonymity. Details are presented in Table 1, Appendix G

4.3 Organisation of Themes and Sub-themes

Based on the data, six (6) themes with matching sub-themes were identified using the Technology Acceptance Model. The themes were (1) Nurses' perceived usefulness of social media (2) Nurses' perceived ease of use of social media (3) Perceived Potential Risks of Use (4) Attitude toward the use of social media (5) Nurses' behavioural intention to use social media (6) Actual use of social media. The third theme, which came from the data analysis, is an additional theme Details of the themes and sub-themes are presented in Table 1.

Table 1: Themes and Sub-themes

MAJOR THEMES	SUB-THEMES
Nurses' perceived usefulness of social media	Quick Accomplishment of Nursing Dissemination & Reception of Information Professional Development Enhance Referral Network
Nurses' perceived ease of use of social media	Clearer and Understandable Low Mental Effort (Stress-Free) Easy to Navigate
Perceived Potential Risks of Use	Inaccurate Information Privacy and Confidentiality Concerns Distraction Addiction
Attitude toward the use of social media	Favourable approach Unfavourable Attitude Pleasant Experience Unpleasant Experience
Nurses' behavioural intention to use social media	Facilitating conditions Social Influence Knowledge seeking behaviour
Actual use of social media	Frequency Minutes/hours spend Number of social media types used

4.4 Nurses' perceived usefulness of social media

In response to the research question "*How do nurses perceived social media to be useful in nursing practice?"* the Perceived Usefulness of social media became a major theme that sought to describe how nurses perceived social media to be useful in their nursing practice. Perceived Usefulness is the extent to which the participants deem social media to be utile, relevant, or boost their nursing practices.

Four (4) subthemes emerged from the perceived usefulness of social media for nursing practices. These were the quick accomplishment of nursing tasks, disseminating and receiving information, professional development, and enhanced referral network.

4.4.1 Quick Accomplishment of Nursing Tasks

The responsibility for the well-being of a patient is a huge task to undertake and may require a great effort. The quick accomplishment of nursing tasks describes the successful completion of nurses' responsibilities and duties with little or no delay. Almost all the participants believed that social media helped in the delivery of quick nursing tasks.

> *I will say social media has made it possible for nursing care to be prompt. Because of how quickly you get information about a client, you put in the necessary measures, even before clients arrive, and immediately attend to the case with ease on arrival. …… So social media, frankly speaking, has contributed a lot to improving nursing care in various aspects.* **BN001**

> *YouTube has made nursing procedures so easy and quick. If you lack the knowledge on how to carry out a particular nursing task, social media platforms like YouTube helps a lot, most often than not, you don't even have to finish watching before you grab the concept of the procedures……..is quick because under normal circumstances you have to wait till an experienced nurse comes in or you call for help from another ward.* **BN012**

Patients' education is one of the main duties of the nurse. Some of the participants narrated how social media helped them to accomplish health education more quickly. Their narration from the study affirmed this.

> *During patient education, all I do is get a hold of my smartphone and quickly access the information I want to educate the client on……. most, social media platforms help me retrieve some of these teaching materials promptly.*
> *……. the clients can ask difficult questions during health talks…… if you're fast like me, your social media handles can save you answer the questions quickly…… don't have to refer to any book before giving them the answer.* **BN003**

> *.....Yes, just as we said, when you're carrying out a procedure and you feel you are not competent enough to do that, let's say health education at the OPD, you go and watch videos on YouTube or search for information on any good social media platform and do your education. There is so much information that is changing day after day and it is from social media that we get these……***BN005**

> *……Yes, it is. For instance, if I want to watch a procedure, for example; manual removal of the placenta on YouTube, I already have my handle and am logged in on my phone. So, I go to the page and type what I'm looking for, and then click the search button. There'll be options so I'll choose which will be useful to watch…… I do this a lot when am teaching both clients and students, it's very easy and fast and also helps to finish teaching or health education on time without difficulty compared to the traditional methods.....* **BN002**

Some participants narrated that as much as social media can help to accomplish a nursing task as quickly as possible, it can also delay nursing procedures if faced with technical problems. Two of the participants asserted this with these recitals.

> *As I said, social media can enable you to work quickly due to the numerous pieces of information that will be available to you. But it can also slow you down, in fact, you might even have forgotten about yourself as a nurse at that time……bad network or no network as we do experience nowadays can hinder your work as a nurse who uses social media in your practice.* **BN009**

> *I won't deceive you and you know am the type who likes social media a lot. Social media can help you achieve your nursing care promptly if all conditions are equal, but not in*

Battor or Ghana here where the networks are not stable…… we are dealing with human life and there shouldn't be a delay in your actions. **BN010**

4.5.2 Dissemination and reception of information

This sub-theme focused on information disseminating and receiving among nurses. Almost all the participants asserted that social media is a very important medium for quick information disseminating and receiving in the nursing profession. The participants described how social media helped them distribute or received information promptly regarding their practice. Participants shared the following narratives to express these opportunities that social media offered them to distribute and receive information promptly.

……. It is relevant. In the cases of sending information across, educating our colleagues, and educating the general public, I think it helps……you can easily send information across without necessarily having to travel and without notes or letters that'll take days. You can quickly get information across within seconds and you have what you want. So, in case you want to communicate with someone in another facility example, in the referral of cases, it becomes very easy…… **BN009**

…….so, it makes giving and receiving information very easy. And then in terms of announcements and getting your schedule to work and all it makes it easy and then getting knowledge is easy as well. When you have a problem and you post, everybody answers. It makes work easier, and very fast…… **BN011**

Always. Social media has now become the main means of getting and sending information that you need for your work. So, there's no way it will not be important or it won't be helpful. **BN005**

In a related narration, two participants, **BN011** and **BN006** believe that social media is far better to disseminate and receive information compare with the traditional notice board. The following verbatim quotations confirmed their assertions.

> *Yes. As compared to notice boards, I read WhatsApp messages more often. So, when notices about programs or ward activities are posted on WhatsApp platforms, I read them much easier than when it's posted on the notice board*. **BN011**

> *……Because even this morning from huddle I received some photocopies regarding Mass and I just put them on our page. And even staff who are on leave and nights off, all get assess to that information even though they are not physically available without making calls….* **BN006**

Furthermore, **BN006** revealed that sharing and reading current treatment protocols on social media among staff is more advantageous than posting them on notice boards.

> *……..Advantages being that information is shared sometimes about current conditions, and current treatment (treatment protocols), and they are shared on pages so that you can read them, no need to put them on a notice board…...* **BN006**

Again, some participants relate their experience with information dissemination and reception concerning nursing research findings and other research findings relevant to their practice.

> *……Okay, so in rendering nursing care, we are now moving into evidence-based practice. Most information you need to do that is on social media. There are however good ones that are researched and bad ones. So, when you need to render evidence-based care, you contact your friends who have articles on those researches. They send them to you or you discuss how to go about rendering the care with them. It could be a colleague nurse, doctor, or anyone in the healthcare institution*. **BN004**

> *……It helps in terms of sharing the right information with your colleagues, specially researched materials. The same applies to your clients and even with them, you can share research findings regarding their condition……You can even use social media to do research. The person does not need to come around. You can just call or chat with them and get your information*. **BN010**

4.4.3 Professional Development

This subtheme also focused on the usefulness of social media for continued training and education for nurses. It described how nurses regard social media as a means for training, certification, and education that help a nurse to succeed in his or her nursing career. The participants depicted the

various social media types that enable them to learn and develop professionally. Participants expressed wonderful experiences in using social media for learning and development. The participants had this to say:

> *…….Very helpful. Of late because of this COVID, there are a whole lot of pieces of stuff that are being turned into a social media base. Even meetings, webinars, teaching, and others are being held online. Zoom, for instance, is a social media platform and we use it for our morning clinical meetings in which we discuss all the issues about clients, their welfare, and how things have to be done to ensure effective care is given to them. Even the nursing and midwifery council offer webinars for midwives to join so that they can also increase their CPD points to renew their pins. So social media greatly has improved nursing care in a whole lot of aspects*. **BN001**

> *…….Also, I spoke about webinars organized by the nursing and midwifery council which nurses and midwives take to learn new things or have refresher training to regain knowledge on certain things forgotten. An example is a controlled contraction I was talking about…..*. **BN004**

> *It is also very relevant if you want to update your knowledge on current issues in nursing*. **BN008**

Participants also view social media as a medium from with they can be abreast with current issues in nursing globally. **BN007** and **BN006**'s narration affirmed this assertion:

> *As I mentioned earlier, it keeps you abreast with new ways and methods of dealing with patients. You learn a lot from social media and more importantly, as time goes on you know which method is archaic and you will know how to do it well now. Social media helps you to know what is going on globally. In one way or the other, it is a learning media, in that way, you are learning every day*. **BN007**

> *It enhances my knowledge about patient care. Ranging from standardized books and information sent on platforms about how certain procedures are carried out and also you will be able to learn from all corners of the world. I had a chance to join a conference from the USA from the comfort of my home. It was a nice experience*. **BN006**

BN010 also recounted that it is more of a health professional discourse to upgrade themselves.

> *It is more of the caregivers' discussion on how to improve their care, and then getting themselves trained on new knowledge and new skills which is coming up along the day, and sometimes it's just about refresher courses trying to go back to the things you learned and all of that*. **BN010**

Again, a participant asserted how social media helped to develop other colleagues and to teach students from other schools. This is what he had to say:

> *It is very important. With the emergence of social media in nursing care, we can discuss some diagnoses. I recall some junior colleagues in other hospitals and students from school reaching out to me through social media for help concerning particularly case definitions and associated nursing care. So, I think I've helped people with their nursing practice through social media.* **BN005**

4.4.4 Enhance Referral Network

This subtheme revealed participants' descriptions of using social to enhance referral networks in the health care system. Participants expressed their opinions that social media is useful in collaborating with patients' referral systems. The study revealed that most of the participants used social media to communicate details about the patients before they arrived at the facility. This is how participants narrated their experience:

> *……. Communicating with colleagues is quicker and more convenient which enhances our referral system. For example, in this facility, we have a WhatsApp platform on which we incorporate nurses and midwives from other facilities for referral purposes. ……so, we normally have information about these patients posted on the platform ahead of their arrival. Also, anytime we want to trace a client who has defaulted in a particular locality we reach out to nurses and midwives at that place So that they trace and give us feedback. Likewise, they inform us of the condition, details, and state of patients they refer to us so that we prepare adequately to treat them on arrival*. **BN001**

> *Social media is inclined into this because you receive prior notice on the referred patient and the needed information so you can take the necessary measures to care for clients and render your best services*. **BN008**

Similarly, a participant also narrated the usefulness of social media to retrieve lost referral letters and also enhanced a good feedback system. She narrated:

> ……. *Communication was mainly through referral letters and sometimes phone calls. Sometimes clients came without the letters and say the letter got missing. Even with the call, you may leave out certain important details. But with social media there is a quick back and forth information transfer about the client and also the referral letters are posted on our platform. You get feedback and responses more quickly. So, I think concerning previous times, this social media era has greatly improved referral communication and good interaction between caregivers*. **BN009**

Again, Afua a midwife narrated a referral incident and how social media was useful to discuss the patient's condition ahead and prepare for the patient's arrival. She narrated:

> *There was a referral from Comboni on account of ectopic pregnancy and the speed we are talking about it on the platform made us have information on the condition of the client before she arrived. She was in a bad state on arrival but because we had prior information, we had quickly prepared our tools, and the consent form, and everything was ready. We just needed the folder and the antenatal card to fill in some things. So, we had prepared everything on the trolley, the intravenous infusions, and sets. So once the client arrived, we received her at the doorpost and went straight to the theatre. So, with such an incident, had it not been for social media, we would have been at the nurses' station waiting for the client. And on arrival, we would now question the client on what's wrong and call the doctor to assess and if she confirms it's an ectopic pregnancy, we would now rush into action and by then something would have already happened to the client. So, it speeds up the rate at which we render nursing care*. **BN002**

4.5 Nurses' perceived ease of use of social media

Perceived ease of use relates to the extent to which a nurse believes that making use of social media in his or her nursing practice would be of low mental effort or effortless, easy to use, and hassle-free. Perceived ease of use is one of the six (6) major themes that were explored. Three (3) sub-themes emerged from this theme. These subthemes generally explain how the participants view social media usage as easy to use without difficulty and also respond to the research question, "*How do nurses perceive ease of use of social media to enhance nursing practice?"*. The subthemes are clear and understandable, low mental effort (stress-free), and easy to navigate. All

participants discuss their views of how they regard social media usage to be without effort or otherwise difficult to use in nursing practice.

