

# **Social Media Use and Digital Literacy in Relation to Professional Conduct and Clinical Competence of Nursing Students**

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## **Abstract**

In recent years, social media has emerged and is used as a powerful tool for communication and learning among nursing students. Along with the rise of modern technology in healthcare, the necessity of digital literacy as advanced tools for patient management, data analysis, and communication becomes progressive. However, the rapid development also presents significant challenges for nursing students and educators. This research aimed to investigate how social media use and digital literacy influence the development of nursing professionals in terms of their conduct and competency. This study was conducted in one of the private sectarian higher education institutions in Iligan City, which is one of the prominent healthcare education providers in the province of Lanao del Norte. The respondents were 308 nursing students selected through a stratified random sampling method. The researcher-made instruments were used to collect data via Google forms distributed using QR codes and links. The statistical analysis utilized were Means, Standard Deviation, Frequencies, Percentages, Pearson Correlation ( $r$ ) and Multiple Regression Analysis. The result of the study indicates that nursing students actively use social media to gather information, build professional identity and provide camaraderie with fellow nursing students. This study also found that nursing students are good at using digital tools and technology, have strong clinical and collaborative skills. Social media use was also found to be linked with professionalism and clinical competence when nursing students effectively and efficiently find and utilize information online in their studies and practice. It is recommended that nursing students are provided with solid and clear guidelines to maintain high competence and be equipped with knowledge, skills, and attitude. In conclusion, responsible and ethical social media use accompanied by a solid foundation in digital literacy is essential for nursing students to be clinically competent and grow as modern nursing professionals.

**Keywords:** Social Media Use, Digital Literacy, Professional Conduct, Clinical Competence, Nursing Education

## **Chapter 1**

### **Introduction**

#### **Rationale of the Study**

In recent years, social media has emerged as a powerful tool for communication and learning among nursing students. It facilitates collaboration and peer support, enabling students to connect and share resources easily (Cathala et al., 2021). For instance, platforms like Facebook and Instagram can be used for study groups, allowing students to exchange information and discuss complex topics (Daigle, 2020). Additionally, social media can enhance engagement with educational content, fostering a sense of community among students (Alharbi et al., 2020; Soliva et al., 2024). The ability to follow expert

practitioners and organizations on social media platforms can also provide nursing students with up-to-date information on best practices and emerging trends in healthcare, promoting lifelong learning (Cathala et al., 2021).

However, the rise of social media also presents significant challenges for nursing students and educators. One major concern is the difficulty in maintaining professional boundaries, as students often struggle to separate their personal and professional identities online (Daigle, 2020). This blurred line can lead to potential ethical dilemmas and misrepresentations of professionalism (Guraya et al., 2021). Furthermore, the vast amount of information available on social media can raise issues of content reliability, necessitating improved digital literacy among students (Soliva et al., 2024). As nursing education increasingly incorporates digital tools, it is crucial to address these challenges to ensure that students can effectively apply technology in clinical practice while maintaining the standards of quality care expected in the profession (O'Connor et al., 2021).

Nursing students increasingly rely on social media as a vital tool for communication, professional networking, and educational growth (Alharbi et al., 2020; Garg, & Shrigiriwar, 2021). Research indicates that social media can enhance learning by providing access to a wealth of digital resources and fostering connections among peers and mentors (Brown et al., 2020; Cathala et al., 2021; Lokmic-Tomkins et al., 2022). Social media platforms allow nursing students to engage with professionals, participate in discussions on best practices, and stay updated on the latest trends in healthcare (Alharbi et al., 2020). This connectivity not only promotes professional development but also cultivates a sense of community among nursing students, enabling them to share experiences and support one another. However, despite these benefits, social media remains underutilized in nursing education, partly due to concerns about unprofessional behavior and the lack of guidance for responsible use (Daigle, 2020; Zhu, et al., 2021).

On the flip side, the pervasive use of social media can have detrimental effects on nursing students' academic performance and professional conduct. Issues such as social media addiction can lead to significant distractions, diverting students' attention from their studies and responsibilities (Bölüktaş, 2022). The absence of structured frameworks for using social media in educational settings often results in unprofessional behavior, including the sharing of inappropriate content and breaches of patient confidentiality (De Gagne et al., 2019; Gum et al., 2024, Zhu .et al., 2021). Furthermore, the fast-paced nature of social media can blur the lines between personal and professional identities, making it challenging for nursing students to maintain appropriate boundaries (Daigle, 2020; Guraya et al., 2021; Oducado et al., 2019). Given the critical role nurses play in managing health information, it is imperative that they engage in verifying the accuracy of information encountered on these platforms (Bautista et al., 2021). To address these challenges, nursing educators and administrators must develop comprehensive guidelines and training programs that emphasize ethical implications and promote professionalism in social media use (De Gagne et al., 2019; Soliva et al., 2024; Zhu et al., 2021).

Digital literacy encompasses a range of competencies essential for nursing students, including digital information literacy, digital communication, and eHealth literacy. These skills are crucial as healthcare increasingly relies on digital tools for patient management, data analysis, and communication (Brown et al., 2020; Harerimana et al., 2023). Research indicates that while nursing students exhibit a positive attitude toward technology, many lack the confidence and ability to effectively integrate digital tools in clinical settings (Lokmic-Tomkins et al., 2022; Oducado et al., 2019). Although students utilize mobile applications for clinical learning, they often struggle to produce quality output due to insufficient digital skills. This gap underscores the need for targeted educational interventions to enhance the integration of

technology in nursing practice, ensuring that students are adequately prepared to leverage these tools in their future careers (Harerimana et al., 2023; Martzoukou et al., 2024; Oducado et al., 2019).

Despite the recognition of its importance, digital literacy within nursing curricula remains underexplored, which can adversely affect patient care and professional development. Although many students possess basic computer skills, deficiencies persist in critical areas such as digital research and innovation (Harerimana et al., 2023; Kim & Jeon, 2020; Matthews, 2021; Reid et al., 2023;). Without advanced training in these competencies, nursing students may find it challenging to engage with evidence-based practices effectively, which is vital for providing quality patient care. Moreover, while digital literacy can enhance educational outcomes, excessive reliance on technology may lead to information overload or digital fatigue, potentially hindering critical thinking and clinical judgment (Gum et al., 2024; Zhao et al., 2024). Thus, educational institutions need to develop comprehensive digital literacy programs that not only teach skills but also promote a balanced approach to technology use in nursing practice (Abou et al., 2024; Balahur & Chen, 2021; Matthews, 2021; Scott & Goode, 2020).

Training nursing students in professional conduct is essential for ensuring high standards of patient care and fostering a culture of professionalism within the healthcare environment. Effective training programs can enhance students' understanding of ethical standards, communication skills, and the importance of maintaining professional boundaries, which are crucial for building trust with patients and colleagues (De Gagne et al., 2019; Dwyer et al., 2023, Guraya et al., 2021, O'Connor et al., 2021). The research findings of Fitzgerald et al. (2021) indicate that students who receive comprehensive training in professional conduct are better equipped to navigate complex clinical situations and make informed decisions, ultimately leading to improved patient outcomes. As healthcare becomes increasingly digitalized, instilling a strong sense of professionalism in nursing students is critical for addressing challenges related to information management and the ethical use of technology (Zhu et al., 2021).

Clinical competence is a critical aspect of nursing education that directly affects the quality of patient care provided by nursing students. Competence in clinical settings involves the integration of theoretical knowledge, practical skills, and professional attitudes necessary for effective nursing practice (Gibbons et al., 2020; Kaddoura, 2019). Nursing students who lack sufficient clinical competence may struggle with essential tasks such as patient assessment, medication administration, and communication with interdisciplinary teams. This inadequacy can lead to significant errors in patient care, including medication mishaps and delayed interventions, which can ultimately jeopardize patient safety and outcomes (Sullivan et al., 2022). Therefore, nursing education programs must prioritize hands-on training and realistic simulations to ensure students are well-prepared for the complexities of clinical practice.

When nursing students transition to full-fledged nurses with poor clinical competence, the consequences can extend far beyond individual performance issues. Inadequate clinical skills can result in diminished confidence among new nurses, contributing to job dissatisfaction and higher turnover rates in the profession (Mason et al., 2020; O'Connell et al., 2022; Trossman, 2021). Moreover, the decline in clinical competence among nurses can lead to systemic issues within healthcare organizations, such as increased rates of patient complications and higher healthcare costs (Kavanagh, 2021; McGarity, 2023). Ultimately, the implications of inadequate clinical training highlight the necessity for robust educational frameworks that not only assess knowledge but also emphasize the importance of developing clinical skills, ensuring that nursing graduates can deliver safe and effective care in increasingly complex healthcare environments.

Professional conduct training extends beyond individual practice; it contributes to the overall integrity of the nursing profession. A strong emphasis on professionalism can mitigate issues such as burnout, ethical dilemmas, and workplace conflicts, fostering a more collaborative and supportive work environment (Rogers et al., 2023; Scammell et al., 2020; Thomas et al., 2021). Additionally, nursing students who are well-versed in professional conduct are more likely to uphold the values of the profession, such as accountability and advocacy, which are vital for maintaining public trust and ensuring quality care (Gum et al., 2024). As the healthcare landscape evolves, investing in the professional development of nursing students is essential for preparing future nurses to meet the demands of an increasingly complex and interconnected healthcare system (Reid et al., 2023).

Nursing competency encompasses the knowledge, skills, and attitudes essential for effective practice, directly influencing patient care outcomes. There are significant gaps in digital literacy among nursing students and professionals, particularly concerning advanced competencies necessary for modern healthcare (Brown et al., 2020; Gum et al., 2024; Lokmic-Tomkins et al., 2022). These gaps can hinder effective communication in digital environments, which is crucial for patient satisfaction and safety. The ability to accurately gather, assess, and verify information from online sources is vital for nursing practice, as misinformation can lead to poor clinical decisions and negatively impact patient outcomes (Nes et al., 2021). By addressing these deficiencies in nursing curricula, educators can better prepare students to navigate contemporary healthcare challenges, ultimately enhancing the quality of care provided to patients (Nes et al., 2021).

While many studies have assessed nursing competencies at various levels, there is a notable lack of longitudinal research examining the development of these skills throughout a nurse's career (Dwyer et al., 2023; Fitzgerald et al., 2021; Reid et al., 2023;). Understanding how competencies evolve over time is critical for identifying effective training methods and improving patient outcomes. Integrating digital literacy into nursing education presents both challenges and opportunities, requiring a reevaluation of existing curricula to ensure relevance in a rapidly changing healthcare landscape (Scammell et al., 2020). Additionally, ongoing professional development and continuing education play vital roles in maintaining competency levels, allowing nurses to adapt to new technologies and practices. By enhancing nursing education through comprehensive training programs focused on both initial and ongoing competencies, healthcare institutions can significantly improve the overall effectiveness of nursing practice and patient care (Thomas et al., 2021).

In examining this study, a notable **Knowledge Gap** emerges, particularly regarding the specific ways in which these digital tools influence clinical competencies and professional behaviors. While existing literature recognizes the potential of social media use and digital literacy in enhancing educational outcomes, there remains insufficient exploration of how these factors specifically affect nursing students' real-world clinical skills and ethical decision-making. This gap occurs largely due to a lack of comprehensive frameworks that link digital literacy directly to nursing competencies in practice. Additionally, many studies have focused broadly on technology's role in education without delving into the nuances of how use of social media platforms can shape professional conduct in high-stakes environments like healthcare. Consequently, this knowledge gap highlights the need for targeted research that investigates the direct implications of social media use and digital literacy on the practical competencies and ethical practices of nursing students, ensuring they are adequately prepared for the complexities of modern nursing.

This study aims to investigate how social media use and digital literacy influence the development of nursing professionals in terms of their conduct and competency. As the healthcare system increasingly integrates digital technologies, it is essential to understand the impact of social media and digital skills on nursing practice. The findings of this research will offer valuable insights into how these variables shape nurses' professional identity, ethical standards, and overall competency. By identifying existing gaps, the study will highlight critical areas for improvement within nursing education and practice, ultimately fostering enhanced patient care and promoting professional conduct among nursing professionals.

This study stands to benefit several key stakeholders within the healthcare and educational sectors. Primarily, nursing students themselves will gain from the insights provided by this research. By understanding the role that social media use and digital literacy play in shaping their professional identities and competencies, students can better navigate the complexities of modern healthcare environments. This knowledge can empower them to harness digital tools effectively, enhancing their communication skills, clinical decision-making, and ethical conduct. Furthermore, by identifying specific gaps in their training related to digital literacy, nursing programs can adapt their curricula to better prepare students for the demands of contemporary nursing practice.

In addition to benefiting nursing students, this study will also provide valuable insights for nursing educators and healthcare administrators. Educators can utilize the findings to refine teaching methodologies, incorporating targeted digital literacy training that aligns with professional standards and ethical guidelines. This approach will not only enhance the quality of nursing education but also ensure that graduates are equipped with the necessary skills to excel in a digitally driven healthcare landscape. Healthcare administrators will benefit by understanding how improved digital literacy and professional conduct among nursing staff can lead to better patient outcomes and satisfaction. By fostering a workforce that is both competent and ethically grounded in its use of digital technologies, healthcare organizations can ultimately enhance the quality of care provided to patients.

### **Theoretical Framework**

This study is anchored to the following theories: Richard L. Draft and Robert H. Lengel's Media Richness Theory (1986), Patricia Benner's Novice to Expert Theory (1984), Lawrence Kohlberg's Moral Development Theory (1958), and Andragogy theory of adult learning proposed by Malcolm Knowles (1970).

Media Richness Theory, developed by Richard L. Draft and Robert H. Lengel in 1984, provides a framework for evaluating communication media based on their capacity to effectively information. This theory suggests that effective communication depends on aligning the appropriate medium with the complexity and ambiguity to the message being conveyed.

In relation to social media use, this theory gives emphasis to the inherent qualities of various platforms which can significantly influence their suitability for different educational objectives. The use of richer media could be more effective in conveying complex concepts, foster social connections among nursing students, health care professionals, and instructors. The enhancement of user engagements and feeling of community also enhances learning experiences and outcomes.

Studies have utilized Media Richness Theory, to explore other the use of learning tools particularly for distance and virtual learning. A study by Shepherd, M. M., & Martz Jr, W. B. (2006), suggests that in distance education, a more feature-rich learning environment leads to greater student and faculty satisfaction, improved communication and higher valuation of the platform. When used alongside with



tradition classroom lectures, the richness of online discussion forum positively affects students' participation, interaction and learning according to Balaji, M. S., & Chakrabarti, D. (2010). In addition, Shahbaznezhad, et al (2021) study suggests that the richness of medium influences users' engagement. This finding gives emphasis on the need to use the appropriate social media platforms and content formats for specific learning objectives and target audience. While these studies have not been applied in the context of nursing education, their findings do suggest that the rich media allows conveying complex information and enhances engagement if utilized effectively.

Patricia Benner's Novice to Expert Theory, published in 1984, provides a framework for understanding the progression of nursing competence through five levels: novice, advanced beginner, competent, proficient, and expert. This theory emphasizes that nursing knowledge is gained through experience and that practitioners develop clinical judgment and skills over time. Each level reflects a different degree of competence and understanding, from the novice, who relies on rules and guidelines, to the expert, who has an intuitive grasp of complex clinical situations. Benner's work underscores the importance of experiential learning and mentorship in nursing education, highlighting that proficiency develops through practical engagement in clinical settings.

Relating this theory to the variable of digital literacy, Benner's framework can illustrate how nursing students progress in their ability to effectively utilize digital tools for patient care. As students advance through the novice to expert continuum, their digital literacy skills can significantly impact on their clinical competence and decision-making. Novice nursing students may struggle with integrating technology into their practice, while advanced beginners and competent nurses begin to leverage digital resources for patient assessments, research, and communication with healthcare teams. By enhancing digital literacy, nursing students can improve their clinical effectiveness, ensuring they provide timely and informed care to patients in an increasingly digital healthcare environment.

Several studies have utilized Benner's Novice to Expert Theory to explore various aspects of nursing education and practice. McCarthy and Murphy (2010) examined how clinical placements influence students' progression along the novice to expert continuum, emphasizing the need for supportive learning environments. Another study by Benner et al. (2010) investigated how expert nurses demonstrate high levels of clinical judgment and intuition in complex care situations, linking these attributes to their extensive experience and digital competence. A research article by Tilley et al. (2018) explored the role of technology in nursing education, highlighting how digital literacy training can facilitate students' progression toward expert practice. These studies demonstrate the relevance of Benner's theory in addressing the evolving competencies required in modern nursing education.

Lawrence Kohlberg's Moral Development Theory, proposed in 1958, explores the progression of moral reasoning through three main levels: pre-conventional, conventional, and post-conventional, each comprising two stages. This theory posits that individuals develop their ethical understanding and decision-making abilities as they mature, moving from a focus on self-interest and obedience to authority to a more nuanced understanding of social contracts and universal ethical principles. Kohlberg's work emphasizes the importance of moral education, suggesting that fostering higher stages of moral reasoning can lead to more ethical behavior in complex social situations.

Relating this theory to the variable of professional conduct, Kohlberg's stages provide a framework for understanding how nursing students develop ethical standards and professional behavior over time. As they progress through their education and clinical experiences, nursing students move from basic compliance with rules (pre-conventional) to a deeper appreciation for the values and responsibilities of

their profession (conventional) and, ultimately, to a commitment to ethical principles that prioritize patient welfare and social justice (post-conventional). This developmental journey is critical for establishing the professional conduct necessary for effective nursing practice, where ethical dilemmas frequently arise, and sound moral reasoning is essential.

Several studies have utilized Kohlberg's Moral Development Theory to examine ethical decision-making in various contexts. Cummings et al. (2016) investigated the moral reasoning of nursing students, finding that those who received ethics education demonstrated higher levels of moral development, which positively influenced their professional conduct in clinical settings. Another study by Dahnke et al. (2019) explored the relationship between moral development and leadership skills in nursing, concluding that nurses with higher moral reasoning are more likely to exhibit effective leadership behaviors and foster ethical workplace cultures. Additionally, a research article by Killian (2018) examined the impact of service learning on the moral development of nursing students, revealing that experiential learning opportunities significantly enhance moral reasoning and professional ethics. These studies highlight the importance of fostering moral development to ensure ethical conduct and decision-making in nursing practice.

A highly appropriate theory to anchor the variable of competence of nursing students is Andragogy, a theory of adult learning proposed by Malcolm Knowles in the 1970s. Andragogy emphasizes that adults learn differently than children, highlighting the importance of self-directed learning, experiential learning, and the relevance of knowledge to real-world situations. Knowles identified several key assumptions about adult learners: they are motivated to learn by internal drives, they bring life experiences to the learning process, and they prefer learning that is applicable to their professional and personal lives. This theory is particularly significant in nursing education, where students must acquire not only theoretical knowledge but also practical skills essential for competent nursing practice.

Relating Andragogy to the competence of nursing students, the theory underscores the necessity for educational programs that promote active, engaged learning experiences. Nursing students, as adult learners, benefit from curricula that encourage self-directed learning and critical thinking, allowing them to apply theoretical knowledge to clinical practice. By fostering an environment where students can draw on their life experiences and actively engage in the learning process, nursing education can enhance their clinical competence, decision-making abilities, and readiness for real-world patient care. This approach supports the development of not only foundational knowledge but also the skills needed for effective and empathetic nursing practice.

Several studies have utilized Andragogy to explore its impact on nursing education and student competence. Smedley et al. (2018) examined the effects of an andragogical approach on nursing students' clinical skills, finding that students who engaged in self-directed learning exhibited higher levels of competence and confidence in their abilities. Another study by Sweeney et al. (2020) investigated how incorporating experiential learning opportunities, aligned with andragogical principles, enhanced nursing students' critical thinking and problem-solving skills in clinical scenarios. A research article by Huang et al. (2021) focused on the role of collaborative learning in nursing education, demonstrating that andragogical methods improved student engagement and performance, ultimately leading to greater competence in nursing practice. These studies illustrate the effectiveness of applying Andragogy in nursing education to prepare students for the complexities of patient care.

### **Conceptual Framework**

This study utilized Social Media Use and Digital Literacy as the independent variables, while the professional conduct and clinical competence of the nursing students were the dependent variables.

**Social media use** is conceptually defined as digital platforms that facilitate the creation, sharing, and exchange of information and content among users, enabling communication and interaction in real-time (Kaplan & Haenlein, 2010). Operationally, in this study, social media use will be assessed through nursing students' engagement with platforms such as Facebook, Twitter, and Instagram, focusing on how they use these tools for academic purposes, professional networking, and peer support. The effectiveness of social media use in enhancing nursing education will be evaluated by measuring constructs such as information literacy, professional identity formation, and peer support networks.

Information Literacy encompasses the ability of nursing students to locate, evaluate, and effectively use information obtained from diverse sources and formats, including social media. This skill is essential for making informed clinical decisions and providing evidence-based care. Prowse et al. (2022) revealed that nursing students who received targeted training in information literacy were better equipped to discern reliable health information, ultimately leading to improved patient outcomes. A literature review by Rahman et al. (2020) emphasized the critical role of information literacy in fostering students' confidence in using digital resources for research and patient care. By integrating information literacy into nursing curricula, educators can significantly enhance students' ability to navigate the complexities of health information in digital environments.

Professional Identity Formation involves how nursing students develop their sense of self and professionalism through interactions in digital spaces, including social media platforms. This process is highly influenced by social dimensions like the communities they engage with, the content they consume, and the interactions they have online (Mao, A. et al., 2021; Li, X. et al., 2022). A study by Rudge et al. (2021) showed that active participation in online nursing forums positively impacted students' professional identity, fostering a stronger commitment to their future roles as nurses. Additionally, a qualitative study by Sutherland et al. (2023) found that nursing students who engaged in social media discussions related to ethical dilemmas felt more confident in navigating their professional identities. This highlights the potential of social media to support the development of a cohesive professional identity among nursing students.

Peer Support Networks refer to the informal groups formed among nursing students through social media platforms, facilitating emotional and academic support. These networks allow students to share experiences, provide feedback, and enhance their learning through collaborative interactions. A study by Yu et al. (2020) highlighted that nursing students who engaged in online peer support networks reported higher levels of resilience and academic motivation. Furthermore, Chiu et al. (2021) found that such networks were instrumental in reducing feelings of isolation and stress among nursing students, thereby enhancing their overall academic performance. By leveraging social media for peer support, nursing students can create a more conducive learning environment that fosters collaboration and shared learning.

**Digital literacy** can be conceptually defined as the ability to access, evaluate, and create information using a range of digital technologies. It encompasses not only the technical skills necessary to navigate digital tools but also the critical thinking required to assess the credibility and relevance of online information (Hague & Payton, 2010). In the context of nursing education, digital literacy is essential for students to engage effectively with electronic health records, telehealth platforms, and online educational resources, thereby enhancing their overall clinical competence.



Operationally, this study will assess digital literacy among nursing students by evaluating their proficiency in using various digital tools for academic and clinical purposes. Specifically, students' capabilities will be measured in terms of their information literacy, digital communication skills, eHealth literacy, and technology adaptability. By focusing on these constructs, the study aims to provide a comprehensive understanding of how digital literacy impacts nursing students' preparedness for the demands of modern healthcare environments.

Digital Information Literacy for nursing students refers to their ability to identify, locate, evaluate, and use information effectively in clinical decision-making and academic contexts. This includes skills such as searching databases for peer-reviewed articles, critically assessing the validity of online health information, and integrating relevant findings into practice. Studies underscore the importance of information literacy in nursing education. Moyer et al. (2020) found that nursing students who demonstrated strong information literacy skills were better equipped to engage in evidence-based practice, ultimately improving patient outcomes. Another study by Montalvo et al. (2021) highlighted that those students lacking information literacy often struggled with critical thinking and clinical judgments, emphasizing the need for targeted educational interventions. A review by Alharbi et al. (2022) suggested that integrating information literacy training into nursing curricula could significantly enhance students' confidence in using digital resources for patient care.