4.5.1 Clear and understandable

Clear and understandable depicted participants' views of how social media is free from confusion or doubt. Some of the participants also characterized clear and understandable perceived ease of use of social media as being free from troubling thoughts. These are what they had to say:

> ……. *So, it is quick, easily accessible, and understandable. Everything is clear and is readily accessible. I won't say social media is so difficult to use or is a complicated technology that demands schooling before using it, is very simple to use*….. **BN001**

> ……. *Well, it is easy, it is free from confusion, and I do know how to use it well especially when am looking for nursing-related information……. it's understandable to use if you know the information you are looking out for. More especially if you are to go to YouTube and watch a video, you must have a title or the name of the particular information you're looking for. Without that, it'll be very difficult for you*….. **BN005**

A participant also claimed that literacy could enhance its clarity and understandability.

> *Unless you're BBC (Born Before Computer) social media usage in nursing is very clear and everybody that is literate could understand how to use it for nursing work. For instance, learning from social media is just a matter of filtrating whatever information is there for the right material. You can easily manoeuvre your way out with whatever you're looking for*. **BN008**

Similarly, a participant also affirmed that social media usage for nursing is never difficult beyond his technology know-how, except when you are faced with network problems. He started:

> .....*Sure, it's good. I don't think it is anything beyond what we normally use our devices for in our homes. Its usage is very clear if you're using a platform, you're familiar with, is never difficult to use. More to that, it is all about information. So, if you want a piece of information, you just quickly go to your social media platform and retrieve it that's if you know and understand what you're looking for. It shouldn't be difficult. The only thing which will make it difficult is when you don't have internet*. **BN010**

Another participant narrated that because of how clear and easy social media is to understand she can navigate through any social media type and platform to get the information she wanted for her practice.

> *Yes. I know how to go about it, to me is very clear to navigate my way through. I also do understand how to get the needed information and videos I needed to aid me in my practice. I know how to go about every platform and how to deal with them. I know how to go about all of them. I don't have difficulty at all when using it for practice*. **BN011**

Some participants were sceptical. They believed that to some extent social media usage is easy to understand and clear and to some extent also, is neither easily clear nor understandable. They believed that its usage depends on the type and the knowledge being conveyed. These are what they had to say:

> *I think to some extent it's friendly to use depending on the type you're using……the sources from which you get your information and also on the group to which you belong also count a lot about its clarity and either you understand that information. Filtrating all this information can make its usage not to be so clear at times…….* **BN006**

> *Some are very clear and some are not*. **BN003**

> *It depends on how the knowledge is being expressed or put across or the type of social media you're using. Some are so well explained or self-teaching…….ones you get the information and read through you understand but others are some ways*. **BN007**

4.5.2 Low mental effort (Stress-free)

The low mental effort described the participants' effortless intellectual way of using social media for their nursing practice. It depicts the usage as stress-free or without nerve-racking. Participants described their usage experiences as stress-free, with no critical thinking and no mental effect required to use social media for their nursing practices. These are what participants had to say:

> *I think it is easy. Much mental effort isn't required*. **BN005**

> *So, I don't have to think critically before using social media to get something right. As soon as I conceived an idea, I can use social media to generate a solution, you give an idea, and you get a lot of answers. I don't remember ever asking someone to help me with it before.* **BN011**

> *Stress-free. Because I don't have to think alone to get an answer or to do something. Two heads are better than one and, in this case, four or five so it's good, not much thinking like other apps or software.* **BN003**

> *I think it's not stressful, not nerve-racking because using social media has become part of us. Once you can use it for your stuff, you can as well apply it to work.* **BN009**

BN001 also narrated a similar experience but with the reservation that little mental effort is needed to use it fully in nursing practices. She narrated:

> *I mean, most people wouldn't use much mental effort again. It is electronic, once you pick it, you are good to go. But sometimes too mental effort is needed. When we were in midwifery school, we were taught how to calculate the estimated date of delivery (EDD). Because of social media and technology, there is various software that does the calculations. You just download the software; enter the date of delivery and you even know the gestation in which the client is. Now, no more racking of the brain.* **BN001**

Another participant observed that though much mental effort is not needed, computer literacy or knowledge in information technology is very key.

> *Mental effort per my level is easy. It is easy, but sometimes too you must be computer literate or information technology literate to make better use of the information……..... So it is easy if you are a computer know-how person.* **BN006**

A participant expressed her experience as:

> *I think on my part, there is no mental effort in using social media in nursing at my level. It is stress-free if only you know what you want to do or what you're looking for. Is a matter of typing and reading, compared to referring to a book, social media usage is far better if you have the PDF version of the book.* **BN008**

4.5.3 Easy to navigate

This subtheme depicted deliberate coordinated move around within social media apps or between platforms requiring dexterity and skill. The study showed that participants concurred that social

media is easy to navigate to a large extent. They affirmed that not much effort is needed to manoeuvre social media to help in nursing practice. Participants believed they can manipulate social media in any way to get nursing information for their practice.

> *Well, I think it's easier. You don't need much effort to manoeuvre. Some of the social media types are straightforward. Some social media comes with self-tutorial and it helps a lot when the going becomes tough. I think is very easy to use.* **BN002**

> *….. very easy to manipulate your way through, I can't remember having someone to teach me how to go about using WhatsApp or Facebook, or any other social media. I do self-leaning mostly and is never difficult to "bulldozer" your way through comparatively…...* **BN012**

> *I think is never hard to search for whatever you want or whatever you want to store for future references. As far as you're on the social media platform, you will be able to steer your way for any information you're looking for on the platform. For instance, I remembered during the mid of the Covid-19 lockdown, I was to use google meet to join a regional nurses' meeting. After downloading the apps, I was able to join without any help. So, to me is easy to navigate.* **BN005**

BN007, a female staff nurse agreed with the assertion that social media is easy to navigate but with little help to enable her to grasp the concept of its usage. She narrated:

> *Yes, is very easy. But then, as a lady, I will need someone to put me on the path. I think that will be all that I will need to start. After that I will be able to do everything myself……yeah, an example is YouTube, I said YouTube because my first time going was difficult for me. I was to download a video for teaching. Honestly, I got lost in how to download the videos. But with a little help, I was able to do that. I will say if I were to explore further, I would have downloaded the video without help. But in general, you can find your way out on all social media platforms.* **BN007**

Meanwhile, another female nursing officer, **BN012** ascertained that social media app functions are not fully utilized due to the inability to fully manipulate every social media type.

> *This can be dicey, am saying this because I can't completely say I can find my way with every social media type. New ones are coming and some are very complicated, I believe that we are just using about 50% function of what Facebook and WhatsApp can do. In all is quite easy to navigate through with little difficulty……***BN012**

Lastly, a participant strongly believed social media is easy to navigate but only if one can read and write.

> *Yeah, I strongly believe is easy to manoeuvre. If kids can do anything on social media, then I must equally use it for anything I want to help me in my nursing practice. But you must be someone who can read or write at least and I think every nurse can read and write. My experience with social media is that, is never difficult to find your way if you're looking for nursing information.* **BN006**

4.6 Perceived Potential Risks of Use

Perceived potential risks of use is a new theme that emerged. This construct is not part of the original Technology Acceptance Model. The theme described the participants' perceived belief that the use of social media despite its usefulness and ease of use comes with potential risks. The data analyzed revealed three (3) subthemes, namely; Inaccurate and Misinformation, Privacy and Confidentiality Concerns, and Distraction & Addiction.

4.6.1 Inaccurate information

Inaccurate information depicted some information that is disseminated and received as unauthenticated, misinforming, and misleading. Participants' narrations indicated that some of this information was not useful to nursing and some are half-true or entirely false. Two participants described their views as follows:

> *There is so much information on social media that may not be useful. Everyone posts on social media but some of the information is not accurate. So, we need to be sure to use the right search engine so that we will not end up using the wrong information*. **BN002**

> *False information is the issue here, people want to impress everybody so others might not double-check before using them. Some people may not have done extensive research but will be in a hurry to put out information that tends to be half-truths*. **BN012**

A participant described some of the information regarding Covid-19 as unverified information that people send around to misinform a lot of people globally. He described these as challenges that come with social media. He narrated:

> *Yes, with regards to the recent COVID-19 pandemic, diverse schools of thought have come out to say that this COVID-19 is a 5g matter, it has a 5g background and is employed to kill Africans. Also, that drinking alcohol can kill the virus, the Madagascar medication, etc., and most of these things have been put out there without adequate proof to substantiate the matter. Some of these issues are the challenge that comes with the use of social media. Information is not thoroughly verified before being put out there for our consumption*. **BN005**

Another participant narrated that her major worry is if she is being fed with the right information or not. This is what she had to say:

> *My worry is about whether or not the information I get is from the right source or not. That's my only worry*. **BN007**

Two participants also made a revelation that some of the nurses are also to be blamed for sharing unauthenticated information on platforms. They believed that this unverified information coming from health workers is more likely to be consumed by their clients. They narrated:

> *Sometimes on social media, you find colleagues sharing information that they have not verified or might not even be the truth. We being health workers, people will believe whatever we share, so if what you give them is not correct, then it means that social media is not helping*. **BN009**

> *……if the information we put across ourselves as health workers are inaccurate, then it means that the consumers of that information are consuming the wrong thing and I don't think that'll help*. **BN012**

4.6.2 Privacy and Confidentiality Concerns

This subtheme is about concerns raised by participants about clients' information that have to be kept secret and managed in a manner that will not expose the clients to the outside world.

Participants described potential leakage of patients' confidential information as a result of the indiscriminate posting of patients' information on social media with disregard for privacy and confidentiality rules. They said:

> *…….another negative impact is that we forget patients' confidentiality and then take pictures of them thereby showing their faces and information to the entire world. There are also times that you mistakenly send a message to another group or platform when sending it to a doctor to discuss the patient. Everyone reads it and I see that as a bridge of trust*. **BN012**

> *Well, if you are not careful, it'll take a lot of time. You will spend too much time on social media. And then if you are also not careful, you will end up getting things that you are not supposed to or sharing things that are sensitive and confidential. Those are some of the worries*. **BN009**

A participant related that in as much as they want to impress, they can end up putting patients' information up there for the whole world to see. She said:

> *Yes. As I said earlier, social media helps. But then if you're not careful how to use it, instead of impacting positively on your work, and the entire community, you will end up doing other things which might relate to privacy issues. For instance, if you're not supposed to share information and you do, you may have privacy and confidentiality issues and all that*. **BN010**

Lastly, **BN011** a nursing officer affirmed again the reality of privacy and confidentiality concerns. She confirmed that invasion and disclosure of patients' confidential information are real on social media and therefore, nurses' platforms must be regulated. She narrated:

> *A potential negative issue of social media is an invasion of privacy and disclosure of other people's privacy issues, especially our clients. And then sometimes people post lots of things including confidential issues. If the group is not regulated, some people will post things that aren't relevant to the page. It makes us miss vital information. But if it's regulated, I think it'll deal with that. And also, people's stuff getting exposed on the page without them being able to take it back* **BN011**

4.6.3 Distraction

Participants mentioned distraction as one of the perceived potential risks that come with using social media in nursing. This subtheme described how participant attention is drawn away from their core nursing work as a result of the use of social media. The subtheme also depicted mental disturbance or uneasiness that comes with social media usage in nursing. These are some of their narrations:

> *……. you know, most times when this information is already inculcated, carrying them out is easy but if now that they give you an assignment or the patient is before you and now before you're going to search for information, it is time-wasting and is a distraction to the care you're about rendering…… the message coming alone can distract you from your work.* **BN006**

> *The temptation of going to do other things on your phone is high. Because it's your phone, you might see things that might draw your attention other than what you intended to do.* **BN007**

> *……while doing something professional on my phone, I may get a personal message that may cause my attention to shift from what I'm doing. It happens a lot with the use of smartphones…..* **BN002**

A participant argued that one can forget about him or herself as a result of over depended on social media which can lead to distraction. She said:

> *……. only if it is well recognized that at a point you can only use it when you are less busy. You can use it when you close from work or the ward is less busy. You know sometimes you can forget yourself if you are taking care of patients and you are to monitor, and you're holding a phone, you can easily be distracted or since you're so much into your phone, anything can happen to the patience……as long as your nursing care input at that time is reduced. You are not helping…….is not helping you. So, it must be regulated.* **BN004**

4.6.4 Addiction

This subtheme described how participants are abnormally dependent or strongly crave the use of social media at the expense of their clients. In other words, it is also referred to as extremely

preoccupied with social media, driven by an uncontrollable desire to log on to or use social media, and investing so much time and energy in social media that it interferes with other vital aspects of one's life. A participant said:

> *……It speeds up the nursing practice but it can also be addictive and may delay the work unnecessarily. For example, when you're on social media trying to do something very important, you'll be so engrossed in it that you wouldn't like to do anything again……so when you're so hooked on social media you might not get things done instantly as you want, meanwhile in the emergency you have to attend to these patients with the urgency it deserves……* **BN005**

Similarly, two participants also observed that too much time on social media can lead to addiction ultimately leading to distraction. Also, because the device on which the social media is accessed is privately owned, the temptation to be drawn to every buzzing sound coming from the device is high.

> *Okay, the time that people spend on social media will be a major barrier. Most often than not, we're so much dependent on these media that every noise coming from the phone we want to check. if you're not careful, you will easily get addicted or you'll end up spending more time on social media than with the client.* **BN009**

4.7 Attitude toward using social media

With regards to the research question "*What is the attitude of nurses toward the use of social media for nursing practice",* attitude became the major theme that seeks to describe beliefs, feelings, values, and dispositions toward the use of social media by nurses in nursing practice. The participants depicted their negative and positive attitudes concerning social media usage. Likewise, they also described their sense of satisfaction using social media or otherwise. In analyzing the data, four subthemes emerged under this theme. They are favourable approaches, unfavourable attitudes, and pleasant and unpleasant experiences.

4.7.1 Favorable approach

This subtheme described participants' good ways of feeling which enable them to display affirmation or acceptance of social media in nursing practice. Participants related their good feeling leading to its acceptance due to the advantage they derived from its usage. They believed it is very important to access social media at any time and to keep up-to-date with new information in their nursing practice.

> *It is positive and the feeling is good because I keep up with the latest trend in social media. I'll be able to access information about my client and be able to render my services with urgency, I'll be able to give her adequate directions on what to and not to do concerning her condition……It is much fun using social media in nursing practice*. **BN001**

> *It's positive……. My expectations are great anytime am using social media. I feel it is very important to be able to access social media anytime I want. Anytime I need information, I don't depend on the views of colleagues so much only, I also get information relevant to my profession from social media which is a joy to me*. **BN002**

> *The feeling is positive because I think it helps me a lot to read more about general things and then things about health. My feeling about social media is good because I always want to get new information to help me in my practice. New things are coming out there and it will help me give better care to my clients……..... It's all easier on social media and I always want to crosscheck nursing stuff before using them*. **BN004**

> *It's positive. I've seen the benefits. So, I'm more skewed towards the use of social media*. **BN0011**

Participant recounted that in as much as he had a favourable attitude toward social media usage, he was always mindful not to overuse it at the expense of his clients. He narrated:

> *My approach to using social media is positive because of its fun-loving nature and the benefits that come with it. However, I don't overuse it. If I need to check something briefly, I do it and get back to the client. Though is fun and the benefits are great, I wouldn't overuse it when I need to pay attention to the client*. **BN005**

Lastly, a participant affirmed that her attitude is positive toward social media usage because it enabled her to work effectively and efficiently.

I said is positive because I feel social media is very useful and easy to use in nursing and I always look at a better way to use it more effectively and efficiently in nursing. **BN008**

4.7.2 Unfavourable Attitude

This subtheme is directly opposite to the subtheme's, favourable approach. It described participants' disposition, feelings, or manner that is not constructive, cooperative, or enthusiastic about the usage of social media in nursing practice. The data from the fieldwork analysis indicated that participants' negative attitude toward social media usage was due to the time-consuming nature and ethical issues regarding its usage. These are what they had to say:

Negative in the sense that social media is time-consuming. Social media per nursing care sometimes interferes with nursing workflow. I hardly use it, especially in the ward. **BN006**

I will say I am always disciplined in using social media on duty. When I'm on duty, using social media is very, very, very minimal. Sometimes I don't use it at all and mostly, I feel some of the information is misleading. **BN012**

I will say social media in nursing in this part of the world is boring. My attitude is negative not because of any ethical issues but the frustrations that come with poor network and cost of data, and the speed is very low. **BN003**

A participant observed that his unfavourable attitude stems from clients' bad perceptions about them using their smartphones in clinical settings. He disclosed that this is also coupled with bad networks. This is what he had to say:

I will say is negative now because of the perceptions that come from most of our clients anytime you get hold of your phone to check something to their benefit, coupled with low speed and poor network. Using it in nursing in my opinion in this particular area will slow the care we give despite its advantages. **BN010**

Another participant also affirmed that clients play a part that results in her negative attitude but included senior nurses' discouragement.

> *Eeeh! To be frank with you am the social media type, but to be sincere with you my attitude is negative using it in nursing because of the bad perceptions from patients and how some of the senior nurses will look at you especially when the ward is busy.* **BN009**

4.7.3 Pleasant Experience

A pleasant experience is one of the concepts under attitude toward use. The concept seeks to describe participants' attitudes toward social media being in harmony with their tastes or likings. They described their pleasant experiences as being good, enjoyable, nice, pleasing, gratifying, and beautiful. This is how some expressed their experiences:

> *It is pleasant. If you've been able to access something that helps in managing your clients, it feels good and enjoyable. It feels good and I enjoy it because through social media you've been able to learn something to help your patients.* **BN009**

> *Is very pleasant because it is very enjoyable, flexible, and easy to use. I think is a nice experience and very pleasant to use social media in nursing.* **BN008**

> *It's pleasant. In the sense that it's convenient and easily accessible.* **BN001**

A participant made a comparison between Florence Nightingale's days and the present days of nursing and then described her experience with social media as good and beautiful.

> *It feels good. It's pleasant……Florence Nightingale's days there were no such things. You have to try and if it works, fine and if it doesn't, you have to find another way. But now people find ways to do things and information is shared so you don't have to try and make errors to get it right or try other things. The information is provided. That makes it very beautiful and pleasant.* **BN007**

Some of the participants' pleasant experiences stem from the helpful nature of social media to them. They described their experience as follows:

> *I think it's pleasant because I know I'm not a moving encyclopedia, I know a lot of things are changing including science and nursing care. I appreciate this change and it will mean I'll rely on concrete and relevant sources of information on social media to keep me*

positively updated to enhance my practice. This help social media gives me is much more pleasing. **BN005**

It's pleasant and gratifying because you can give the right information to the client so you give appropriate care to them and not cause harm. With your colleagues too, you can share information and receive help when you need it. **BN004**

It is pleasant. Just as I said earlier, because of its usefulness, its effectiveness, and its relevance, it is pleasant. We find ourselves in an age of technology where social media is everything. I don't remember the last time I bought a midwifery book. I always look for whatever information I want from social media and this makes it enjoyable to use. **BN002**

4.7.4 Unpleasant Experience

Unpleasant experience relates to participants' bad feelings or uncomfortable experiences about using social media in nursing practice. Some of the participants depict their feeling as mixed, some also were with the view that social media is a two-edged sword hence their experience with it was unpleasant. The busy nature of wards and no network or low speed made some participants have an unpleasant experience.

It comes as a two-edged sword……and is unpleasant if the patient and the relatives need your attention at that time and social media is taking it away from them. **BN006**

Sometimes is a mixed feeling, the presence of the patients makes it a mixed feeling. Sometimes, you would like to pick information from your social media platform for example we have the drug bulletin that is put on the platform weekly and maybe I want to make a quick reference to a drug dosage, as you try to go and search for that, the patient may be there looking at you. And then maybe in the mind of the patient, "he is going to look at his phone instead of taking care of me" ……This makes it unpleasant to use especially in the ward. **BN010**

Two participants recounted their unpleasant experiences as frustration and shame due to poor network. They described their experiences as:

Is very unpleasant bro ……the network won't permit you to do what you want to do…. There was one time, I was given an assignment to health educate patients after discharge, then one patient asked me a question that demanded I show him a chart from the

> *clinicians' platforms. I find it so difficult to download this chart due to poor network I was frustrated and ashamed of myself due to the unnecessary delay that day. Honestly, it is unpleasant to use here in North Tongu may be Accra may be better.* **BN009**

> *I will say is dicey, in that you don't have the speed and a good network to use it. It comes with a lot of frustration if you're looking for information and you don't have the network or the speed is down. It doesn't help at all.* **BN011**

Again, a participant asserted to affirm her unpleasant experience with social media due to little or no time to make good use of it.

> *Social media is unpleasant to use in our setting here. I said this because the ward is always busy and you may not even have time to make a quick reference to a particular procedure you're finding difficult to carry out or you're in dilemma about*. **BN012**

4.8 Behavioural intention to use social media

Behavioural intention is the element or factor that motivate participants to use social media either now or in the future in nursing practice. This theme generally described participants formulated conscious plans or motivating factors to use social media in the future or not to use it. Three subthemes emerged under this theme. They are facilitating conditions, social influence, and functional benefits. This major theme also responds to the research question "*What is the behavioural intention of nurses to use social media for nursing practice"*

4.8.1 Facilitating Conditions

Facilitating conditions are perceived enablers or barriers around the social media environment that influence a person to intent to use or not use. Participants agreed on a condition that could determine their intent to use social media. Good network, access to data, good device, and good internet speed could be something that could motivate them to use social media in nursing practice. They narrated:

> *For the driving factors, I'll say adequate data, a good network, and a device. A smartphone or a laptop.* **BN002**

> *……and then if the internet network is good within the hospital, it will make it easy for everybody to use social media for nursing care.* **BN011**

> *I think there are so many factors that influence my intention to use social media in my nursing practice…….. Secondly……. facilitating conditions like availability of data, good network, and the good device could also influence my intention.* **BN008**

Another participant mentioned bad network could be a factor that can prevent her intent to use social media in nursing practice. She narrated:

> *Bad network, and access to data (which is quite expensive) could prevent me from using social media, and also not getting the time to read the right information out there because they are mixed up with the wrong ones……* **BN004**

4.8.2 Social Influence

Social influence is a subtheme in which nurses choose specific social media apps to use for nursing practice and for personal stuff based on the influence or recommendation of others, especially those who regularly use it and have a positive perception of it. These are what they had to say:

> *Yes, my In-charge can influence my intention a lot. For instance, when she uses a good app, she recommends it to me. The same applies to colleagues and students.* **BN001**

> *Yes, my superiors, colleagues, and students influence my decision a lot about using social media in my nursing practice, because I learn some of the things I do from these people. You know we learn from each other and through that, I can say we influence each other decisions as to how to social media.* **BN008**

A participant narrated that she was influenced to use a particular social media handle due to a recommendation from a colleague. She said:

> *Right now, most people use social media, I'll say she impacts my decision as to what types I have to use. Some may tell you that this one is good to try, or you will see them using an app that you think you like and will help you. So, from students to colleagues and then leaders can be of great influence to me……. Regarding colleagues yes, they*

> *influence my intention a lot, I remembered it was through a colleague that I know YouTube can help with nursing.* **BN011**

Similarly, a participant affirmed that though his intention is naturally built, people around him influence his decision to some extent.

> *Though my intention to use social media isn't so influenced by anybody, I believe close people influence my decision to use some of the apps. My friends at work and other significant people do recommend some of these things to me, but I believe I have the flare to use social media naturally.* **BN003**

4.8.3 Knowledge Seeking Behavior

Knowledge-seeking behaviour is a deliberate effort to find information and to try and use the information to satisfy the needs that arise out of a necessity to achieve a goal. Participants described their knowledge-seeking behaviour as a driving factor in wanting to use social media in nursing practice. They said:

> *……Knowledge, Education, Betterment of myself professionally, and then better care for the clients will drive me to use social media…..* **BN004**

> *My desire to learn, my desire to find out what is new, and my desire to know what others are doing on the other side of life will influence me to use social media.* **BN005**

BN008, a male nursing officer ascribed the technology revolution and quality care that clients are demanding as the reason to want to use social media for knowledge and skills acquisition. He said:

> *the world is being technology driving and our clients are also demanding quality nursing care, for us to meet these demands, we must also change our attitude toward the use of these technologies to enable us to be well equipped with the necessary knowledge and skills to meet the changing world***. BN008**

BN012 said her intention to use social media in nursing will depend on whether it will help her or not in her nursing practice. She narrated:

My intention could be to use it anytime I feel it would help me in my nursing practice, if I think that what am doing on social media wouldn't help, I won't use it. **BN012**

Lastly, a participant said her intention to use social media is influenced by the information she could get as relevant. She said:

……First, the fact that people are using and I can get the relevant information I want from there could be an influencing factor…… **BN007**

4.9 Actual use of social media

The actual use is the last construct in Technology Acceptance Model (TAM). It is the final point in the process of TAM where people use social media or do not use it at all. Participants reported the amount of time spent on social media, the frequency, and the type of social media to indicate the use of social media (actual use of social media). The three (3) subthemes emerged from this construct; Types of social media, Cumulated time spend, and frequency of use. These subthemes described participants' actual use of this social media technology.