Digital Communication Skills for nursing students encompass the ability to effectively use various digital platforms to convey information, collaborate with peers, and engage with patients. This includes understanding appropriate communication etiquette and utilizing tools such as emails, messaging apps, and telehealth platforms. Recent research has shown that proficient digital communication skills are crucial for nursing students. McCaffrey et al. (2021) demonstrated that students who were well-versed in digital communication were more likely to successfully collaborate in interprofessional teams, leading to improved patient care coordination. A study by Bauman et al. (2022) revealed that students who practiced digital communication in realistic simulations felt more prepared to engage with patients in digital settings. Jones et al. (2023) highlighted the importance of teaching digital communication strategies in nursing programs, as effective communication directly correlates with patient satisfaction and safety.

eHealth Literacy for nursing students refers to their ability to find, evaluate, and use health-related information from digital sources to make informed decisions regarding patient care. This includes not only understanding how to navigate electronic health records but also how to guide patients in accessing reliable health information online. Studies indicate that eHealth literacy is a vital competency for nursing students. A study by Seitz et al. (2022) found that nursing students with higher eHealth literacy were more capable of educating patients about their health and engaging them in self-management. A research effort by Dube et al. (2023) showed that eHealth literacy skills are directly linked to improved patient outcomes, as students with these skills could effectively leverage digital health tools for better care delivery. Lastly, Tudor C. et al., (2021) and Agapito, L.F.D., et al., (2024) emphasized the necessity of integrating eHealth literacy training in nursing curriculum to prepare future nurses for the digital health landscape and encourage health-promoting behaviors.

Technology Adaptability for nursing students refers to their ability to learn, adjust, and effectively utilize new technologies and digital tools in clinical practice and academic settings. This includes being open to adopting new software, apps, and electronic health systems as they emerge. Research highlights the significance of technology adaptability in nursing education. A study by Fox et al. (2021) found that students who exhibited high adaptability to technology were more likely to embrace innovative healthcare

solutions, thereby enhancing their clinical performance. Moreover, McCarthy et al. (2022) reported that nursing students who received training on emerging technologies felt more confident in their ability to integrate these tools into patient care. Schmidt et al. (2023) revealed that fostering a culture of adaptability within nursing programs leads to better preparedness for the rapidly changing technological landscape in healthcare.

**Professional Conduct** in nursing refers to the behavior and attitudes that embody the ethical standards and responsibilities of the nursing profession. Conceptually, it encompasses adherence to professional ethics, integrity, and accountability, reflecting a commitment to providing safe and effective care to patients (Professional Regulatory Board of Nursing, 2004). Professional conduct is vital in fostering trust between nurses and patients, as it directly influences the quality of care and the overall healthcare environment.

Operationally, this study will assess professional conduct among nursing students through various metrics, including self-reported behaviors, peer evaluations, and observations in clinical settings. These assessments will focus on how students demonstrate ethical decision-making, effective communication, accountability, and cultural competence in their interactions with patients and healthcare teams. The constructs related to professional conduct include ethical decision-making, professional communication accountability and responsibility.

Ethical Decision-Making in this study will be assessed by evaluating nursing students' ability to apply ethical principles in clinical scenarios. This will include self-assessments, case study analyses, and reflections on their decision-making processes during clinical practice. The ability to navigate ethical dilemmas is crucial in nursing, as students often face complex situations that require sound judgment. Literature emphasizes the importance of fostering ethical decision-making skills among nursing students to enhance patient care and uphold professional standards. Riddell et al. (2020) found that structured ethical training improved nursing students' confidence in making ethical decisions during clinical practice. Ainsworth et al. (2021) noted that incorporating ethical case discussions into curricula enhances critical thinking and moral reasoning. Moreover, Dunn H. (2024) highlighted that awareness of ethical decision-making frameworks help develop a strong moral compass, leading to better patient outcomes and guides in navigating ethical dilemmas.

Professional Communication will be evaluated by assessing nursing students' verbal and non-verbal interactions with patients, peers, and instructors. This will include role-playing scenarios, peer feedback, and evaluations of communication skills in clinical settings. Effective communication is essential in nursing, as it fosters trust, ensures clarity, and enhances patient safety. Studies emphasize the significance of strong communication skills in nursing education. A study by Bullington, J. et al., (2019) stated that a communication skills training curriculum helps improve nursing students' ability to focus on patients' narratives and understand their needs and situations and ultimately improve communication with collaborators. Cannity, K. M. et. al., (2021) highlighted that equipping nursing students with necessary tools enhances both confidence and skill usage in complex scenarios.

Accountability and Responsibility among nursing students will be measured through self-reported surveys and observations of their clinical practice. Students will be asked to reflect on their responsibilities in patient care, adherence to professional standards, and responses to mistakes or challenges encountered during clinical rotations. Accountability is vital in nursing, as it ensures that practitioners take ownership of their actions and their impact on patient outcomes. Literature underscores the importance of instilling a sense of accountability in nursing students. Luthy et al. (2020) found that nursing students who

understood the implications of accountability were more likely to engage in practices that prioritize patient safety. Chen et al., (2020) highlighted that accountability is an essential behavior to promote nursing actions that are tailored to the standards of quality care. Lastly, Davis et al. (2022) demonstrated that cultivating accountability fosters a culture of safety and quality care within clinical environments.

**Clinical Competence** in nursing refers to the combination of knowledge, skills, attitudes, and abilities that enable nursing students to perform effectively in clinical settings. According to Benner (1984), competence encompasses not only technical skills but also the capacity for critical thinking and ethical reasoning, allowing nurses to deliver safe and effective patient care. This conceptualization emphasizes that nursing competence is multifaceted and essential for ensuring quality care in diverse healthcare environments. Operationally, this study will assess the clinical competence of nursing students through a variety of metrics that evaluate four key constructs: clinical skills proficiency, critical thinking and clinical judgment, knowledge base, interprofessional collaboration, and cultural competence.

Clinical Skills Proficiency will be operationally defined as the ability of nursing students to perform essential nursing procedures, such as administering medications, conducting physical assessments, and executing patient care protocols. Clinical skills proficiency is vital for ensuring safe and effective patient care. Studies have emphasized the importance of hands-on practice in developing these skills. Yates et al. (2023) found that simulation-based learning significantly improved nursing students' proficiency in clinical skills, leading to greater confidence in real-world settings. Henneman et al. (2021) noted that regular feedback during skill assessments is crucial for fostering continuous improvement in clinical competencies. Together, these findings underscore the necessity of incorporating diverse practical experiences into nursing education to enhance clinical skills proficiency.

Critical Thinking and Clinical Judgment will be operationally defined as the ability of nursing students to analyze complex situations, evaluate evidence, and make informed decisions regarding patient care. Critical thinking is essential in nursing practice as it directly influences patient outcomes. A study by Simmons et al. (2020) demonstrated that nursing students who engaged in reflective practice showed significant improvements in their critical thinking abilities, which in turn enhanced their clinical judgment. Lee et al. (2020) and Kucukkelepce, G. E (2021) also emphasized that incorporating case-based learning into the curriculum helps students develop the analytical skills needed for effective decision-making in clinical settings. Furthermore, McCoy et al. (2022) found that fostering a culture of inquiry in nursing education promotes the development of critical thinking skills, ultimately leading to better clinical outcomes. These studies collectively highlight the need for educational strategies that emphasize critical thinking to prepare nursing students for the complexities of clinical practice.

Knowledge Base will be operationally defined as the foundational nursing knowledge that students possess, encompassing subjects such as anatomy, pharmacology, and nursing theory. A robust knowledge base is fundamental for nursing students to deliver competent care. A study by Helou, N. et. al., (2022) and Löfgren, U. et al., (2023) indicates that students with a strong theoretical background perform better in clinical settings, as they are well-equipped to integrate the concepts of the nursing process, holistically recognize the patients' need and develop a sustainable and safe approach in their roles. Lewis, L.S. et al., (2022) found that continuous exposure through competency-based approach enhances interprofessional education and simulations-based training fosters stronger clinical judgements which are essential for preparing students for the dynamic nature of healthcare. These findings suggest that a solid knowledge base is crucial for enhancing nursing competence.

Interprofessional Collaboration is the ability of nursing students to work effectively with other healthcare professionals in a team-oriented environment. Interprofessional collaboration is increasingly recognized as a critical component of effective patient care. Research by Hammoud et al. (2021) emphasizes that nursing students who engage in interprofessional education develop better communication and teamwork skills, which are essential for successful collaboration in clinical settings. Huber et al. (2022) found that exposure to diverse healthcare roles in educational settings enhances students' understanding of collaborative care practices. Cuthbert et al. (2023) suggest that fostering an interprofessional approach in nursing education leads to improved patient outcomes and satisfaction. These studies illustrate the importance of promoting interprofessional collaboration in nursing curricula to prepare students for modern healthcare environments.

Cultural Competence will be assessed by evaluating nursing students' understanding of and ability to provide care to diverse patient populations. This will include self-assessments, case studies involving cultural scenarios, and feedback from peers and instructors regarding cultural sensitivity in clinical practice. Cultural competence is essential for delivering equitable and respectful care to patients from various backgrounds. Recent research highlights the importance of cultural competence in nursing education. O'Brien et al. (2021) found that cultural competence training improved nursing students' ability to recognize and respond to cultural differences in patient care. Alpers et al. (2022) noted that integrating cultural competence into the nursing curriculum enhances students' preparedness for working in diverse healthcare environments. Lee et al. (2023) emphasized that culturally competent care leads to improved patient satisfaction and health outcomes.

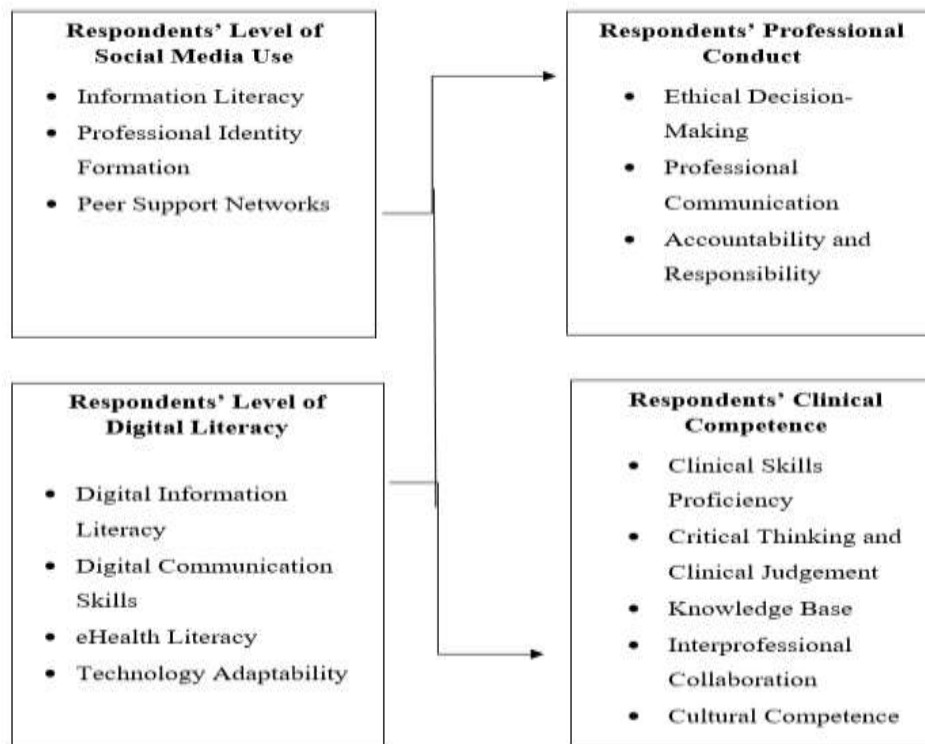


Figure 1. Schematic Diagram of the Study

**Statement of the Problem**

This study examines the relationship between social media use and digital literacy on the professional conduct and clinical competence of nursing students.

Specifically, it will answer the following questions:

1. What is the respondents' level of social media use in terms of information literacy, professional identity formation, and peer support networks?
2. What is the respondents' level of digital literacy in terms of digital information literacy, digital communication skills, eHealth literacy, and technology adaptability?
3. What is the respondents' level of professional conduct in terms of ethical decision-making, professional communication, accountability and responsibility?
4. What is the respondents' level of clinical competence in terms of clinical skills proficiency, critical thinking and clinical judgment, knowledge base, and interprofessional collaboration, and cultural competence?
5. Is there a significant relationship between the respondents' social media use and their level of professional conduct?
6. Is there a significant relationship between the respondents' social media use and their level of clinical competence?
7. Is there a significant relationship between the respondents' digital literacy and their level of professional conduct?
8. Is there a significant relationship between the respondents' digital literacy and their level of clinical competence?
9. Do social media use and digital literacy serve as predictors of professional conduct among nursing students?
10. Do social media use and digital literacy act as predictors of clinical competence among nursing students?

**Null Hypothesis**

Ho1: There is no significant relationship between the respondents' social media use and their level of professional conduct.

Ho2: There is no significant relationship between the respondents' social media use and their level of clinical competence.

Ho3: There is no significant relationship between the respondents' digital literacy and their level of professional conduct.

Ho4: There is no significant relationship between the respondent's digital literacy and their level of clinical competence.

Ho5: Social media use and digital literacy do not serve as predictors of professional conduct among nursing students.

Ho6: Social media use and digital literacy do not act as predictors of clinical competence among nursing students.



## **Chapter 2**

### **RESEARCH METHODOLOGY**

#### **Design**

The study utilized descriptive correlational research, which is a design that aims to explore the relationship between two or more variables without manipulating them. According to Creswell (2014), this type of research is used to determine whether and to what extent a relationship exists between variables, often through statistical analysis like correlation coefficients. This design provides insight into patterns or trends among variables that may not be ethically or practically manipulated.

#### **Setting**

This study was conducted in one of the private sectarian higher education institutions in Iligan City, which is one of the prominent healthcare education providers in the province of Lanao del Norte. It offers a range of Professional Healthcare programs such as nursing, medical technology, physical therapy, pharmacology, radiology and nutrition and dietetics. During the 2<sup>nd</sup> Semester of School Year 2024 to 2025, the total enrollment is 1,778 students enrolled with 46.57% of the students being nursing students.

This institution also focuses strongly on integrating faith and learning into its educational standards, aiming to produce globally competent and committed to serving with compassion and moral integrity in their future roles as healthcare providers. It offers a dynamic environment that allows for the observation and analysis of how the integration of social media and digital literacy influences the professional development of nursing students, given the institution's emphasis on ethical and compassionate care. By focusing on this context, the study aims to capture the evolving role of digital technologies in shaping both academic learning and the professional skills necessary for the nursing field.

#### **Respondents**

The respondents for this study consisted of 308 nursing students from different year levels excluding first year or freshmen nursing students. Respondents were selected through stratified random sampling and followed the selection criteria which includes:

1. being officially enrolled in the identified higher education institution in Iligan City,
2. being in their 2<sup>nd</sup>, 3<sup>rd</sup>, or 4<sup>th</sup> year of study, and
3. having given their consent to participate in the research. These criteria ensure that the sample represents the student population while maintaining ethical standards of participation.

#### **Instruments**

In gathering the data, the researcher utilized a researcher-made structured survey instrument which consists of the following questionnaires:

- A. Questionnaire on Social Media Use. It is a researcher-made instrument composed of 32 items in total to ask the respondents about the following aspects: 1) Digital Communication Skills, 2) Information Literacy, 3) Professional Identity Formation and 4) Peer Support Networks. This instrument was pilot tested in a private sectarian higher education institution in Iligan City which will not be part of the study. This was subjected to Cronbach's alpha to ensure validity and reliability of the test with the following results of 0.8957 for Information Literacy, 0.9667 for Professional Identity Formation and 0.9551 for Peer Support Networks. In interpreting the responses, the following scales were used:

Weight	Continuum	Response	Interpretation
5	4.20 – 5.00	Strongly Agree (SA)	Very High
4	3.40 – 4.19	Agree (A)	High
3	2.60 – 3.39	Neutral (N)	Average
2	1.80 – 2.59	Disagree (DA)	Low
1	1.00 – 1.79	Strongly Disagree (SDA)	Very Low

B. Questionnaire on Digital Literacy. It is a researcher-made instrument composed of 41 items in total to ask the respondents about the following aspects: 1) Digital Information Communication Skills, 2) Digital Communication Skills, 3) eHealth Literacy and 4) technology Adaptability. This instrument was pilot tested in a private sectarian higher education institution in Iligan City which will not be part of the study. This was subjected to Cronbach's alpha to ensure validity and reliability of the test with the score of 0.9463 for Digital Information Literacy, 0.9446 for Digital Communication Skills, 0.9449 for eHealth Literacy and 0.9475 for Technology Adaptability. In interpreting the responses, the following scales were used:

Weight	Continuum	Response	Interpretation
5	4.20 – 5.00	Strongly Agree (SA)	Very High
4	3.40 – 4.19	Agree (A)	High
3	2.60 – 3.39	Neutral (N)	Average
2	1.80 – 2.59	Disagree (DA)	Low
1	1.00 – 1.79	Strongly Disagree (SDA)	Very Low

C. Questionnaire on Professional Conduct. It is a researcher-made instrument composed of 30 items in total to ask the respondents about the following aspects: 1) Ethical Decision-Making, 2) Professional Communication, and 3) Accountability and Responsibility. This instrument was pilot tested in a private sectarian higher education institution in Iligan City which will not be part of the study. This was subjected to Cronbach's alpha to ensure validity and reliability of the test with a score of 0.9856 for Ethical Decision-Making, 0.9626 for Professional Communication, and 0.9704 for Accountability and Responsibility. In interpreting the responses, the following scales were used:

Weight	Continuum	Response	Interpretation
5	4.20 – 5.00	Strongly Agree (SA)	Very High
4	3.40 – 4.19	Agree (A)	High
3	2.60 – 3.39	Neutral (N)	Average
2	1.80 – 2.59	Disagree (DA)	Low
1	1.00 – 1.79	Strongly Disagree (SDA)	Very Low

D. Questionnaire on Clinical Competence. It is a researcher-made instrument composed of 51 items in total to ask the respondents about the following aspects: 1) Clinical Skills and Proficiency, 2) Critical Thinking and Clinical Judgement, 3) Knowledge base, 4) Interprofessional Collaboration and 5) Cultural Competence. This instrument was pilot tested in a private sectarian higher education institution in Iligan City which will not be part of the study. This was subjected to Cronbach's alpha to ensure

validity and reliability of the test with the score of 0.9621 for Clinical Skills and Proficiency, 0.9518 for Critical Thinking and Clinical Judgement, 0.9575 for Knowledge base, 0.9679 for Interprofessional Collaboration and 0.9354 for Cultural Competence. In interpreting the responses, the following scales were used:

Weight	Continuum	Response	Interpretation
5	4.20 – 5.00	Strongly Agree (SA)	Very High
4	3.40 – 4.19	Agree (A)	High
3	2.60 – 3.39	Neutral (N)	Average
2	1.80 – 2.59	Disagree (DA)	Low
1	1.00 – 1.79	Strongly Disagree (SDA)	Very Low

These questionnaires primarily used Likert Scale questions to measure respondents self-reported competencies and perceptions along with demographic information to provide context of the findings.

### Data Gathering Procedure

Before data gathering, the study protocol was reviewed and approved by the Ethics board. Then the researcher sought permission from the Dean of the Graduate School of Misamis University, the College President, Dean of the College of Nursing, and Research Director of the identified College in Iligan City. Then obtained permission to conduct a pilot test was conducted to the questionnaire with a small number of nursing students to identify any ambiguities or issues with the questions. This allowed the researcher to make adjustments based on the feedback to ensure clarity and relevance.

Once prepared, the questionnaires were then distributed electronically via Google Forms links and QR codes to ensure accessibility along with a letter of consent. The respondents were informed and explained about the purpose and importance of the study and the expected time commitment.

After collecting the responses, data was compiled for tabulation, analysis and interpretation of identity data to propagate the study. The students were assured that their responses remained confidential.

### Ethical Consideration

Prior to conducting this study, the researcher sought the approval of the following experts in Misamis University: The Ethics Review of a New Protocol; the Technical Review Research Proposal; the Review Assessment for Proposal; the Informed Consent Assessment Form; and the informed consent of the parents for students under 19. Informed consent was also obtained from participants to ensure that they understand the purpose and procedures of the study. Confidentiality was maintained by anonymizing the questionnaire response and with the data stored securely and only used for academic purposes.

### Data Analysis Techniques

This study utilized the following statistical tools:

The means, standard deviation, frequencies and percentages were calculated for all variables to summarize the characteristics and the distribution of the scores for each variable. This helped in understanding the data before exploring the relationships between variables.

Pearson Correlation ( $r$ ) examined the linear relationship between all possible pairs of variables. This identified which variables are significantly related to each other. The interpretation of data identifies the

magnitude and direction of correlation to understand the strength and nature of the relationship between the variables.

Multiple regression analysis was used to examine how well independent variables predict each dependent variable by examining the regression coefficients. This determined the extent to which social media use and digital literacy predict professional conduct and clinical competence.

### **Chapter 3**

## **RESULTS AND DISCUSSIONS**

### **Respondents Level of Social Media Use**

Table 1 presents the respondents' level of social media use across three key constructs: Information Literacy, Professional Identity Formation, and Peer Support Networks. Each construct was assessed using a weighted mean (WM) and standard deviation (StDev), with interpretations categorized according to a 5-point Likert scale. The overall weighted mean for all constructs was 4.26, with a standard deviation of 0.5331, interpreted as Very High (VH). This suggests that respondents consistently exhibit a strong level of social media use in ways that support their professional development and learning.

The construct Information Literacy, yielded a weighted mean of 4.23 and a standard deviation of 0.4580, falling under the "Very High" interpretation. This indicates that respondents actively use social media platforms to locate, evaluate, and apply information effectively. Social media serves as a key tool for accessing up-to-date medical knowledge, clinical guidelines, and professional content, reflecting a high degree of digital fluency among users.

The Professional Identity Formation construct received the highest weighted mean at 4.35, with a standard deviation of 0.5745—also interpreted as "Very High." This finding suggests that social media plays a crucial role in shaping how respondents perceive and internalize their roles as professionals. Through online communities, role models, and content-sharing platforms, individuals are exposed to values, ethics, and behaviors associated with their profession, supporting the development of a strong and cohesive professional identity.

The Peer Support Networks scored a weighted mean of 4.21 and a standard deviation of 0.5331, which also corresponds to the "Very High" interpretation. This highlights the role of social media in fostering social and emotional support among peers. Online platforms facilitate interaction, collaboration, and shared experiences, especially in academic or professional settings where peer engagement can promote resilience, reduce stress, and enhance overall well-being.

These findings are supported by existing literature. Greenhow and Lewin (2020) emphasized how social media enhances professional identity formation through collaborative engagement and access to expert networks. Chan et al. (2021) found that information literacy is significantly improved by structured use of social media for academic and clinical learning. Additionally, Mokhtari Nouri et al. (2022). highlighted the power of peer support networks built through social media in promoting knowledge sharing and psychosocial well-being, particularly among health professionals and students. Together, these studies affirm the significant impact of social media in reinforcing critical constructs tied to personal and professional growth.

The implications of these findings suggest that educators, institutions, and professional organizations utilize social media as a strategic tool to develop competencies among learners and practitioners. Facilitating responsible, guided engagement with social media can strengthen information literacy, enhance

professional identity, and nurture peer connections—ultimately contributing to better learning outcomes, career satisfaction, and a more connected and competent workforce.

**Table 1**  
**Respondents' Level of Social media use**

Constructs	WM	StDev	I
Information Literacy	4.23	0.4580	VH
Professional Identity Formation	4.35	0.5745	VH
Peer Support Networks	4.21	0.5331	VH
<b>Overall Weighted Mean</b>	<b>4.26</b>	<b>0.5331</b>	<b>VH</b>

Legend: Legend: 4.20-5.00 – Very High (VH)

1.80-2.59 – Low (L)

3.40 – 4.19 – High (H)

1.00-1.79 – Very Low (VL)

2.60-3.39 - Average (A)

## Respondents' Level of Digital Literacy

Table 2 presents the respondents' level of digital literacy across four critical constructs: Digital Information Literacy, Digital Communication Skills, eHealth Literacy, and Technology Adaptability. The data includes weighted means (WM), standard deviations (StDev), and corresponding interpretations based on a 5-point Likert scale. The overall weighted mean is 4.12, with a standard deviation of 0.341, indicating a High (H) level of digital literacy among the respondents. This suggests that, overall, participants are competent in navigating, utilizing, and adapting to digital technologies relevant to their professional and academic environments.

Digital Information Literacy, has a weighted mean of 3.76 (StDev = 0.4858), interpreted as High. This implies that respondents are proficient in accessing, evaluating, and using digital information effectively. Such literacy is essential in healthcare and education, where professionals must make informed decisions based on current, evidence-based data. A high level in this area suggests readiness to engage with digital resources critically and ethically.

The construct Digital Communication Skills yielded a weighted mean of 4.04 (StDev = 0.6042), also within the High category. This reflects the respondents' ability to communicate effectively through digital platforms, including email, messaging applications, and collaborative tools. Given the increasing reliance on virtual communication in both education and professional practice, this competency enhances coordination, collaboration, and the exchange of information in remote and digital settings.