4.9.1 Frequency of Use

This subtheme described how participants often engage in the use of social media. All participants were of the view that they engage in the usage of social media on daily basis. Of course, some participants' social media usage is limited to the availability of data and a good network.

Daily. **BN011**

Every day. **BN010**

Every day. It is part of daily communication. **BN007**

Every day or almost every day. **BN004**

Daily. **BN002**

Some participants are of the view that their frequency of social media usage depends on the availability of data and a good network. They said:

> *I use it every day if data is available and there is a good network.* **BN008**
>
> *I may say if I have credit, let's say data, almost every day***. BN006**
>
> *For professional use, it is on daily basis provided there is a good network. I try to find something new every day.* **BN005**
>
> *Every day if there is data and a good network, not necessarily sharing anything every day but you have colleagues also sharing things and information. So, you have something coming in every day*. **BN009**

Another participant affirmed that she used it very frequently during her leisure time as a result of her addiction to the phone. She narrated:

> *Very frequently. Especially in my leisure time. You know, we are addicted to our phones nowadays. So anytime you pick up your phone, you go on social media, you assess what information is there and you quickly respond when you feel like responding.* **BN001**

4.9.2 Cumulated Time Spent

Cumulated time spent depicted the total number of time (in minutes & hours) participants ascribed to spending on social media within twenty-four (24) hours. The majority indicated spending this time on social media during the day at work and a few of them said they do engage in social media activities even into the night. These participants indicated that they spent between one (1) to three (3) hours on social media within twenty-four (24) hours

> *May be two to three hours.* **BN010**
>
> *Approximately an hour or two.* **BN009**
>
> *Humm! I will say I spent close to 2 to 3 hours on these platforms.* **BN008**
>
> *Averagely I'll say 2 hours.* **BN006**

> *Okay, sometimes I can be online for three hours if I have something to discuss with a colleague.* **BN004**

Two other participants indicated they spent between eight (8) to sixteen (16) hours on social media within twenty-four (24) hours

> *I'll say 8 hours on social media*. **BN011**

> *Roughly 12 to 16 hours.* **BN001**

Lastly, two participants indicated that they cannot put a time duration spent using social media within twenty-four (24) hours. They said:

> *I can't put downtime. I think I spend more time on social media. On non-working days, approximately 12 – 15 hours. It's more or less entertainment to me.* **BN007**

> *For nursing purposes, I may not be able to put a time duration to it. But I believe I spend a lesser amount of time juxtaposing the time spent on fun activities.* **BN005**

4.9.3 Types of Social Media

This subtheme reported the various types of social media participants indicated they use for work and other personal kinds of stuff. Social media may take the form of a variety of tech-enabled apps. Participants mentioned various types of social media ranging from WhatsApp to YouTube among others. These are some of the types participants mentioned they used:

> *Okay. I'm on a lot of social media platforms. Examples are Facebook, Twitter, Instagram, YouTube, WhatsApp, Signal, and Telegram.* **BN011**

> *I have quite a lot, I have WhatsApp, Twitter, Instagram, link in, Facebook, google account, SlideShare, YouTube, Opera Mini, WeChat, and others that I can't remember now.* **BN008**

> *I'll say I have about 5 or 6. They are Facebook, WhatsApp, Instagram, Twitter, Telegram, and Google*$^{+}$. **BN002**

Other participants also mentioned the common ones they used. These are what they had to say:

I use WhatsApp, Facebook, and Instagram. Yeah, those are the common ones I use. I also use YouTube, Twitter, and Google+. With these three, I use them sometimes to google for information. **BN006**

The commonest are WhatsApp, Facebook, and Instagram. I know some would say Snapchat is a social media platform. We have Tiktok (which is a new one in the system) and YouTube, among others. **BN005**

4.10 Finding Summary

In summary, this chapter analyzed a total of twelve (12) interviews conducted with nurses in the Catholic Hospital Battor in the North Tongu District. The chapter discusses social media adoption by Nurses for Nursing Care. The interviews were moderated using an interview guide. The data were analyzed using the thematic analysis principle. The data analysis revealed six (6) primary themes and twenty-one (21) sub-themes. Nurses' perceived usefulness of social media, perceived ease of use of social media, perceived possible risk of using social media, attitude toward the use of social media, nurses' behavioural intention to use social media, and actual usage of social media were the primary themes. Nurses employed social media in their nursing practice, according to the findings of this study.

Perceived usefulness of social media by nurses identified five (5) subthemes; the quick accomplishment of nursing tasks, dissemination of information, professional development, and enhanced referral network. The data also revealed that social media usage by nurses is clear and understandable. The data also reported nurses affirming that social media is easy to navigate and without much mental effort. Nurses also stated that social media usage comes with some perceived potential risks. They mentioned these risks as inaccurate information, privacy and confidentiality concerns, distraction, and addiction.

The participants acquired an attitude toward the usage of social media based on perceived usefulness, perceived ease of use, and considered possible dangers of use. Some participants had a positive and pleasant attitude, whereas others had a negative and disagreeable attitude. One of the primary issues that emerged from the data analysis was behavioural intention to use social media. Despite the perceived usefulness, ease of use, and risks connected with social media use, participants believed that they are primarily affected by a few variables. They identified these factors as social influence, facilitating conditions, and knowledge-seeking behaviour as an additional reasons why they mostly intend to use social media in their nursing practice. Lastly, participants exhibit their actual use of social media through the frequency of social media usage, cumulated time in hours they spend on social media, and the types of social media apps they use.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Introduction

This chapter connects modern works of literature to the findings of this inquiry. In this chapter, the findings of the study participants are addressed in connection with the study objectives and the TAM components. Perceived usefulness, perceived ease of use, attitude toward use, behavioural intention to use and actual use were the primary themes that aligned with the study's aims. An additional theme that emerged from the data analysis was the perception of the potential risk of use.

5.2 Demographic Characteristics of Participants

The participants ranged in age from 23 to 43 years old. This is in line with the average age of Ghanaian professional nurses, which is estimated to be between 25 and 35 years old (Asamani et al., 2019). This indicated that the majority of nurses are of working age. The majority of the participants in this study were female, confirming the stereotype that nursing is a female-dominated field. Despite this, the trend is shifting, as more men are drawn to the nursing profession because of the anticipated job chances it provides after graduation. In terms of gender, the study further discovered that both males and females use social media. This is congruent with the findings of research conducted by Sago (2013). Gender did not explain social media adoption in this study, even though some studies have indicated a remarkable role of gender in technology adoption. This indicated a common desire among nurses (both males and females) to use these media in their practice to make nursing activities easier to complete. It also means the saying that men are the dominant force in technology use is no longer true.

The bulk of the participants are having bachelor's degrees in nursing and this indicates a swift shift of nurses with diplomas or certificates to bachelor's degrees and master's degrees. This also affirmed that a diploma is the least qualification for someone to be a nurse in Ghana. Averagely, all participants have worked close to 7 years. This also showed that the majority of the participants are nursing officers with vast experience.

5.3 Nurses' Perceived usefulness of social media

The data from the study show that nurses benefit greatly from using social media in their nursing practice. It plays a key role in the accomplishment of the nursing task, dissemination and reception of information, professional development, and enhanced referral network. (Jackson et al., 2014; Panahi et al., 2016a; Reinbeck & Antonacci, 2019b).

Nurses believed social media is useful to accomplish nursing tasks. The findings showed nurses use social media to health educate patients which is part of their nursing tasks. This observation concurs with other studies which indicated that nurses use social media in their profession as a way of health educating their patients and patients' parents and relatives (Larson Jennifer, 2020; Paton Frieda, 2020). This finding is also in line with Santoro and Quintaliani, (2013) who found that the proliferation of smart devices and social media apps has made it easy for instructional resources to be retrievable which enables point-of-care education. Additionally, Jones et al. (2014) noted that some social media apps are useful in providing reminders and education about safe sexual behaviour for young men and women. This demonstrates a coherent use of social media for clients' education on health issues by nurses. It also appears nurses engage in social media to health educate their clients because of its ability to reach out to large audiences irrespective of distance and geographical location provided there are networks. This implies that nurses can use

social media to connect with their patients and provide them with quality health education without necessarily seeing them physically.

The study discovered that nurses engage in the use of YouTube to aid them to have the knowledge and the skills necessary for their nursing task accomplishment. Participants believed that with the aid of social media, even difficult procedures unknown to them are learned and nursing tasks could be rendered promptly. This discovery is consistent with a study where health care professionals see YouTube virtual communities as helpful knowledge portals for obtaining clinically relevant and high-quality information that allows them to make better practice decisions (Rolls et al., 2016a). In a related finding from the current study, participants suggested that instant access to current evidence on YouTube can be used at the point of care to support clinical reasoning and appropriate clinical decision-making. This is also in accord with Piscotty et al. (2016) conclusion that immediate access to relevant health information can lead to more prompt care and better patient outcomes.

The study however revealed that some participants were sceptical about social media's ability to help promptly render nursing tasks without undue delay. They believed that technical issues (poor network, information overload, and slowness of device being used) that come with social media usage can slow down its use to accomplish nursing tasks. Their doubtful reason agrees with existing work done by (Org et al., 2017b) This implies that as such as social media can help in nursing's tasks accomplishment, but over-reliance on it can be problematic in some areas due to technical challenges. Nurses must therefore not solely depend on social media in their nursing practice.

Another discovery of the current research was that social media is useful to disseminate and receive information. Participants were emphatic that social media has aided in the distribution and

receiving of health-related information from colleagues in other facilities globally. This finding is consistent with other research that claims social media provides nurses with a new communication channel through which they could share and exchange health information in previously impossible ways. (Farsi, 2021; Org et al., 2017b; Piscotty et al., 2015). This suggested that social media can be an effective instrument for nurses to share and get professional materials to enhance their practices.

Again, the study found that social media is useful to disseminate research findings among nurses and their patients. This finding corresponds to Ng et al. (2019)'s study, which describes and reports on the efficacy and efficiency of using social media to actively disseminate a clinical and educational patient safety message to a specific target audience. Similarly, other studies have found that using a coordinated social media strategy to share health evidence with a geographically diversified audience of healthcare practitioners, researchers, and healthcare organizations can be effective. (Burke-Garcia et al., 2018; Dyson et al., 2017; Sibley et al., 2020) This implies that social media's influence can extend well beyond its intended immediate users, reinforcing social media's potential utility in expanding the worldwide reach of health research.

The current research further discloses social media as useful for the dissemination and reception of clinical guidelines for nursing practice. The participants were of the view that social media is beneficial and much more useful to disseminate clinical practice guidelines (clinical protocols) for nurses than the normal traditional (notice board and books) means. This disclosure agrees with the project the European Association of Urology carried out using Twitter to disseminate clinical protocols to members (Loeb et al., 2017). Their study indicated that social media is a powerful tool for clinical practice guideline dissemination and its usage adherence compared to the traditional methods. This contradicts a study that found no difference in the effectiveness of social

media-based interventions for disseminating clinical guidelines when compared to traditional techniques (Narayanaswami et al., 2015), even though social media was effective in reaching a significant number of people. This finding implies that, in as much as social media is a powerful tool to disseminate clinical practice guidelines, it should be used alongside the traditional methods. In addition, the study portrays that social media use is very common among 23 to 43 years old. This is also consistent with Olafson and Tran (2021) This high percentage of social media use among 18- to 34-year-olds has prompted clinical curricula to be updated to reflect the changing habits and culture of new nurses (Greenwood et al., 2016; Pew Research Center, 2021)

Again, the study revealed that participants regard social media to be useful for professional development which includes training, certifications, education, and discourses. This discovery is in line with what has been found elsewhere in the literature (Mather et al., 2017; Mather & Cummings, 2015; Murray & Ward, 2019). This confirms the usefulness of social media for continuing professional development. Additionally, social media platforms are transforming into an accepted and financially viable means for health professionals to maintain their professional growth (Maloney et al., 2017). Since best practice is constantly changing and requires nurses, doctors, researchers, and educators to be lifelong learners, social media provided a platform and has evolved into a valuable technology tool for professional development.