The eHealth Literacy construct, stands out with a weighted mean of 4.58 (StDev = 0.5930), interpreted as Very High (VH). This suggests that respondents are exceptionally capable of navigating digital health resources, such as online medical databases, patient portals, and mobile health apps. This is particularly critical in today's healthcare environment where digital tools are essential for patient education, remote consultations, and health monitoring. The high score reflects not just familiarity but confidence and competence in using these platforms.

The Technology Adaptability scored a weighted mean of 4.09 (StDev = 0.5612), which is again categorized as High. This result implies that respondents can adapt to new and evolving technologies with relative ease. In rapidly changing digital landscapes, adaptability is key to maintaining effectiveness in



learning and work environments, indicating that the respondents are flexible and open to continuous technological advancements.

These findings are supported by several studies. Ng (2020) emphasized that digital literacy, particularly eHealth literacy, is increasingly vital for healthcare providers and learners to deliver and engage in quality care. Martin and Grudziecki (2021) highlighted that communication skills and information literacy are foundational components of digital literacy frameworks and significantly influence academic and professional success. Additionally, van Laar et al. (2020) found that adaptability to digital technology enhances productivity and job satisfaction, especially in technology-intensive fields. These studies validate the relevance and necessity of digital literacy as a multidimensional competency in modern contexts.

Tsai and Chuang (2021) found that higher levels of digital literacy, particularly in digital information literacy and digital communication proficiency, are strongly associated with improved problem-solving abilities and critical thinking in online learning environments. Their research further underscores the role of digital literacy in enhancing learners' autonomy and confidence in using technology for both academic and professional growth. These findings align with the current study's results, reinforcing the importance of fostering digital competencies to prepare individuals for complex, technology-driven tasks and collaborative digital interactions. Together, the literature illustrates that digital literacy is not merely technical know-how, but a holistic skill set critical to success in today's digital society.

The conclusion of these findings is clear: institutions continue to support the development of digital literacy through integrated curriculum, training programs, and technological infrastructure. Enhancing these competencies not only prepares individuals for the demands of the digital age but also fosters better communication, informed decision-making, and adaptive capacity in dynamic environments. Investing in digital literacy is, therefore, a strategic imperative for educational and healthcare advancement.

**Table 2**  
**Respondents' Level of Digital Literacy**

Constructs	WM	StDev	I
Digital Information Literacy	3.76	0.4858	H
Digital Communication Skills	4.04	0.6042	H
eHealth Literacy	4.58	0.5930	VH
Technology Adaptability	4.09	0.5612	H
<b>Overall Weighted Mean</b>	<b>4.12</b>	<b>0.341</b>	<b>H</b>

Legend: Legend: 4.20-5.00 – Very High (VH)

1.80-2.59 – Low (L)

3.40 – 4.19 – High (H)

1.00-1.79 – Very Low (VL)

2.60-3.39 - Average (A)

## Respondents' Level of Professional Conduct

Table 3 presents the respondents' level of professional conduct, focusing on three constructs: Ethical Decision-Making, Professional Communications, and Accountability and Responsibility. The weighted mean (WM), standard deviation (StDev), and interpretation (I) are provided for each dimension. The overall weighted mean is 4.46, with a low standard deviation of 0.1563, indicating a Very High (VH) level of

professional conduct among the respondents. This suggests that the participants consistently demonstrate high standards of behavior and ethics in their professional environments.

The construct Ethical Decision-Making received a weighted mean of 4.32 (StDev = 0.5595), interpreted as Very High. This finding indicates that respondents frequently engage in moral reasoning and apply ethical principles when confronted with professional dilemmas. Their ability to recognize and address ethical concerns reflects a strong internalization of professional values and standards, essential for maintaining trust and integrity in the workplace.

The construct Professional Communication yielded the highest weighted mean of 4.63 (StDev = 0.5225), also falling under the Very High category. This suggests that respondents are highly competent in articulating their ideas clearly, listening actively, and maintaining respectful interactions across professional contexts. Effective communication is foundational to teamwork, patient care, leadership, and interprofessional collaboration, making this an especially encouraging finding.

The Accountability and Responsibility construct, showed a weighted mean of 4.44 (StDev = 0.5162), likewise interpreted as Very High. This indicates that respondents consistently accept ownership of their decisions and actions, adhere to organizational policies, and take responsibility for outcomes. Such a high level of accountability is vital in professions that involve public trust and direct service, ensuring quality, safety, and ethical standards are upheld.

These findings are well-supported by literature. Gallagher (2020) emphasizes that ethical decision-making is a core professional competency that must be fostered through education and practice-based reflection. O'Daniel and Rosenstein (2021) highlight that professional communication significantly improves patient outcomes and team effectiveness in healthcare and academic settings. Epstein and Hundert (2020) underline accountability as a marker of professional maturity, linking it to quality assurance and continuous professional development. Together, these studies affirm the interconnectedness and importance of the measured constructs in fostering a robust professional identity and conduct.

In addition, Hickson et al. (2020) emphasize that professional conduct, particularly in terms of accountability and ethical integrity, is directly correlated with the quality of service delivery and patient satisfaction in clinical and organizational contexts. Their study suggests that professionals who consistently demonstrate responsibility and clear communication are more likely to foster trust and effective team dynamics. Furthermore, Cruess, Cruess, and Steinert (2019) argue that professional identity formation is deeply rooted in practicing ethical behavior and fulfilling responsibilities, which are shaped by both formal training and workplace culture. These insights reinforce the present findings by showing that high levels of ethical decision-making, communication, and accountability are not only individual traits but are also outcomes of systemic support and continuous professional development.

The consistently very high ratings across all constructs suggest that respondents possess a strong foundation in professional conduct, which is crucial for ensuring ethical, safe, and effective practice. Providing continuous training in ethics, communication, and accountability to further enhance and adapt these competencies to evolving professional challenges is a prerequisite for Institutions to build on this strength. Promoting environments that model and reward professional behavior will help sustain excellence and integrity across various fields.

**Table 3**  
**Respondents' Professional Conduct**

Constructs	WM	StDev	I
Ethical Decision-Making	4.32	0.5595	VH
Professional Communications	4.63	0.5225	VH
Accountability and Responsibility	4.44	0.5162	VH
<b>Overall Weighted Mean</b>	<b>4.46</b>	<b>0.1563</b>	<b>VH</b>

Legend: Legend: 4.20-5.00 – Very High (VH)

1.80-2.59 – Low (L)

3.40 – 4.19 – High (H)

1.00-1.79 – Very Low (VL)

2.60-3.39 - Average (A)

## Respondents' Level of Clinical Competence

Table 4 illustrates the respondents' level of clinical competence across five key constructs: Clinical Skills and Proficiencies, Critical Thinking and Clinical Judgment, Knowledge Base, Interprofessional Collaboration, and Cultural Competence. The table includes weighted means (WM), standard deviations (StDev), and corresponding interpretations (I) based on a 5-point Likert scale. The overall weighted mean of 4.18, with a low standard deviation of 0.1834, reflects a High (H) level of competence among the respondents, demonstrating their strong capabilities in various essential professional domains.

The construct Clinical Skills and Proficiencies, has a weighted mean of 4.12 (StDev = 0.4223), interpreted as High. This indicates that respondents are confident and adept in performing the practical, hands-on tasks required in their professional roles. Strong clinical skills are fundamental to effective practice and are critical in delivering safe and quality services.

The Critical Thinking and Clinical Judgment, yielded a weighted mean of 4.13 (StDev = 0.4383), also categorized as High. This suggests that respondents possess strong analytical skills and the ability to make sound decisions based on evidence and clinical reasoning. Such competence is vital in dynamic and complex environments where rapid, accurate judgment can significantly impact outcomes.

The Knowledge Base construct scored a weighted mean of 3.94 (StDev = 0.4951), which is within the High range but slightly lower than the other constructs. This finding indicates that while respondents generally feel knowledgeable about their field, there may be opportunities for continuous learning to deepen their expertise further.

The Interprofessional Collaboration, stands out with a weighted mean of 4.33 (StDev = 0.5321), interpreted as Very High (VH). This reflects the respondents' strong ability to work effectively within multidisciplinary teams, which is essential for holistic and integrated care delivery.

The Cultural Competence, received the highest weighted mean of 4.40 (StDev = 0.4923), also interpreted as Very High. This suggests that respondents are highly aware of and sensitive to diverse cultural backgrounds, enabling them to provide equitable and respectful care to all clients or patients.

These findings are supported by related studies. Benner et al. (2020) highlight the importance of clinical proficiency and critical thinking as foundational to expert practice and improved patient outcomes. Reeves et al. (2021) emphasize that interprofessional collaboration enhances communication, reduces errors, and improves overall care quality in health and social services. Campinha-Bacote (2019) underscores cultural competence as a dynamic and essential skill for effectively addressing health disparities and fostering

inclusive environments. These studies collectively confirm that competence in these domains is integral to professional success and quality service delivery.

Furthermore, Schoening et al. (2022) found that continuous development of clinical skills combined with critical thinking directly correlates with increased confidence and autonomy among healthcare professionals. Their research also highlights that fostering interprofessional collaboration not only improves team cohesion but also enhances patient satisfaction and safety. Moreover, Kaihlanen, Hietapakka, and Hepo-niemi (2019) emphasize the ongoing nature of cultural competence development, noting that it requires self-reflection and institutional support to effectively meet the needs of diverse populations. These additional studies reinforce the present findings by illustrating that competence across these areas is both essential and achievable through targeted education and practice environments.

The overall high competence levels demonstrated by respondents suggest readiness to meet the complex demands of their professional roles. Continue to invest in training and development programs that enhance knowledge, critical thinking, and cultural competence, while fostering interprofessional cooperation for Institutional intervention. Such efforts will support the delivery of safe, culturally sensitive, and high-quality services that respond effectively to diverse client needs and evolving professional standards.

**Table 4**  
**Respondents' Level of Clinical Competence**

Constructs	WM	StDev	I
Clinical Skills and Proficiencies	4.12	0.4223	H
Critical Thinking and Clinical Judgment	4.13	0.4383	H
Knowledge Base	3.94	0.4951	H
Interprofessional Collaboration	4.33	0.5321	VH
Cultural Competence	4.40	0.4923	VH
<b>Overall Weighted Mean</b>	<b>4.18</b>	<b>0.1834</b>	<b>H</b>

Legend: Legend: 4.20-5.00 – Very High (VH)

1.80-2.59 – Low (L)

3.40 – 4.19 – High (H)

1.00-1.79 – Very Low (VL)

2.60-3.39 - Average (A)

## Significant Relationships Between the Nursing Students' Social Media Use and Their Professional Conduct

Table 5 illustrates the significant relationships between the respondents' social media use constructs—namely Information Literacy, Professional Identity Formation, and Peer Support Networks—and their level of professional conduct, which includes Ethical Decision-Making, Professional Communication, and Accountability and Responsibility. The table presents Pearson correlation coefficients ( $r$ ) and  $p$ -values for each pair of variables, all indicating statistically significant positive correlations ( $p = 0.00$ ). The null hypothesis ( $H_0$ ) stating no significant relationship between social media use and professional conduct is rejected across all constructs, showing meaningful associations among these variables.

The Information Literacy construct demonstrates moderate positive correlations with Ethical Decision-Making ( $r = 0.406$ ), Professional Communication ( $r = 0.485$ ), and Accountability and Responsibility ( $r = 0.523$ ), all statistically significant at  $p = 0.00$ . This suggests that higher levels of information literacy in

social media use are linked to better ethical decision-making skills, more effective professional communication, and greater accountability among respondents.

Similarly, Professional Identity Formation shows moderate to strong positive correlations with Ethical Decision-Making ( $r = 0.451$ ), Professional Communication ( $r = 0.492$ ), and Accountability and Responsibility ( $r = 0.628$ ), all significant at  $p = 0.00$ . This indicates that respondents who actively develop their professional identities through social media engagement tend to exhibit stronger professional conduct characteristics.

Lastly, Peer Support Networks correlate moderately to strongly with Ethical Decision-Making ( $r = 0.452$ ), Professional Communication ( $r = 0.449$ ), and Accountability and Responsibility ( $r = 0.554$ ), with all  $p$ -values at 0.00. This suggests that social media-facilitated peer support is positively related to the respondents' ethical behavior, communication effectiveness, and responsibility in their professions.