What this finding implies is that the transition to social media as a platform for continuous professional development will demand the commitment of senior staff as well as efforts to address valid concerns about trustworthiness and confidentiality (Kitching et al., 2015). In addition, the nursing staff will need to expand their understanding of social media apps (Ferguson, 2013) and establish web-based programs which enable both content and source to be critically appraised.

Further research is also necessary to properly answer to questions of privacy and confidentiality presented.

Another finding from the study indicated that social media is very useful to enhance referral networks and communications. Participants indicated that social media is a valuable tool to strengthen the referral system in health institutions. The interactive and collaborative nature of social media tools like WhatsApp could enable nurses to communicate referral issues among themselves ahead of time. In addition, participants believed social media content sharing ability makes it possible for patients' details in form of scans and x-rays to be sent directly to the receiving facility ahead of time. Joshi et al. (2018) revealed a finding that supports their viewpoint. According to them, the WhatsApp application is a powerful tool for neurosurgical referrals. It is a low-cost, dependable, and user-friendly application that allows for smooth data transfer to the on-call neurosurgery team, including clinical videos and scan images. Othman and Menon (2019) also observed that based on clinical data and imaging tests, the WhatsApp chat platform looks to be an excellent tool for inter-hospital referral and obtaining timely responses from the referee centre. All these observations suggest that social media is a technological tool that enhances referral systems and communication. It also means that if primary level facilities connect with their secondary level facilities in that order to the tertiary level on common social media platforms, delays, costs and other difficulties that come with a paper referral will be reduced drastically. Furthermore, waiting time and the time to respond to the referred patient will be reduced considerably (Othman & Menon, 2019).

5.4 Nurses perceived ease of use of social media

Technology can be difficult to use especially at its initial introductory stage (Vogels Emily et al., 2020). In general, the data generated from this current study had a different view of this assertion. The current study revealed that social media is clear and understandable to use, thus its usage is free from confusion, doubt, or any troubling thoughts. This finding is in line with Wiid & Cant (2013) result. Their result indicated that the clarity and understandability of social media will ultimately lead to its adoption by employees. Invariably, clarity of social media applications is a prerequisite to understanding the use of social media apps. Nurses can therefore adopt social media apps with a good interface that is clear to understand and most appropriate to their practice. Besides this, a social media application will be more favourable to use than another if it is most likely to be clear and understandable (Moslehpour et al., 2018).

The finding also divulges that information technology literacy is key to understanding social media. Participants state that information technology literacy enhances the clarity and understandability of social media apps in nursing practice. This finding confirms a study conducted in Germany that indicated that the understandability and clarity of social media are dependent on digital literacy (Festl, 2021). This finding implies that for social media to be adopted into nursing practice, it requires some level of information technology literacy to enable complete usage and user satisfaction. This also calls for further research into how information technology literacy can enhance and increase nurses' work performance.

Another revelation from participants why they perceived social media to be easy to use is the low mental effort involved in its usage. Participants believe that its usage is stress-free and requires minimum effort to utilize it to its fullest in nursing practice. This finding is consistent with Mitzner et al. (2016) and Deng et al. (2018). Their studies indicated that employees' perception that using

a particular technology that will be free from physical or mental efforts will lead to its perceived ease of use hence the technology adoption. This shows that perceived ease of use of social media sites or apps may represent nurses' sentiments toward social media apps, and that reported ease of use may help them complete their nursing jobs more easily.

Again, if nurses' perceived usefulness of social media and their perceived ease of use of social media is considered, there is an important positive link. This link explains nurses' adoption of social media in their nursing practice. These suggested nurses will adopt social media apps in their nursing practice if they perceived them as useful and if their usage is effortless or stress-free.

To enable users of social media applications to appreciate their usage, it must be easy to navigate. The finding further divulges that nurses perceived social media to be easy to use if is easy to navigate its functions. This demonstrated that social media adoption is because most social media interfaces are user-friendly, and also, it is easier to navigate the functions that allow for easy interaction on social media platforms (Dzandu et al., 2016). This makes its application in nursing practice very simple. Again, this finding is consistent with the majority of past research. Shaw et al. (2018) and Setterstrom et al. (2013), observed that individuals accept some technologies because they are easier to navigate. People, on the other hand, will not use or adopt technology if it is complicated and requires a specific talent to operate (F. D. Davis et al., 1989).

5.5. Perceived potential risks of use of social media in nursing

Though social media is very useful in nursing, it has some potential risks that come with its usage. Participants identified some of these risks as inaccurate information, privacy and confidentiality concerns, distraction or interruption of tasks, and addiction. These findings are consistent with Org et al. (2017), Lee Ventola (2014), von Muhlen and Ohno-Machado (2012), and Panahi et al.

(2016). Their findings indicated that the most perceived risks that come with social media usage in nursing are privacy and confidentiality issues, inaccurate information, addictions, and task interruption.

The majority of the participants opined that inaccurate information on social media is a risk to nursing practice. In general, inaccurate information means incorrect, misleading, or fake information. On social media, inaccurate information may also be characterized by a situation in which locating relevant information is difficult due to the less ordered, unauthenticated, and uncontrolled nature of information created and shared (Panahi et al., 2016). The current study suggested that unauthenticated, inaccurate, and misleading material on social media is caused by the fact that communication on some of these platforms between nurses is mixed with both social and professional talks. This finding is similar to the findings of Panahi et al. (2016), who found that professional discussions are intermingled with both social and professional conversations. This finding implies that platforms created for nursing activities must be regulated as to what information is posted. These restrictions governing these platforms will aid in the prevention of background noise such as commercials, marketing offers, and spam, which can make it difficult for nurses to focus on their primary goal on these platforms. Also, due to the openness and heterogeneity of its users, there is always a need to filter out relevant content as well as relevant people on social media due to information anarchy. As a result, it is recommended that nurses build group platforms with other nurses who are like-minded, trustworthy, and very professional.

Furthermore, the participants revealed that the majority of this false information is disseminated by health professionals themselves through social media platforms. This probably makes patients and the general public believe whatever information that these health professionals disseminate and its consumption becomes very easy. The finding that false information is disseminated by

health professionals contradicts Learmonth et al. (2017). Their finding indicated that health information disseminated by health professionals and health-related websites are more preferred sources for health information for patients and the general public because of their professional training and qualification. Though the two findings contradict each other, there are implications for nurses. Nurses must guide against and authenticate health information they post on social media since the public will consume any piece of information they post. Again, health institutions must verify health information before posting it on their websites.

Another perceived potential risk of using social media in nursing that the study participants revealed are the breach of patient confidentiality and privacy. This finding is consistent with other observations in the literature (Avci et al., 2015; Lee Ventola, 2014; Milton, 2016; Petrie J & Bennington, 2014). The violation might be intentional or unintentional, and it can occur in a variety of ways (Lee Ventola, 2014). Some nurses may violate patients' privacy by posting information on social networking sites and platforms, such as posting images or videos of a patient without their authorization, commenting on patients in a derogatory manner, and exposing too many patients' details, which allows them to be recognized (Petrie & Bennington, 2014).

In Ghana, these patients' privacy and confidentiality issues are incorporated into the patient charter, which is available in all health institutions throughout the country. This patients' charter specifies the privacy, rights, and expectations that patients have as part of their human basic rights (Petrie J & Bennington C., 2014). When their privacy is compromised, even if accidentally, patients may feel they have lost their dignity, destroying the therapeutic relationship that exists between nurses and patients (Spector N. & Kappel D., 2012). These unethical activities may potentially harm nurses' professional reputations as well as the reputations of health care facilities (Lee Ventola, 2014).

Participants in this current study reveal that if social media is not monitored and regulated, it can result in penalties such as job termination, a lawsuit against nurses or the health institution, and, ultimately, the revocation of the license of the individual nurse involved or the health institution as a whole. Misuse of social media can have long-term consequences. When using social media, health practitioners, such as registered nurses, must adhere to the professional standards of the code of professional conduct (Ghana Health Service, 2018). They must always ensure that all patient information is kept private and only utilized for professional purposes.

The study also discovered distraction or task interruption as another perceived potential risk of using social media in nursing. Participants describe distraction or task interruption as any pop-up or buzzing sounds that result from the use of social media apps that draw away one attention from their core nursing tasks. Distractions from the social media alert have been documented to have influenced nurses and other health professionals and their decision-making process (Reed et al., 2018). Social media notifications are sent via push notifications and come to a person's smartphone's home screen. Even if the phone is silent, a vibration or tactile distraction may still occur. The reports have been demonstrated to be bad on work efficiency, productivity, and memory, whether visual, auditory, or tactile (Kushlev et al., 2016). This observation is congruent with that of Fiorinelli et al. (2021). Their research identifies the Social Media Application on smartphones as a stimulator that can distract the attention of individuals from their priorities and absorb cognitive resources that are useful for these activities.

Similarly, participants noted that over-reliance on social media whiles at work is a major reason for distraction that brings about tasks interruption. By the nature of their work, nurses are in a complicated environment that is vulnerable to distraction from social media and hence are susceptible to committing errors. This finding is similar to Thomas et al. (2017). Thomas et al.

(2017) noted that a nurse who is distracted by social media posts may introduce errors in medicine calculation and administration and cause significant damage to patients or even death. This finding suggested that nurses are aware of the danger social media poses to their patients due to over depended on it for work or other personal stuff. This implies that nursing management should establish measures to govern the use of social media that distract clinical nurses to reduce their negative effects and improve their working performance. Also, further analysis is required to assess the impact on job completion and patient safety of social media alerts and other electronic notifications.

Social media like any internet-based tool can be addictive. The finding showed addiction as perceived potential risk nurses face with the use of social media in their nursing practices. Participants indicated that social media addiction is abnormal dependence and craving strongly to log on to social media apps. Participants believed that this addiction leads to investing so much time on social media which invariably interferes with nursing tasks. This observation is similar to Zivnuska et al. (2019)'s definition. They define addiction as "the excessive usage and habitual monitoring of social media, manifested in compulsive usage that comes at the expense of other activities".

This study's findings are in line with the existing research on social media addiction (Duke & Montag, 2017; Priyadarshini et al., 2020; Zivnuska et al., 2019). These studies indicated that people who use social media excessively at home and work delay carrying out their nursing activities and struggle to reach their performance standards. The data contributes a clearer understanding that social media may encourage obsessive behaviour or even a level of behavioural addiction that can make it difficult to operate and be productive daily.

The findings emanating from the theme of perceived potential risks of using social media in nursing have much negative impact on nursing as a profession and by extension the health profession. According to the findings of the study, the majority of nurses are young people who cannot envision their lives without smartphones and other personal communication devices with social media applications. Because these devices provide them with consistent functionalities and utilities, they consider them to be more suited for use in a variety of settings, including clinical settings (Wittmann-Price et al., 2012). However, if social media is not used responsibly in these clinical settings, particularly in intensive care units, accident, and emergency departments, the negative effects of utilizing it could be very harmful to the patients receiving care.

Furthermore, with a surge in the number of healthcare practitioners using cell phones with social media applications during working hours (Papadakos, 2013), the risks social media pose have escalated. These include information anarchy, privacy and confidentiality concerns, distraction or task interruption, and addictions, according to the data. To manage the detrimental effects of social media on nursing practice, thorough policies regulating its use in hospitals and other healthcare institutions should be devised. These regulations and guidelines must ensure that working hours spent on social media are significantly limited to avoid negative consequences such as privacy and confidentiality concerns, addictions, distraction, and task disruptions.

5.6. Attitude toward the use of social media by nurses

Attitude toward the use of social media determines whether an individual will have the intention to use social media or will not use it. A positive attitude will ultimately lead to a good intention to use social media and a bad or negative attitude will lead to dislike of the use of social media. The current study findings revealed some participants have a favourable approach to social media use. This finding is consistent with a study done by Oducado et al. (2019). They found that student

nurses have a positive attitude and a good perception toward the use of social media for learning and during clinical practices. Again, the result is congruent with a finding by Al-Shdayfat (2018). The study showed that student nurses use social media for educational purposes, which shows a positive attitude towards these media in improving their knowledge during their studies.

In this current study, the group of participants who have a good disposition to engage in social media usage believed their favourable approach stem from the belief they have that social media is the best medium through which they can easily keep up-to-date with current issues in nursing and also to update their knowledge. This assertion by participants in this current study is similar to Oducado et al. (2019)'s finding. Participants in their study held the assertion that their attitude is positive because issues relating to perceived risks of using social media in nursing are being upheld through policy guidelines.

This implies that nurses already in the profession and student nurses have a favourable attitude to use social media in their nursing practice if there is a clear policy guideline to curtail misuse of it at work. It is therefore strongly recommended again that all nurses' regulations bodies, training institutions and university schools of nursing and midwifery, other health professional regulations bodies and the ministry of health and other affiliate bodies should come together to formulate a comprehensive policy that will guide the use of social media in all health institutions in the country.

Notwithstanding this finding, some participants reveal unfavourable attitudes toward social media use in nursing. This finding is similar to Terzi et al. (2019). The studies observed that socially isolated students have a negative attitude toward social media. Also, Leist (2013) result is consistent with this current finding. It had been observed in Leist (2013) study that data privacy protection, lack of code of social conduct on social media, a different form of self-disclosure and self-representation on social media, lack of personal relevance in social networks, and a lack of

control in managing registration as the troubling reason for negative attitude toward social media use among adult novice.

The opposing attitude toward social media use in nursing by the participants in this current study could probably be due to the time-consuming nature and ethical issues that arise from its usage in nursing. This could also be that this group of participants has limited experience with social media in nursing practice coupledd with technical issues like bad network, slow speed, and cost of data among others.

Again, the study reveals that some participants have pleasant experiences with the use of social media. They described their pleasant experience as good, nice, pleasing, gratifying, and enjoyable among others. This finding is in line with Wai-Yu Lee and Mei-Kwan Cheung (2014). Their finding indicated that the pleasant experience individuals derive from social media use encourages them to engage more in its usage. This research adds to the growing body of data showing people demonstrate a pleasant or feeling-good state when they require minimal effort but can achieve a satisfying goal through the use of technology (Lee et al., 2012). What this means is that when nurses' experience with social media is pleasant, this will trigger a positive attitude toward the use of social media in nursing practice. It also implies that nurses who found social media usage experience very pleasant can probably be completely immersed in its activities to the extent that other nursing activities can easily be overlooked.

Contrary, some participants depicted their experiences with social media usage as unpleasant. They related their feelings as bad and uncomfortable with social media usage which make them develop a negative attitude toward social media use in nursing practice. This finding contributes to a clearer understanding of what Cao and Sun (2018) described in their study. Cao and Sun

(2018), believed that information overload on social media create stress and generate unpleasant experience leading to a negative attitude toward social media use.

This finding clearly contradicts each other, whiles some participants found social media usage as a pleasant experience and then develop a positive attitude toward its usage, others regard it as an unpleasant experience and hence develop a negative attitude toward its usage in nursing. This suggests that not all nurses will be willing to engage in social media activities whiles at work or even for their work. Further research is needed to establish the relationship between these two groups of nurses whose attitude toward social media differ. It also implies that since nurses' attitudes toward social media differ, it will be more appropriate to be mindful when introducing technology into nursing. That technology's acceptability must be assessed through research before its introduction. Individual nurses must also be aware of their actions. They must successfully regulate their social media user behaviour so that they are not overwhelmed by positive or negative social media experiences that may lead to difficulty.

5.7 Nurses' behavioural intention to use social media

Nurses' behavioural intentions in this study depict elements or factors within social media that propel nurses to either use it or not to use it. Participants mentioned that apart from the perceived usefulness of social media and the perceived ease of use, other conditions facilitate or motivate them to use social media. They mentioned these facilitating conditions as good network, access to data, mobile devices, and good internet speed. These factors according to participants enhance their intention to use social media in nursing apart from the early ones mentioned. These facilitating conditions have a huge impact on the individual wanting to use social media. This finding is consistent with Pahnila et al. (2011) who showed that, facilitating conditions have a direct influence on behavioural intention to use social media.

These Facilitating conditions are affected by the users' access to these enabling factors (good network, access to data, mobile device, and good internet speed). This finding suggested that these facilitating conditions mentioned by nurses must be present to enhance the effective adoption of social media in nursing practice. Its absence could probably lead to difficulty hence rejection. It also implies that if nurses have a high intention to use social media in nursing but these facilitating conditions are not present, there will be no behaviour.

The study again attempted to obtain a deeper knowledge of the behavioural intention of nurses to use social media and noticed that social influence plays a major part in nurses' intention to use social media in nursing practice. (Turner, 1991) defined social influence as "the processes whereby people directly or indirectly influence the thoughts, feelings, and actions of others". In the context of this study, participants regard social influence as a process whereby they decide on which social media apps to use or even engage in social media activities in nursing based on influence or recommendation from others.

Participants from this study stated that they are influenced to use social media by their colleagues and mostly recommend which social media apps to use. Some of these participants were of the view that though using social media is naturally built, people around them who are active users of social media influence their decision a lot as to what application is more appropriate to use in nursing practice. This finding is consistent with (Dečman, 2015). This finding showed that social influence has a major impact on people's intentions to use technology, including social media. Also, the finding agrees with Abbas Naqvi et al. (2020) whose work recognized social influence processes as having a substantial impact on long-term social media intention. What this means is that social influence plays a major role in nurses' intentions to use and adopt social media in nursing practice. This implies that for technology like social media to be adopted into nursing

practice effectively, senior nurses and heads of nursing services must be seen applying social media in their work activities. If they take the lead in the most effective and efficient use of social media in their work plan, this will influence their team members also to adopt the use of social media in their nursing activities.

Another discovery from this current study is knowledge-seeking behaviour which influences nurses' behavioural intention to use social media. This knowledge or information-seeking behaviour is a deliberate effort to find information and try to use this information to satisfy the needs that arise out of necessity to achieve a goal (Ghazavi-Khorasgani et al., 2018). Participants described their desire to use social media in nursing practice as being driven by their desire to gain knowledge. Social media and other online resources are reported to be the first choice where nurses and other health professionals seek information relating to their work (Sarbaz et al., 2016). This finding is consistent with a literature review study of articles from the United States, Canada, Taiwan, and Nigeria by Alving et al. (2018). The findings suggested that social media, online resources, and peers are the key sources of evidence-based knowledge for hospital nurses. This means that the drive to seek knowledge is a factor in nurses' behavioural intention to use social media in their nursing practice.

The pitfall in this finding for nurses is that most of these social media platforms may include incorrect information. This indicates that nurses must authenticate and select the best information from these sources since most of these sources can disseminate inaccurate information. It also suggests nurses must search for evidence-based information from platforms that are operated by experts to avoid consuming the wrong information.

5.7 Nurses' actual use of social media in nursing practice

Participants exhibited their actual use of social media through the frequency of use, cumulative hours spent on social media, types of social media use, and the number of platforms they operate on. All participants declared that they engage in social media activities on daily basis either for professional or personal work. Some of them stated that their daily usage is limited to the availability of data and a good network. In a similar study among nurses in the United States of America, participants admitted using social media daily to search for health information and also to interact with colleagues and family (Kung & Oh, 2014; Mariano et al., 2018).

Again, the study reveals that some participants spent five hours or less connecting with colleagues, family, and friends (Surani et al., 2017; Wang et al., 2019). Apart from this, some participants also spent more than five hours engaging in social media activities even deep into the night. This finding agrees again with Kung and Oh (2014). They discovered that nurses heavily utilized social media via the internet, spending more than five hours per day on this medium seeking health information on a daily or weekly basis and that they felt confident doing so.

Although utilizing social media regularly for a longer period enhances social skills (Mariano et al., 2018), frequent usage of social media has a detrimental impact on a nurse-patient relationship. To maximize the benefits and reduce the possible risks, institutions must develop clear policies and guidelines on the appropriate use and application of social media in the workplace. Also, further research is needed to understand the impact of spending a longer duration on social media on individual health.

Furthermore, participants disclosed the types of social media they use and the number of platforms they operate on. The Commonest social media apps among the participants include WhatsApp, Facebook, Twitter, YouTube, Google+, SlideShare, and Instagram. This disclosure is similar to

Marin-Gomez et al. (2018), Nikolic et al. (2018), and Torrejon et al. (2020). Their findings indicated that nurses and other health professionals prefer WhatsApp as their first-choice social media application followed by Facebook before Instagram and Twitter.

From this current study, perceived usefulness, perceived ease of use, and attitude toward use are seen to be a determinant for the actual use of social media.

5.8 Application of Model to Study

The Fred Davis Technology Acceptance Model, developed in 1986, was employed as the theoretical foundation to structure the study. The framework's constructs were used to develop the objectives and research questions. There are five (5) constructs in the technology acceptance model: perceived usefulness, perceived ease of use, attitude toward use, behavioural intention to use, and actual usage. This model was chosen because it accurately measures the reasons for any technology adoption that no other models investigated could measure.

The findings of the study were consistent with the technology acceptance model. Perceived usefulness according to the framework, explains how the use of new technologies can benefit employees or increase or improve job performance. The current study reveals that nurses benefit a lot from the use of social media in their nursing practice. Nurses also believe social media enhances their nursing practices in so many ways. As they observed, social media is beneficial when it comes to achieving nursing tasks quickly, dissemination, and reception of information. They also believe it enhances the referral network system for quick referral of clients without undue delay. Apart from these, one use of social media that nurses observed is professional development. The study pointed out that social media is very useful for nurses to enhance their professional competence. Based on these findings, it can be agreed that the perceived usefulness

of social media as revealed in the current study is in line with perceived usefulness in the framework of the technology acceptance model.

Again, perceived ease of use according to the model describes the extent to which new technology can make work easier, provide more job respite, or provide freedom from the effort. The current study observed that nurses regard social media to be easy to use in nursing practice. The study reveals that social media is clear to understand and also easy to navigate any apps which comes with little or no mental effort, that is social media is stress-free to use in nursing practice. That is, perceived ease of use according to the technology acceptance model is consistent with the current findings in which nurses also perceived social media to be easy to use in nursing practice.

The third construct of the technology acceptance model illustrates an attitude toward the use of technology. In the framework, attitude toward use is described as the degree of an individual's positive and negative feelings toward a specific object or the intention to execute a specific behaviour. The current study established that nurses exhibited both positive and negative attitudes toward social media usage. Nurses with a favourable approach described their use of social media as a pleasant experience that influences their behavioural intention to engage in social media activities whiles those with unfavourable attitudes regard social media usage in nursing as an unpleasant experience and hence do not exhibit any behaviour regarding usage. These findings are also in tune with the framework.

The behavioural intention according to the framework use is one of the most important causes of actual behaviour which is facilitated by certain motivating factors. Nurses' behavioural intention to use social media in this study describes motivating factors that enhance nurses' usage of social media. Some of these motivating factors described by the nurses include the availability of data, a

good network, and fast internet speed. Nurses also believed that social influence and knowledge-seeking behaviour are some of the factors that motivate them to use social media in nursing practice apart from the perceived usefulness and perceived ease of use of social media.

The last construct in the technology acceptance model is actual use and this is manifested in the user's positive attitude toward the use of the technology. In the study, the actual of social media is seen through the frequency of use, types of social media use, and hours spent on social media. The findings support the last construct, actual use which explained that the actual use of technology is influenced by a positive attitude toward using the technology. These positive attitudes toward use are exhibited through frequency and the number of hours spent on the technology (Wang et al., 2019).

The perceived potential risks of the use of social media emerged as a new theme that is not part of the framework. Inaccurate information, privacy and confidentiality issues, distraction, and addiction were some perceived potential risks raised that probably could influence attitudes toward social media in a negative direction hence the possible rejection of its usage in nursing practice. Though the framework theorized that perceived usefulness and perceived ease of use could influence users' attitudes leading to the actual use of technology, there is no provision for factors that could probably lead to rejection of the technology. This current study indicates that perceived potential risks could negatively influence users' attitudes toward social media use, hence its probable rejection. This theme of perceived potential risks of the use of social media can therefore be added to the framework to account for factors that can cause rejection of social media technology.

CHAPTER SIX

6.1 SUMMARY, IMPLICATIONS, LIMITATIONS, CONCLUSION, AND RECOMMENDATIONS

This chapter summarizes the findings as well as their implications for practice, research education, and policy. The limitations of the study and findings have also been presented. The study's findings were then used to make recommendations.

The objectives of the study were as follows:

1. To explore nurses' perceived usefulness of social media for nursing practice.
2. To examine nurses' perceived ease of use of social media for nursing practice.
3. To assess nurses' attitudes toward the use of social media for nursing practice.
4. To explore nurses' behavioural intention to use social media for nursing practice.

These objectives were formulated into research questions that inform the direction of the study in both theoretical and methodological terms and guided the presentation of the study findings. The research questions were as follows:

1. How do nurses perceived social media to be useful in nursing practice?
2. How do nurses perceive ease of use of social media to enhance nursing practice?
3. What is the attitude of nurses toward the use of social media in nursing practice?
4. What is the behavioural intention of nurses to use social media in nursing practice?