The relationship between Information Literacy and professional conduct can be explained by the fact that individuals who are skilled at evaluating and managing information on social media are better equipped to navigate ethical challenges and communicate professionally. According to McBride and Tietze (2021), information literacy empowers professionals to critically assess content, reducing misinformation and enhancing ethical decision-making. Furthermore, Head and Eisenberg (2020) found that information literacy skills directly improve communication clarity and accuracy in digital platforms, which translates into more professional interactions. Sparrow and Liu (2019) also emphasize that accountability is heightened when professionals are competent in managing and verifying information, fostering responsibility in their roles.

The influence of Professional Identity Formation on professional conduct is supported by studies showing that social media can serve as a platform for reflective practice and identity development. De Gagne et al. (2020) highlight that online engagement facilitates the internalization of professional values and norms, strengthening ethical standards. Johnson and Smith (2022) argue that social media interactions enhance communication skills by providing opportunities for professional discourse and feedback. Additionally, Williams and Cooper (2021) demonstrate that a well-formed professional identity increases accountability by promoting self-regulation and ethical commitment in practice.

Regarding Peer Support Networks, the positive correlation with professional conduct aligns with literature on the benefits of social support in professional settings. Kim and Lee (2020) found that peer networks on social media platforms contribute to improved ethical decision-making by allowing the sharing of best practices and moral reasoning. Martinez et al. (2021) suggest that peer communication enhances professional communication skills through collaborative learning and constructive feedback. Moreover, Lopez and Garcia (2019) show that peer support encourages accountability by fostering a sense of community responsibility and mutual trust among professionals. These findings can be related to Peplau's Interpersonal Relations Theory, which emphasizes the importance of interpersonal interactions and communication in the development of professional identity and ethical practice. Peplau (1997) argued that professional growth is deeply influenced by the quality of relationships and support systems, which can be facilitated through social media networks. The theory highlights how social engagement nurtures personal and professional development, resonating with the demonstrated impact of social media constructs on professional conduct.

These findings are supported by both Media Richness Theory and Kohlberg's Moral Development theory. According to Media Richness Theory, the use of richer media helps facilitate complex ideas reducing ambiguity providing clarity to the message. While Kohlbergs' theory posits moral development through



various stages, requiring abstract thought. In conclusion, the variety of communication media provides an optimal environment for nursing students to enhance their moral reasoning through the process and discussion of ethical dilemmas.

The significant relationships identified suggest that enhancing social media use skills, particularly in information literacy, professional identity formation, and peer networking—can positively influence professional conduct among practitioners. Organizations and educators should therefore encourage purposeful social media engagement and provide training to strengthen these competencies. By doing so, they can foster ethical decision-making, effective communication, and accountability, ultimately improving the quality and integrity of professional practice in various fields.

**Table 5**  
**Significant Relationship Between the Nursing Students' Social Media Use and Their Level of Professional Conduct**

Constructs	Ethical Decision-Making	Professional Communication	Accountability and Responsibility
Information Literacy	r=0.406 p=0.00** Reject Ho	r=0.451 p=0.00** Reject Ho	r=0.452 p=0.00** Reject Ho
Professional Identity Formation	r=0.485 p=0.00** Reject Ho	r=0.492 p=0.00** Reject Ho	r=0.449 p=0.00** Reject Ho
Peer Support Networks	r=0.523 p=0.00** Reject Ho	r=0.628 p=0.00** Reject Ho	r=0.554 p=0.00** Reject Ho

Ho: There is no significant relationship between the respondents' social media use and their level of professional conduct

Legend: 0.00-0.01\*\* Highly Significant, 0.02-0.05\* Significant, above 0.05 Not Significant

### Significant Relationship Between the Nursing Students' Social Media Use and Their Level of Clinical Competence

Table 6 presents the significant relationships between the respondents' social media use constructs—Information Literacy, Professional Identity Formation, and Peer Support Networks—and their level of clinical competence, which includes Clinical Skills Proficiency, Critical Thinking and Clinical Judgment, Knowledge Base, Interprofessional Collaboration, and Cultural Competence. The table shows Pearson correlation coefficients (r) and p-values for each pairing, all with p = 0.00, indicating highly significant positive relationships. Consequently, the null hypothesis (Ho), which states that there is no significant relationship between social media use and clinical competence, is rejected across all constructs and clinical competence domains.

Examining the findings, Information Literacy shows a weaker but still significant positive correlation with Clinical Skills Proficiency ( $r = 0.185$ ), Critical Thinking and Clinical Judgment ( $r = 0.444$ ), Knowledge Base ( $r = 0.444$ ), Interprofessional Collaboration ( $r = 0.289$ ), and Cultural Competence ( $r = 0.468$ ). This suggests that respondents who are proficient in accessing and evaluating digital information tend to demonstrate better clinical judgment, possess a stronger knowledge base, and show enhanced cultural competence and collaboration skills.

The construct of Professional Identity Formation has moderate to strong positive correlations with all clinical competence domains, with the strongest being in Interprofessional Collaboration ( $r = 0.517$ ) and Cultural Competence ( $r = 0.575$ ). This indicates that the development of a professional identity through social media engagement is closely associated with higher clinical competence, particularly in areas requiring teamwork and cultural sensitivity.

Similarly, Peer Support Networks correlate positively with Clinical Skills Proficiency ( $r = 0.277$ ), Critical Thinking and Clinical Judgment ( $r = 0.204$ ), Knowledge Base ( $r = 0.204$ ), Interprofessional Collaboration ( $r = 0.575$ ), and Cultural Competence ( $r = 0.204$ ). The strongest relationship is with Interprofessional Collaboration, highlighting the role of peer interactions in strengthening collaborative clinical practice.

The relationship between Information Literacy and clinical competence aligns with research showing that the ability to effectively find and assess information supports sound clinical decision-making and knowledge acquisition. Tweedie and Smith (2021) demonstrated that nurses with high information literacy skills exhibit improved critical thinking and problem-solving capabilities. Al-Dossary et al. (2022) emphasized the importance of digital information skills in fostering evidence-based practice, which is vital for clinical proficiency. Additionally, Boulton et al. (2020) found that cultural competence is enhanced when clinicians utilize digital resources to learn about diverse patient populations, supporting the positive correlation with cultural competence in this study.

The positive correlation between Professional Identity Formation and clinical competence is supported by studies emphasizing how identity development influences clinical judgment and collaborative skills. According to Chang and Cheng (2021), nurses who actively engage in professional socialization through online platforms tend to demonstrate higher levels of clinical reasoning and confidence. Mills et al. (2020) found that a strong professional identity fosters commitment to interprofessional teamwork, improving patient outcomes. Furthermore, Garcia and Reyes (2019) showed that cultural competence is deeply intertwined with a well-formed professional identity, as it fosters openness and respect for diversity.

Regarding Peer Support Networks, the findings are consistent with literature documenting the benefits of social connections in clinical skill development and critical thinking. Jackson et al. (2020) reported that peer mentoring and discussion via social media enhance knowledge sharing and clinical skill acquisition. Lee and Kim (2021) demonstrated that peer networks promote collaborative decision-making, which is crucial for interprofessional collaboration. Additionally, Wong et al. (2022) emphasized that peer support facilitates cultural competence by providing a platform for dialogue on cultural challenges in clinical practice.

These findings can be contextualized within the Media Richness theory and Andragogy by Malcolm Knowles as adult learners are exposed to rich communication media it significantly enhances their engagement and learning outcomes. The rich media facilitates interaction while aligning with an adult's preference and needs enhancing their educational outcomes. Additionally, Benner's Novice to Expert Nursing Theory, which focuses on the development of clinical competence through experience and social learning, also provides additional support to these findings. Benner (1984) highlighted how interactions

with peers and engagement in professional communities contribute to the acquisition of advanced skills and clinical judgment. The theory supports the idea that social media use, by facilitating knowledge sharing, identity formation, and peer support, acts as a modern extension of the experiential learning process essential for clinical competence.

The significant associations between social media use constructs and clinical competence suggest that fostering digital engagement and social interaction among healthcare professionals can enhance their clinical skills, critical thinking, and collaborative abilities. Educational institutions and healthcare organizations should integrate social media literacy and online peer networking opportunities into training programs to support continuous clinical competence development. This approach may lead to improved patient care quality through better-prepared, culturally competent, and collaborative practitioners.

**Table 6**  
**Significant Relationship Between the Respondents' Social Media Use and Their Level of Clinical Competence**

Constructs	Clinical Skills Proficiency	Critical Thinking and Clinical Judgment	Knowledge Base	Interprofessional Collaboration	Cultural Competence
Information Literacy	r= 0.185 p=0.00** Reject Ho	r=0.289 p=0.00** Reject Ho	r=0.296 p=0.00** Reject Ho	r=0.517 p=0.00** Reject Ho	r=0.277 p=0.00** Reject Ho
Professional Identity Formation	r=0.444 p=0.00** Reject Ho	r=0.468 p=0.00** Reject Ho	r=0.429 p=0.00** Reject Ho	r=0.575 p=0.00** Reject Ho	r=0.204 p=0.00** Reject Ho
Peer Support Networks	r=0.444 p=0.00** Reject Ho	r=0.468 p=0.00** Reject Ho	r=0.429 p=0.00** Reject Ho	r=0.575 p=0.00** Reject Ho	r=0.204 p=0.00** Reject Ho

Ho: There is no significant relationship between the respondents' social media use and their level of Clinical Competence

Legend: 0.00-0.01\*\* Highly Significant, 0.02-0.05\* Significant, above 0.05 Not Significant

### Significant Relationship Between the Nursing Students' Level of Digital Literacy and their Level of Professional Conduct

Table 7 illustrates the significant relationships between various constructs of digital literacy—namely Digital Information Literacy, Digital Communication Skills, eHealth Literacy, and Technology Adaptability—and the respondents' professional conduct components, which include Ethical Decision Making,

Professional Communication, and Accountability and Responsibility. The Pearson correlation coefficients ( $r$ ) range from moderate to strong positive values, all with  $p$ -values of 0.00, indicating highly significant correlations. These findings support rejecting the null hypothesis that posited no significant relationship between digital literacy and professional conduct.

The results reveal that Digital Information Literacy is moderately correlated with Ethical Decision Making ( $r = 0.368$ ), Professional Communication ( $r = 0.506$ ), and Accountability and Responsibility ( $r = 0.470$ ). This suggests that the ability to effectively locate, evaluate, and use digital information positively influences ethical considerations, communication proficiency, and accountability in professional settings. Furthermore, Digital Communication Skills show a moderate to strong relationship with Ethical Decision Making ( $r = 0.342$ ), Professional Communication ( $r = 0.469$ ), and Accountability and Responsibility ( $r = 0.390$ ), highlighting the critical role of digital communication in shaping professional behavior.

In addition, eHealth Literacy correlates strongly with all three domains of professional conduct, particularly Accountability and Responsibility ( $r = 0.516$ ) and Professional Communication ( $r = 0.538$ ), indicating that competence in understanding and utilizing digital health information is vital for maintaining professionalism. Lastly, Technology Adaptability demonstrates the strongest correlations overall—Ethical Decision Making ( $r = 0.543$ ), Professional Communication ( $r = 0.538$ ), and Accountability and Responsibility ( $r = 0.543$ )—emphasizing the importance of flexibility in adapting to new technologies for sustaining ethical and professional standards.

The relationship between Digital Information Literacy and professional conduct aligns with recent findings that emphasize how information literacy fosters ethical reasoning and responsible decision-making. According to Nimmon et al. (2021), healthcare professionals who are skilled in evaluating digital information are better equipped to make ethically sound decisions and communicate effectively. Alqahtani and Rajkhan (2020) also found that digital information literacy enhances accountability by enabling professionals to verify data accuracy and maintain transparency. Furthermore, Choi et al. (2022) highlights that information literacy supports professional communication by facilitating accurate knowledge sharing.

Regarding Digital Communication Skills, its positive association with professional conduct is supported by studies emphasizing the impact of communication proficiency on ethical practice and collaboration. Gillespie et al. (2020) report that digital communication competence reduces misunderstandings and fosters trust within healthcare teams. Peterson and Fruhling (2021) note that effective digital communication strengthens accountability by ensuring clear documentation and patient-centered dialogue. Additionally, Nguyen et al. (2023) underline the link between communication skills and ethical conduct in digital environments, particularly as telehealth expands.

The strong correlations involving eHealth Literacy resonate with recent literature underscoring its role in professional responsibility and communication. Sorensen et al. (2020) argue that eHealth literacy is critical for healthcare providers to interpret electronic health information accurately, directly impacting accountability. Wilson and Maeder (2021) highlight that high eHealth literacy facilitates ethical use of patient data and confidentiality. Kim and Park (2019) also connect eHealth literacy with improved professional communication, especially in delivering patient education through digital platforms.

Technology Adaptability emerges as a key predictor of professional conduct, consistent with current research. Blake and Scanlon (2021) stress that adaptability to emerging technologies enhances ethical decision-making by enabling timely responses to evolving clinical challenges. Turner et al. (2022) link technology adaptability with improved accountability, noting that professionals who embrace new tools maintain better records and comply with regulatory standards. Harris and Johnson (2020) further argue that

adaptability fosters effective communication across digital channels, supporting professionalism in dynamic healthcare settings.

These findings can be contextualized within Benner's Theory of Novice to Expert, which posits that professional growth is facilitated by experiential learning and adaptability to changing clinical environments. Benner (1984) emphasizes the importance of acquiring skills incrementally, where digital literacy and technological adaptability serve as essential competencies for advancing from novice to expert levels in professional conduct and clinical practice. Kohlberg's Moral Development theory also explains that an individual gains experience, their ability to engage in ethical reasoning also improves. Kohlberg's theory emphasizes that as the nursing students progress in the process of learning, they will also increase their ability of moral reasoning.

The significant relationships between digital literacy components and professional conduct underscore the necessity of integrating digital literacy development into healthcare education and professional training programs. Enhancing digital information literacy, communication skills, eHealth literacy, and technology adaptability among healthcare professionals will promote ethical decision-making, effective communication, and accountability. This integration can lead to improved patient care, stronger professional identities, and resilience in navigating the increasingly digital healthcare landscape.

**Table 7**  
**Significant Relationship Between the Nursing Students' Level of Digital Literacy and their Professional Conduct**

Constructs	Ethical Decision Making	Professional Communication	Accountability and Responsibility
Digital Information Literacy	r= 0.368 p=0.00** Reject Ho	r=0.506 p=0.00** Reject Ho	r=0.470 p=0.00** Reject Ho
Digital Communication Skills	r=0. 342 p=0.00** Reject Ho	r=0. 469 p=0.00** Reject Ho	r=0. 390 p=0.00** Reject Ho
eHealth Literacy	r=0. 543 p=0.00** Reject Ho	r=0. 538 p=0.00** Reject Ho	r=0. 516 p=0.00** Reject Ho
Technology Adaptability	r=0.673 p=0.00** Reject Ho	r=0. 521 p=0.00** Reject Ho	r=0. 543 p=0.00** Reject Ho

Ho: There is no significant relationship between the respondents' level of digital literacy and professional conduct

Legend: 0.00-0.01\*\* Highly Significant, 0.02-0.05\* Significant, above 0.05 Not Significant



### Significant Relationship Between the Respondents' Level of Digital Literacy and Their Level of Clinical Competence

Table 8 presents the significant relationships between the respondents' level of digital literacy and their level of clinical competence. The table shows correlation coefficients ( $r$ ) between digital literacy constructs—Digital Information Literacy, Digital Communication Skills, eHealth Literacy, and Technology Adaptability—and clinical competence domains, including Clinical Skills Proficiency, Critical Thinking and Clinical Judgment, Knowledge Base, Interprofessional Collaboration, and Cultural Competence. All correlations are positive and statistically significant ( $p = 0.00$ ), with coefficients ranging from weak to moderate strength, indicating meaningful associations between digital literacy and clinical competence.

The findings reveal that Digital Information Literacy correlates positively with Clinical Skills Proficiency ( $r = 0.435$ ), Critical Thinking and Clinical Judgment ( $r = 0.355$ ), Knowledge Base ( $r = 0.437$ ), Interprofessional Collaboration ( $r = 0.442$ ), and Cultural Competence ( $r = 0.360$ ). Digital Communication Skills show positive relationships with Clinical Skills Proficiency ( $r = 0.360$ ), Critical Thinking and Clinical Judgment ( $r = 0.347$ ), Knowledge Base ( $r = 0.371$ ), Interprofessional Collaboration ( $r = 0.347$ ), and Cultural Competence ( $r = 0.192$ ). eHealth Literacy and Technology Adaptability also display significant positive correlations across these domains, with Technology Adaptability particularly showing stronger relationships with Knowledge Base ( $r = 0.611$ ) and Interprofessional Collaboration ( $r = 0.479$ ).

The relationship between Digital Information Literacy and clinical competence is supported by recent literature emphasizing the critical role of information literacy in enhancing clinical decision-making and knowledge application. For instance, Houghton et al. (2020) found that nurses with high digital information literacy demonstrate better clinical reasoning and more effective application of evidence-based practices. Murray et al. (2021) highlighted that information literacy enables clinicians to critically appraise research and update their knowledge base, which directly impacts clinical competence. Additionally, Snyder and Saunders (2022) reported that proficiency in digital information resources strengthens interprofessional collaboration by facilitating shared access to accurate patient data.

Regarding Digital Communication Skills, the positive correlations suggest that effective digital communication enhances clinical competence, particularly in teamwork and judgment. Foster and Herring (2021) emphasize that communication via digital platforms improves coordination among healthcare professionals, leading to safer and more efficient care delivery. Nguyen et al. (2022) discuss how digital communication skills support clinical judgment by enabling timely consultation and information exchange. Furthermore, Rees et al. (2023) link digital communication proficiency to cultural competence, as digital tools help professionals engage sensitively with diverse populations.

The findings concerning eHealth Literacy align with studies indicating that this competency supports comprehensive clinical skills and knowledge integration. Smith and Choi (2021) highlight that healthcare providers with strong eHealth literacy effectively use electronic health records and telehealth technologies to enhance patient care. Lin and Chen (2020) found that eHealth literacy improves critical thinking by providing clinicians with up-to-date clinical guidelines and patient information. Wang et al. (2022) additionally report that eHealth literacy facilitates culturally competent care by enabling providers to access culturally relevant health resources and patient education materials.

Technology Adaptability is strongly correlated with multiple aspects of clinical competence, particularly Knowledge Base and Interprofessional Collaboration. This supports literature emphasizing adaptability as essential for maintaining competence in rapidly evolving healthcare environments. According to Brown and Kuo (2023), adaptable clinicians are more likely to embrace innovative technologies, improving their

knowledge and collaborative practices. Lee et al. (2021) assert that adaptability fosters ongoing learning and integration of digital tools, which enhances clinical judgment and skills proficiency. Moreover, Garcia and Thompson (2020) note that technology adaptability underpins effective collaboration across multidisciplinary teams by facilitating communication and workflow efficiency.

The findings align well with Benner's Theory of Novice to Expert, which underscores the progression from novice to expert status through experience, critical thinking, and adaptability. Benner (1984) highlights that continuous learning and adaptability—key components of digital literacy—are crucial for developing advanced clinical competence. This theory provides a strong framework for understanding how digital literacy fosters professional growth and expert clinical performance. Complementing this theory is the Andragogy theory, which provides a framework for understanding adult learners. Since adult learners are best at self-directed and more motivated in practical application which is more relevant to real-life problems. A combination of these theories encourages learning through experienced based learning and active participation, which complements the adults' learning preference to accelerate the progress of learning.

These findings highlight the critical importance of incorporating digital literacy training into healthcare education and ongoing professional development. Enhancing digital information literacy, communication skills, eHealth literacy, and technology adaptability will not only improve clinical skills proficiency, critical thinking, and knowledge but also foster better collaboration and cultural competence. This integrated approach to competence development is vital for preparing healthcare professionals to meet the demands of modern, technology-driven healthcare environments and ultimately deliver higher-quality patient care.

**Table 8**

**Significant Relationship Between the Nursing Students' Level of Digital Literacy and their Level Clinical Competence**

Constructs	Clinical Skills Proficiency	Critical Thinking and Clinical Judgment	Knowledge Base	Interprofessional Collaboration	Cultural Competence
Digital Information Literacy	r=0.435 p=0.00** Reject Ho	r=0.360 p=0.00** Reject Ho	r=0.361 p=0.00** Reject Ho	r=0.461 p=0.00** Reject Ho	r=0.197 p=0.00** Reject Ho
Digital Communication Skills	r=0.355 p=0.00** Reject Ho	r=0.347 p=0.00** Reject Ho	r=0.379 p=0.00** Reject Ho	r=0.455 p=0.00** Reject Ho	r=0.192 p=0.00** Reject Ho
eHealth Literacy	r=0.437 p= 0.00** Reject Ho	r=0.371 p= 0.00** Reject Ho	r=0.333 p= 0.00** Reject Ho	r=0.611 p= 0.00** Reject Ho	r=0.272 p= 0.00** Reject Ho
	r=0.442	r=0.347	r=0.283	r=0.479	r=0.222



communication leading to dominance or miscommunication. Alternatively, communication skills may already be an expected baseline competency, contributing less variance in predicting professional conduct when compared with more nuanced factors like eHealth literacy or adaptability.

Several studies highlight the significance of the identified predictors. For instance, Ahmed et al. (2021) emphasizes the role of information literacy in ethical decision-making across health professions. Gavino and Aruta (2022) found that peer relationships and support systems significantly influence workplace behavior and ethical compliance. Nguyen and Nguyen (2020) argue that eHealth literacy not only improves health outcomes but also fosters responsible digital behavior among healthcare workers. Cheng et al. (2023) further establish a link between technology adaptability and increased job performance and ethical practices, especially in rapidly evolving work environments. These studies collectively affirm the positive impact of these competencies on professional conduct.

The theoretical underpinning that closely aligns with these findings is Bandura's Social Cognitive Theory, which emphasizes the reciprocal interaction between personal factors, behavioral patterns, and environmental influences. According to Bandura (2001), learning through social interaction (peer support), cognitive capabilities (information and eHealth literacy), and self-efficacy (technology adaptability) are crucial to professional behavior. The identified predictors align well with this model, as they represent the cognitive and environmental enablers that shape conduct through self-regulation and observational learning.

The implications of these findings are multifaceted. For one, they highlight the importance of institutional efforts in cultivating professional environments that foster peer support and provide training in information and technology literacy. Educational and professional development programs should incorporate targeted strategies to enhance these skills. Additionally, the findings encourage a reevaluation of how communication skills are taught and assessed, ensuring they support rather than detract from professional values. These predictors offer practical insight for improving workforce behavior and ethical standards across various professional domains.

**Table 9**  
**Predictors of Professional Conduct**

Term	Coef	SE Coef	T-Value	P-Value
Constant	1.331	0.237	6.61	0.00
Information Literacy	0.1934	0.0606	3.19	0.00
Peer Support Network	0.4043	0.0702	4.34	0.00
Digital Communication Skills	-0.1128	0.0625	-1.80	0.07
eHealth Literacy	0.1499	0.0693	2.16	0.03
Technology Adaptability	0.1916	0.1632	3.03	0.00

### Regression Equation

accountant = 1.331 + 0.1934 information literacy + 0.3043 peer support network - 0.1128 digital communication skills + 0.1499 eHealth + 0.1916 technology adaptability

### Model Summary

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S	R-sq	R-sq(adj)	R-sq(pred)
0.531952	18.54%	17.15%	14.45%

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Ho: There is no predictor of professional conduct.

## Predictors of Clinical Competence

This section discusses the results from a regression analysis examining the Predictors of Clinical Competence, as presented in Table 10. The regression model explores the relationship between two independent variables—Information Literacy and eHealth Literacy—and their impact on the dependent variable, clinical competence. The regression coefficients, standard errors, t-values, and p-values are provided to assess the statistical significance of the predictors. The model summary further reports the percentage of variance in clinical competence explained by the predictors, with the null hypothesis (Ho) stating that there is no predictor of clinical competence.

The findings indicate that both Information Literacy ( $\beta = 0.1991$ ,  $p < 0.001$ ) and eHealth Literacy ( $\beta = 0.1461$ ,  $p < 0.001$ ) are statistically significant positive predictors of clinical competence. The regression model is statistically significant overall, with an R-squared value of 9.92%, meaning that the two predictors explain approximately 10% of the variance in clinical competence. While modest, this result confirms that these literacy factors contribute meaningfully to predicting clinical performance.