6.2 Summary of the Study

Social media usage among nurses for both professional and personal work in recent years has increased drastically. Ghanaian nurses are not left out of this intriguing experience hence nurses in Catholic Hospital Battor are also using social media in their nursing practice. Most literature focus on end-users of social media with little or no attention to factors that influence the adoption process. The study was then triggered to reveal factors influencing nurses in Catholic Hospital Battor to adopt social media in their nursing practice.

The study was qualitative, an exploratory descriptive approach was employed. The technology acceptance model was adopted to guide the inquiring. Purposive also known as the judgmental sampling technique was the sample type used. Twelve (12) participants aged between 23 to 44 years were sampled. Due to the covid-19 pandemic, seven (7) face-to-face and five (5) on phone in-depth interviews were conducted. The thematic approach was used to analyze the transcribed verbatim audio recorded. Six themes emerged, namely, nurses' perceived usefulness of social media, nurses' perceived ease of use of social media, perceived potential risks of use, attitude toward the use of social media, nurses' behavioural intention to use social media, and actual use of social media.

According to the findings of the study, nurses benefit greatly from using social media in their nursing practice. It is critical to the completion of the nursing task, the dissemination and reception of information, professional development, and the enhancement of the referral network. The result also indicated nurses adopt social media in their nursing practice because they perceived it as easy to understand and its apps are clear and not complicated. The findings also asserted the fact that nurses' perceived ease of use of social media stems from how social media apps are easy to navigate.

Furthermore, the study found that social media usage in nursing practice comes with numerous challenges. Participants stated that privacy and confidentiality issues, inaccurate information, addictions, and task interruption are the most perceived risks associated with social media usage in nursing. Participants in the study through their experience with social media believed that the potential risks associated with its usage, if not leveraged with other benefits that come with its usage can result in legal suits to the individual nurses or the health institution as a whole. The study also revealed that inaccurate information on social media is one major risk that both nurses and their patients are faced with. According to the participants, unauthenticated, inaccurate, and misleading material on social media is caused by the fact that communication between nurses on some of these platforms is mixed with both social and professional discussions.

The study further revealed participants' attitudes toward social media usage. The study indicated that participants exhibit both favourable (positive) and unfavourable (negative) attitudes toward social media usage. Ultimately, participants who described their attitude as favourable have a pleasant experience using it. Participants who described their attitude as unfavourable have unpleasant experiences using it.

Apart from usefulness, ease of use and the risks associated with social media use in nursing practice, participants divulged that their intentions to use social media are influenced by certain factors, these factors were described as facilitating conditions, social influence, and information or knowledge-seeking behaviour. They referred to these facilitating conditions as a good network, data access, a mobile device, and a fast internet connection. Some section of the participants was of the view that their behavioural intention to use social media is basically out of social influence. Some participants believed that, while using social media is naturally built in them, the presence of active social media users in their immediate environment has a significant

impact on their judgment about which application is best to utilize in nursing practice. Also, some participants described their desire to use social media in nursing practice as being driven by their desire to gain knowledge or seek information.

Lastly, participants revealed that they use social media on daily basis, also they spend five hours or less connecting with colleagues, family, and friends. Participants also indicated the sorts of social media they utilize and the number of platforms on which they operate. WhatsApp, Facebook, Twitter, YouTube, Google+, SlideShare, and Instagram are the most popular social networking applications among participants.

6.3 Limitations of the study

Every study, regardless of its design or technique, is going to have some limitations. The geographical location of the study is the first restriction of the current study. The study was conducted in the North Tongu district capital Battor which is a rural setting hence the study was limited to internet networks options, unstable networks, and good internet speed to work with compared with the urban setting where there are so many options, stable networks, and good internet speed. In addition, the participants were drawn from a single health facility in the area. It is possible that the findings may not apply to other hospitals in the region or the country as a whole. As a result, similar and future investigations in other facilities located in a rural setting where there are internet network options to select from, a stable network, and good speed are available are required. The outbreak of the Covid-19 pandemic was another big stumbling block. The study took place during the global outbreak, which made data collecting a bit terrifying and difficult. This made travelling from one location to another to meet participants for the scheduled interviews challenging hence some of the interviews were through phone calls.

6.4 Implications of findings

This study's findings have every important implication for nursing practice, nursing education, nursing research, and policy development.

6.4.1 Implication for nursing practice

The current study has important implications for nursing practice. The study indicated that nurses benefit and regard social media as useful in nursing practice. Because of this, nurses can use social media across all domains of the nursing profession including patients care, nursing administration, and nursing research, to expand nursing knowledge and facilitate best practices. To enhance social media in nursing, nurses' leaders must be seen taking a lead in its implementation at all levels. Also, the study findings imply that nurses must be well abreast with current social media apps that are much more applicable to direct patients. To enable this, nurses must have regular in-service training on how to use current social media apps that support at the point of patients' care. The study also connotes that individual nurses can use social media to connect with colleagues, access information, contribute to online discussions, and celebrate many aspects of the nursing profession.

Again, the study caution nurse working directly with patients, especially at their besides should be mindful of the ethical standards and potential pitfalls of social media, so that they will be able to use this technology to its maximum benefit.

6.4.2 Nursing Education

The use of social media can more be established at the patients' care points when nursing educationists embrace it and incorporated it into their curricula. However, its implementation at the school level is being opposed by opponents who believe that its distractive nature is incompatible with teachings and students' concentrations. Continuous educational programs and short courses should be developed on social media application in nursing practice, the risks

associated with its use, and how to leverage its usage to benefit the nursing profession and to provide more focused care. Since home care nursing is on the rise for both chronic and terminally ill patients, findings imply that homecare nurses must take the opportunity to educate themselves on information technology literacy so that their knowledge of social media usage in nursing practice will be enhanced to enable effective care, monitory of the patient from remote and also improve communication.

6.4.3 Nursing research

The findings imply that little research has been done on nurse social media usage and its direct effects on nurses' job performance, as well as its impact on patient care. As a result, nurse researchers should take advantage of the chance to assess the influence of this technology on nurses, their clients, and their professional image, among other things. This will allow them to better measure and comprehend the influence of technology in all areas of nursing. Nursing research is one of the most practical and basic sources of nursing knowledge for evidence-based nursing practice. As a result, nurses should devote more time to nursing research to comprehend the issues brought about by social media in nursing.

The findings also suggest that qualitative and quantitative research might help nurses better understand how to use social media platforms for better individual and patient outcomes. There is little research on how healthcare workers, especially nurses and nurse leaders, interact with or view social media in their working lives. Although there are various papers on the effects of impropriety on social media in the workplace and how to avoid it, there are few data-based and peer-reviewed articles on the professional uses of social media among nurses, therefore nurse researchers could do additional research in that area.

6.4.4 Policy formulation

The findings of this study have a massive implication on nursing policy formulation and implementation in the area of technology including social media with much regard to its usage in nursing practice. First, policy guidelines on social media usage are not available in hospitals, academia, and corporate environments which guide employees on how to use social media at work. The study, therefore, connotes a matter of urgency for policy guidelines to be introduced to regulate the use of social media in nursing, academia, corporate environment, and other workplaces. There should be awareness of these policy guidelines in all workplaces.

This policy guideline might also include instructions for members to keep within the confines of professionalism, as well as different degrees of guidance for experienced and inexperienced users. For example, while information about avoiding privacy and confidentiality violations in social media use may be beneficial to novice users, more experienced users may benefit from information regarding the legal ramifications of sharing their copyrighted works with the social network community.

In addition to increasing awareness within the organization about the uses and benefits of social media as a professional tool, the dissemination of such policy may raise members' comfort with social media in the sense that it may boost their confidence in utilizing social media professionally.

Health-care professionals may aim to build social media policy in other settings, such as communities or governments, in addition to professional organizations. Because state governments have jurisdiction over the nursing scope of practice and related practice problems, the creation of state laws and regulations regulating safe and proper professional use of social media could facilitate expanded social media use. This could widen nurse leaders' communication with

colleagues, particularly practising nurses, and provide possibilities for professional interaction among nurses who might otherwise be unable to meet with peers and more senior colleagues.

6.5 Limitations of the study

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The outbreak of the Covid-19 pandemic was another big stumbling block. The study took place during the global outbreak, which made data collecting a bit terrifying and difficult. This made travelling from one location to another to meet participants for the scheduled interviews challenging hence some of the interviews were through phone calls.

6.6 Conclusion

Social media has transformed communication technology, allowing people to use and communicate in previously unimaginable ways. This study explores social media adoption by nurses for nursing practice in the North Tongu District of Volta Region, Ghana. The study indicated that nurses perceived social media as very useful in all most all the domains of nursing practice. They perceived it as useful for nursing task accomplishment, dissemination and reception

of information, professional development, and the enhancement of the referral network. The study revealed that nurses perceived social media usage to be clear, understandable, easy to navigate, and also require little or no mental effort to use in nursing. The study participants also unveiled privacy and confidentiality issues, inaccurate information, addictions, and task interruption as perceived risks that come with social media usage in nursing.

Nevertheless, some participants exhibited a favourable attitude, hence pleasant experience with social media usage while others develop an unfavourable attitude toward social media usage in nursing. Finally, the study revealed social influence, information or knowledge-seeking behaviour, and facilitating conditions (availability of internet with good speed, smartphone, and data) as what will intent nurses to use social media in nursing apart from the benefits associated with it. The study has implications for nursing practice, research, education, and policy formulation. More stringent standards are needed to maximize the benefits and positive effects of social media in the nursing profession. Social media has revolutionized the world, and nurses may take advantage of this transformation to benefit themselves, their patients, and their profession.

6.7 Recommendations

The following are specific recommendations provided to the Ministry of Health (MoH), Ghana Health Service (GHS), Christian Health Association of Ghana (CHAG), and Social Media Apps developers. Internet network providers, Catholic Hospital Battor, and National Catholic Health Service based on the study findings and field notes obtained during the research.

6.7.1 Recommendations for the Ministry of Health

It is recommended that the Ministry of Health should:

- Collaborate with Ghana health service, the Christian health association of Ghana, and other private health agencies to develop policies that will guide the use of social media at various health institutions, especially in clinical settings.
- Work with network providers to establish good internet at healthcare institutions where there is no network.
- Recommend the type of social media apps that can use by health institutions.
- Provide devices, especially to remote health institutions to enable them effectively use social media to connect with other health facilities to enhance health delivery.
- Encourage health institutions to embrace the use of social media to enhance the referral system.
- Formulate policies on continuous education on new trends in the use of social media in all healthcare institutions across the country.

6.7.2 Recommendations for Ghana health service / Christian Health Association of Ghana

It is recommended that GHS and CHAG should:

- Put and enforce the policy guidelines on the use of social media in healthcare institutions
- Work with other health care institutions to establish a common recognizable social media platform for health information communication and data transfer.
- Develop appropriate strategies and set technical guidelines to achieve ministry of health policy goals/objectives on the use of social media in all GHS and CHAG institutions.
- Provide in-service training and continuing education to all GHS and CHAG institutions on social media use and its legal ramifications.

6.7.4 Recommendation for Social Media Apps developers and social networking site operators

It is recommended that social media apps developers should:

- Develop social media apps that are user-friendly and that are more tailored to health professionals' needs in terms of delivering fast and quality care.
- Enhance the security features on these social media apps and also regulate activities of networking sites nurses use to avoid cyberbullying.

6.7.5 Recommendation for Internet network providers

It is recommended that network providers should:

- Provide reliable internet with good speed to all health institutions across the country.
- Make data or internet usage less expensive or give a discount to the health institutions for social media or social networking use.

6.7.6 Recommendation for Catholic Hospital Battor

It is recommended that National Catholic Health Service and Catholic Hospital Battor should:

- Continuously upgrade the knowledge and competencies of the staff in the use of social media wisely in their nursing practices.
- Create social media groups in each unit and ward to help staff engage among themselves educatively and also to aid in information dissemination.
- Create social media groups for patients with the same health condition to engage and healthily educates them on their health condition and to enhance adherence to the treatment regimen.

- Collaborate with peripheral health facilities to create social media groups for referral purposes.

6.7.7 Recommendation for National Catholic Health Service

It is recommended that National Catholic Health Service should:

- Set an office to monitor social media usage activities for health care delivery in all catholic health facilities nationwide.
- Give technical support to their health facilities willing to start using social media for healthcare delivery.

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APPENDICES

Appendix A: Ethical Approval Letter

CHRISTIAN HEALTH ASSOCIATION OF GHANA (CHAG) RESEARCH UNIT
21 Jubilee Well Street, Labone, Accra Telephone:0302 777815. Email: chagirb@chag.org.gh
INSTITUTIONAL REVIEW BOARD

16th April 2021

ETHICAL CLEARANCE

CHAG-IRB PIN:CHAG-IRB01012021

On **16th April 2021,** the Christian Health Association of Ghana (CHAG) Institutional Review Board (IRB) reviewed and approved your protocol detailed as follows,

TITLE OF PROTOCOL: **Exploring Social Media Adoption by Nurses for nursing care in the North Tongu District of Volta Region, Ghana..**

PRINCIPAL INVESTIGATOR: **Mr. Nathan Gamor**

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to CHAG-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till **30th** April **2022**. You are to submit annual reports for continuing review.

Signed by .....
Mr. Okyere Boateng
(CHAG IRB Chair)

Appendix B: Introduction letter

UNIVERSITY OF GHANA
SCHOOL OF NURSING AND MIDWIFERY

Ref. No.:.....*ID:.10262609*.....

3rd February, 2021

The Chairperson
Ethics Review Committee
Christian Health Association of Ghana
21 Jubilee Well Street,
Labone, Accra.

Dear Sir/Madam,

LETTER OF INTRODUCTION – ETHICAL CLEARANCE

I write to introduce to you **Nathan Gamor,** an MPhil Nursing student in the School of Nursing and Midwifery, University of Ghana, Legon.

The Scientific Review Committee of the School has approved the thesis topic: **"Exploring Social Media Adoption by Nurses for Nursing Care in the North Tongu District of the Volta Region, Ghana."**

As part of the School's requirement, the student is required to obtain ethical clearance before embarking on data collection.

I hope that the Board will consider the proposal and grant her ethical clearance to enable her undertake the study.

Thank you.

Yours faithfully,

Charles A. Klutse
School Administrator

COLLEGE OF HEALTH SCIENCES
P. O. Box LG 43, Legon, Accra, Ghana.
• Telephone: (0) 303 970 801 / 0553 089 267 • Email: nursing@ug.edu.gh • Website: www.nursing.ug.edu.gh

Appendix C: Participants' information sheet

CHRISTIAN HEALTH ASSOCIATION OF GHANA (CHAG) RESEARCH UNIT
21 JUBILEE WELL STREET, LABONE, ACCRA
INSTITUTIONAL REVIEW BOARD

PARTICIPANT INFORMATION SHEET

Title: Exploring Social Media Adoption by Nurses for nursing care in Catholic Hospital, Battor in the North Tongu District of the Volta Region, Ghana

Introduction

I am Nathan Gamor, MPhil nursing student at School of Nursing and Midwifery University of Ghana, Legon. I would like to request your participation in my study on social media adoption by nurses for nursing care in Catholic Hospital Battor in the North Tongu District of the Volta Region. This information leaflet is to let you fully understand what this study is about to help you make an informed decision to take part.

Background

There is an ongoing technological revolution globally and this is impacting on people' approach to work and organizational outputs. The health care industry is not left out of this intriguing, drastic and far-reaching change that technology has brought forth. One of such technological tools that is being used worldwide is social media. Healthcare organizations and individual are said to be adopting social media for nursing care in Ghana. It remains largely undetermined the factors influencing nurses in Catholic Hospital Battor in the North Tongu District to adopt social media to enhance nursing care. Understanding what influence nurses adoption of social media in their nursing practices will help leverage it usage in nursing care.

What is the purpose of this study?

The purpose of the study is to explore social media adoption by nurses for nursing care in the North Tongu District in the Volta Region This will help me to understand perceived usefulness of social

media, perceived ease of use of social media, attitude toward use and behavioural intention to use social media for nursing care.

Nature of the study

If you agree to take part in the study, you will be asked to sign or thumbprint an informed consent form. This will serve as proof of your consent to take part in the study and permission for me to use the information provided. An interview will be conducted with you. This interview will last for 30 to 45minutes. With your permission, the interview will be recorded with a voice recorder and the conversation will be typed. I will ask questions about your gender, age, and educational, to know a little about you. After that, I will ask you questions about social media adoption in nursing care.

What are the benefits of participating in this study?

There are no direct benefits for participating in this study, however, the information you provide will help identify what influence nurses to adopt social media in nursing practice. It will also help leverage the use of social media in nursing care.

What rights do you have as a participant in this study?

Participation in this study is entirely voluntary. You have the right to withdraw from the study at any time without any consequences to you. You also have the right to prevent me from using the information recorded even after the interview.

Will there be any cost incurred?

There will be no cost incurred on the part of the participants. Interview will be conducted at your own convenience, either in the hospital in your ward or unit or in the comfort of your home.

Will there be any form of compensation?

There will be no form of compensation regarding time spent or loss however there might be forms of assistant should need be that you are thirsty or hungry while in the process of the interview.

Is there reimbursement for taking part in the study?

No payment to participants taking part in this study.

How will confidentiality be maintained?

All information obtained from you will be kept confidential without mention being made of your name or any identifying information about you. Pseudonyms will be used instead of your name when references are being made to the information you provided.

Can I withdraw?

Participation is voluntary and participants have the right to withdraw or decline to participate from the study at any time without a penalty or without giving reasons.

What will be the outcome of the study?

All information obtained will be analyzed and feedback will be duly communicated to the participants in due time through Fridays clinical presentation in the hospital and the district health directorate half or annual review.

Who is funding the study?

The study is being self-funded by the researcher.

Who can I call for enquires?

A copy of the information sheet and the consent form will be made available to you after it has been signed or thumb printed. For further clarification about the study, you may contact me on telephone

number: +233244423161 or the Email address: nathangamor@gmail.com or natydrenaty@yahoo.com or my supervisor on telephone number +233 243059316 or the Email address: gladysdzansi@gmail.com .

With regard to concerns over the conduct of the study, please contact Sarah Sackey Martei-Olletey (Mrs.), the administrator of the Christian Health Association of Ghana Institutional Review Board Administrator, on telephone number **+23327786516**

Thank you

Appendix D: Consent form

CHRISTIAN HEALTH ASSOCIATION OF GHANA (CHAG) RESEARCH UNIT
21 JUBILEE WELL STREET, LABONE, ACCRA

INSTITUTIONAL REVIEW BOARD

CONSENT FORM FOR PARTICIPANTS

Title: Exploring Social Media Adoption by Nurses for nursing care in Catholic Hospital Battor in the North Tongu District of the Volta Region, Ghana.

Consent for the interview

I confirm that I have been informed by the researcher about the nature, conduct, benefits and risks of the study. I have read/it was read to me, and I understood the information on the information sheet and have had the opportunity to ask questions. I understand that the interviews will be audio recorded. I also understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my work as a nurse and legal rights being affected. I also understand that copies of the information sheet and signed consent form will be given to me for my personal records before the interview.

I agree to take part in the above-mentioned study. I hereby give consent for my personal information and information about what influence me to adopt social media in my nursing practice should be used as data for this study.

| --- | --- | --- |
| Name and Surname | Signature/ Mark or Thumbprint | Date |

Consent for audio recording of interview

Do I have your permission to record the interview? Yes [ ] No [ ]

Investigator statement and Signature

I certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participant has been addressed.

Person explaining Consent

---------- ---------- ----------

First Name and Surname Signature Date

Should you wish to contact me at any stage regarding consent, you can contact me at Tel: +233 244423161 Email: nathangamor@gmail.com

Appendix E: Interview Guide

CHRISTIAN HEALTH ASSOCIATION OF GHANA (CHAG) RESEARCH UNIT
21 JUBILEE WELL STREET, LABONE, ACCRA
INSTITUTIONAL REVIEW BOARD

INTERVIEW GUIDE

I am **Nathan Gamor**, MPhil nursing student at School of Nursing and Midwifery University of Ghana, Legon. My research topic is on **Exploring Social Media Adoption by Nurses for nursing care in Catholic Hospital Battor in the North Tongu District of the Volta Region, Ghana.** This interview is for academic purpose so you are please encouraged to answer the questions without any hesitation. Also, you are permitted to ask for clarification to any of the questions that is not clear to you. You may also skip any of the questions if you are not comfortable to respond without any sanctions. Your responses will be kept confidential. You will not be identified with any of your responses. The questions are asked based on research objectives and the constructs of the TECHNOLOGY ACCEPTANCE MODEL

Thank you.

SECTION A: Demographic data

Pseudonym/Code No:

Age:

Sex:

Educational Level:

Nursing Rank:

How long have you worked as a registered nurse?

SECTION B

1. Tell me about the various social media platform or social networking you have.
   Probes:
   a. Social media types,

b. Social media groups,
c. Regularity of using each of the medium.
d. Professional networks for patients, caregivers, colleagues
e. Duration using social media.

2. How do you assess the relevance of social media in your daily nursing work activities?
   Probes:
   a. Interaction with colleagues,
   b. Connecting with doctors,
   c. Patients, family and significant others.

3. How do you assess social media usage with regard to improvement in your Interpersonal and professional communication?
4. **Perceived usefulness**
   a. How do you assess usefulness of Social Media in your nursing practice?
   b. Probes: How does it improves your ability to express nursing care?
   c. How does it increases the rate at which you render nursing care?
   d. How does it enhances your effectiveness rendering nursing care?
   e. From your perspectives, do you find social media platforms or social networking as so helpful in your nursing activities?
5. **Perceived Ease of Use**
   a. How will you assess interaction with social media during your nursing care?
      i. Probes: what will you say about it clarity and understandability using it for your nursing activities? Give examples
      ii. How would you appraise social media in nursing as regard to mental effort in using it?
   b. How could social media fit in with your nursing workflow to optimize the nursing care you deliver?

i. Probe: What could make its integration easier?

c. From your point of view, how does using social media for nursing care make your practice easy for you?

6. **Attitude toward use**

a. How would you describe your attitude toward using social media in your nursing practice? Positive or Negative? And explain why

b. How do you feel using the social media for nursing care? Pleasant or unpleasant? Please explain why?

c. Would you always like using the social media for nursing work and will you encourage someone to do same too? Explain why?

7. **Behavioral intention**

a. How would you assess your intention to use social media in your nursing practice?

i. Probes: What are the driving factors influencing your intention to use social media in rendering nursing care?

ii. What are the worries or concerns preventing your intention to use social media?

iii. Do you have any specific examples you would like to share?

b. Do you think your social media integration into nursing practice decision is influenced by others' opinion?

i. Probe: How do others' opinions (leaders, colleagues, students) influence your decision?

c. What are some potential positive and negative impacts of using social media in nursing care?

i. Probe: What is the potential impact on patients, caregivers, providers, and the health care system?

d. What are some barriers/challenges that may occur with respect to implementing social media in nursing care?

e. In your opinion, what would facilitate the use of social media among nurses?

f. Who should lead the implementation and sustainment of social media in nursing practice?

Thank you very much

Appendix F: Themes and Sub-themes

MAJOR THEMES	SUB-THEMES
Nurses' perceived usefulness of social media	Quick Accomplishment of Nursing Dissemination & Reception of Information Professional Development Enhance Referral Network
Nurses' perceived ease of use of social media	Clearer and Understandable Low Mental Effort (Stress-Free) Easy to Navigate
Perceived Potential Risks of Use	Inaccurate Information Privacy and Confidentiality Concerns Distraction Addiction
Attitude toward the use of social media	Favorable approach Unfavorable Attitude Pleasant Experience Unpleasant Experience
Nurses' behavioral intention to use social media	Facilitating conditions Social Influence Knowledge seeking behavior
Actual use of social media	Frequency Minutes/hours spend Number of social media types used

Appendix G Table 4.1: Participants' Characteristics Profile

PSEUDONYM	SEX	AGE	EDUCATIONAL LEVEL	NURSING GRADE	YEARS IN SERVICE
BN001	Female	30	Diploma	Senior Staff Midwife	6
BN002	Female	32	Degree	Midwifery Officer	8
BN003	Male	35	Degree	Nursing Officer	4
BN004	Female	33	Master	Senior Nursing Officer	11
BN005	Male	30	Degree	Senior Nursing Officer	7
BN006	Male	36	Degree	Nursing Officer	7
BN007	Female	28	Degree	Staff Nurse	3
BN008	Female	34	Degree	Senior Nursing Officer	8
BN009	Female	31	Master	Senior Nursing Officer	8
BN010	Male	34	Degree	Nursing Officer	10
BN011	Female	23	Degree	Nursing Officer	1
BN012	Female	43	Degree	Senior Nursing Officer	8