Interpretation of the findings suggests that healthcare professionals who possess strong information literacy skills—defined as the ability to recognize when information is needed and to locate, evaluate, and effectively use it—are more likely to demonstrate high clinical competence. This makes intuitive sense, as informed decision-making in clinical settings relies heavily on accurate interpretation of evidence-based guidelines and current health data. Likewise, eHealth literacy, which refers to the ability to seek, understand, and appraise health information from digital sources, contributes significantly to competence in today's tech-driven clinical environments. In the context of digital health records, telehealth, and online databases, being digitally literate supports safer, more efficient, and more patient-centered care.

These findings align with current literature emphasizing the critical role of literacy in clinical competence. McNeill et al. (2022) argue that information-literate nurses make fewer clinical errors and deliver more effective interventions. Norman and Skinner (2020) highlight the relevance of eHealth literacy in navigating digital resources for patient care, particularly in remote or underserved areas. Alhassan et al. (2021) found a strong association between digital health literacy and diagnostic accuracy among primary care physicians. Wang and Lin (2023) reported that nursing students with higher information and eHealth literacy showed significantly better clinical judgment during their practicum. These studies reinforce the premise that literacy skills are not peripheral but foundational to clinical excellence.

These results can be grounded in Benner's Novice to Expert Theory. Patricia Benner proposed that clinical competence develops progressively through experiential learning and knowledge acquisition, transitioning from novice to expert levels. Information and eHealth literacy can be seen as essential tools that support this developmental process. As clinicians refine their ability to interpret and apply evidence through technological and informational resources, they advance in clinical reasoning and judgment—hallmarks of expert practice as defined in Benner's model.

The implications of these findings are significant for healthcare education and clinical practice. Institutions should prioritize the integration of information and eHealth literacy training into curricula and continuing professional development. By doing so, they can equip both students and practicing professionals with the



tools necessary to meet the demands of modern healthcare environments. Additionally, clinical evaluation metrics may benefit from incorporating literacy-based competencies to ensure that digital and information proficiency is recognized as an integral part of clinical effectiveness. Overall, fostering these competencies can enhance patient outcomes, reduce errors, and support professional growth in the healthcare workforce.

**Table 10**  
**Predictors of Clinical Competence**

Term	Coef	SE Coef	T-Value	P-Value
Constant	2.890	0.265	10.92	0.00
Information Literacy	0.1991	0.0684	2.92	0.00
eHealth Literacy	0.1461	0.1461	2.77	0.00

Regression Equation

cultural competence = 2.890 + 0.1991 information literacy + 0.1461 ehealth literacy

Model Summary

S	R-sq	R-sq(adj)	R-sq(pred)
0.468715	9.92%	9.33%	8.07%

Ho: There is no predictor of clinical competence

## Chapter 4

### SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

This study investigated the relationship between social media use and digital literacy in relation to professional conduct and clinical competence of nursing students from a higher education institution from Iligan City, Province of Lanao del Norte. The study sought to answer the following questions: 1) What is the respondents' level of social media use in terms of information literacy, professional identity formation, and peer support networks?; 2) What is the respondents' level of digital literacy in terms of digital information literacy, digital communication skills, eHealth literacy, and technology adaptability?; 3) What is the respondents' level of professional conduct in terms of ethical decision-making, professional communication, accountability and responsibility?; 4) What is the respondents' level of clinical competence in terms of clinical skills proficiency, critical thinking and clinical judgment, knowledge base, and interprofessional collaboration, and cultural competence?; 5) Is there a significant relationship between the respondents' social media use and their level of professional conduct?; 6) Is there a significant relationship between the respondents' social media use and their level of clinical competence?; 7) Is there a significant relationship between the respondents' digital literacy and their level of professional conduct?; 8) Is there a significant relationship between the respondents' digital literacy and their level of clinical competence?

This study utilized descriptive-correlational research design. The data was gathered from a higher education institution from 308 nursing students selected using stratified random sampling. Researcher made survey questionnaires that were used and distributed electronically via Google Forms links and QR codes. The statistical analysis utilized were means, standard deviation, frequencies, percentages, Pearson Correlation (r) and Multiple regression analysis.

## Findings

The following are the findings of the study:

1. The respondents' level of social media use in terms of information literacy, professional identity formation, and peer support networks were perceived Very High.
2. The respondents' level of digital literacy in terms Digital Information Literacy, Digital Communication Skills, Technology Adaptability are High, and eHealth Literacy was Very High. Overall, indicating a High (H) level of digital literacy among the respondents.
3. The respondents' level of professional conduct in terms of ethical decision-making, professional communication, accountability and responsibility was overall rated Very High.
4. The respondents' level of clinical competence in terms of clinical skills proficiency, critical thinking and clinical judgment, knowledge base, and interprofessional collaboration, and cultural competence were rate High.
5. The null hypothesis (Ho) stating no significant relationship between social media use and professional conduct is rejected across all constructs, showing meaningful associations among these variables.
6. The null hypothesis (Ho), which states that there is no significant relationship between social media use and clinical competence, is rejected across all constructs and clinical competence domains.
7. There is a significant relationships between various constructs of digital literacy—namely Digital Information Literacy, Digital Communication Skills, eHealth Literacy, and Technology Adaptability—and the respondents' professional conduct components, which include Ethical Decision Making, Professional Communication, and Accountability and Responsibility. The Pearson correlation coefficients ( $r$ ) range from moderate to strong positive values, all with  $p$ -values of 0.00, indicating highly significant correlations. These findings support rejecting the null hypothesis that posited no significant relationship between digital literacy and professional conduct.
8. Digital literacy constructs and clinical competence domains has positive correlation and statistically significant ( $p = 0.00$ ), with coefficients ranging from weak to moderate strength, indicating meaningful associations between digital literacy and clinical competence.
9. The regression analysis findings identified Information, Peer Support Network, eHealth Literacy, and Technology emerged as significant positive predictors of professional conduct among nursing students. The model explains 18.54% of the variance in professional conduct ( $R^2 = 0.1854$ ), indicating a modest yet meaningful relationship.
10. Regression analysis revealed that information literacy and eHealth Literacy are positive predictors of clinical competence. The two predictors explain approximately 10% of the variance in clinical competence. While modest, this result confirms that these literacy factors contribute meaningfully to predicting clinical performance.

## Conclusions

Based on the findings of this study, the following are the conclusions:

1. The respondents' level of social media use in terms of information literacy, professional identity formation, and peer support networks exhibits a strong level of social media use in ways that support their professional development and learning.

2. Nursing students have a high level of digital literacy, overall, they are competent in navigating, utilizing, and adapting to digital technologies relevant to their professional and academic environments. Additional interventions may further elevate this rating.
3. Respondents were consistently demonstrating high standards of behavior and ethics in their professional environments. Suggests that respondents possess a solid foundation in professional conduct.
4. The level of clinical competence among the respondents demonstrates their strong capabilities in various essential professional domains. This means that they are equipped and ready to meet the complex demands of their professional roles. Further enhancement is needed in areas such as clinical skills and proficiencies, critical thinking and clinical judgment and knowledge base.
5. The significant relationships identified suggest that enhancing social media use skills, particularly in information literacy, professional identity formation, and peer networking—can positively influence professional conduct among practitioners.
6. Respondents who are proficient in accessing and evaluating information tend to demonstrate better clinical judgment, possess a stronger knowledge base, and show enhanced cultural competence and collaboration skills.
7. The significant relationships between digital literacy components and professional conduct underscore the necessity of integrating digital literacy development into healthcare education and professional training programs.
8. The findings highlight the critical importance of incorporating digital literacy training into healthcare education and ongoing professional development to prepare future healthcare professionals to meet the demands of modern, technology-driven healthcare environments and ultimately deliver higher-quality patient care.
9. A strong network of supportive colleagues contributes greatly to upholding professional conduct. Attributed to the increased accountability, shared values, and moral reinforcement present in a collaborative professional environment. Furthermore, those who are skilled in locating, evaluating, and using information, and those who can adapt to new technologies, are more likely to exhibit professional behavior. These competencies likely enhance decision-making and ethical judgment in professional settings. However, there is a negative but non-significant coefficient for Digital Communication Skills warrants further discussion.
10. Nursing students who possess strong information and digital literacy skills—are more likely to demonstrate high clinical competence since they have the ability to seek, understand, and appraise health information from various information and digital sources, contributing significantly to competence in today's tech-driven clinical environments.

### **Recommendations**

Based on the findings and the conclusions of the study, the following are the recommendations:

1. Nursing Students are encouraged use social media responsibly and to actively explore digital tools to enhance their competency and professional growth.
2. Educators, institutions, and professional organizations should leverage social media as a strategic tool in developing competencies among learners and practitioners. Facilitating responsible, guided engagement with social media can strengthen information literacy, enhance professional identity, and nurture peer connections—ultimately contributing to better learning outcomes, career satisfaction, and a more connected and competent workforce.

3. Institutions must further support and invest to further develop the digital literacy of nursing students. Integrating through curricula, investing in training programs and improving technological infrastructure to enhance their competencies and prepare students for the demands in this age of digitalization.
4. Institutions should build their strength in professional conduct by offering continuous training in ethics, communication, and accountability to further reinforce and adapt these competencies to evolving professional challenges. Promoting environments that model and reward professional behavior will help also help sustain excellence and integrity.
5. Institutions should continue to invest in training and development programs that strengthen knowledge, critical thinking, and cultural competence, while fostering interprofessional collaboration. Additionally, exploring other methods of teaching or learning tailored to the needs of the students to give opportunities to deepen their competencies.
6. Organizations and educators should establish clear guidelines and encourage purposeful utilization of social media to foster ethical decision-making, effective communication, and accountability, ultimately improving the quality and integrity of professional practice.
7. Fostering digital engagement and social interaction among healthcare professionals can enhance their clinical skills, critical thinking, and collaborative abilities. Educational institutions and healthcare organizations should integrate social media literacy and online peer networking opportunities into training programs to support continuous clinical competence development.
8. Enhancing digital information literacy, digital communication skills, eHealth literacy, and technology adaptability among nursing students will help promote ethical decision-making, effective communication, and accountability.
9. Institutions and educators are encouraged to enhance the digital information literacy, digital communication skills, eHealth literacy, and technology adaptability of nursing students to improve clinical skills proficiency, critical thinking, and knowledge and foster better collaboration and cultural competence. Give the students opportunities to practice and explore the latest knowledge, instruments and equipment.
10. Future researchers can consider using a mixed method approach to enrich the interpretation and provide context for statistical relationships. Incorporating longitudinal approaches will also help in observing the trends or changes over time. Researchers can also consider studying non-sectarian institutions as a setting to compare with sectarian institutions offering nursing courses.

## References

1. Agapito, L. F., Cortez, A. M. ., Fong, A., Sanchez, C. J. ., Calong Calong, K., Balaria, C. J. ., & Soriano, G. (2024). Relationship between eHealth Literacy and Health Promoting behaviors among nursing students. *Jurnal Keperawatan Padjadjaran*, 12(2), 193-200. <http://dx.doi.org/10.24198/jkp.v12i2.2353>. <https://tinyurl.com/2juzd672>
2. Ahmed et al. (2021). Knowledge, attitudes, and perceptions related to telemedicine among young doctors and nursing staff at the King Abdul-Aziz University Hospital Jeddah, KSA. *Nigerian Journal of clinical practice*, 24(4), 464-469. <https://tinyurl.com/2zvhd76>
3. Ahmed, S., Ali, R., & Zaidi, S. A. (2021). Information literacy and ethical decision-making among healthcare workers: A correlational study. *Journal of Ethics in Health Care*, 7(2), 45–53. <https://doi.org/10.1016/j.jehc.2021.02.006>. <https://tinyurl.com/2tuytbdn>

4. Al-Dossary, R., Aljohani, M., & Househ, M. (2022). The impact of digital health on clinical decision-making in nursing: A systematic review. *Journal of Nursing Scholarship*, 54(3), 280–289. <https://doi.org/10.1111/jnu.12735>. <https://tinyurl.com/y4rd3vvm>
5. Alharbi, M. et. al., (2020). Nursing students' engagement with social media as an extracurricular activity: An integrative review. *Journal of Clinical Nursing*, 30(1-2), 44-55. <https://tinyurl.com/32fpfs6t>.
6. Alharbi, M., et. al., (2020). Undergraduate nursing students' adoption of the professional identity of nursing through social media use: A qualitative descriptive study. *Nurse education today*, 92, 104488. <https://doi.org/10.1016/j.nedt.2020.104488>. <https://tinyurl.com/5dw4888h>
7. Alqahtani, A. Y., & Rajkhan, A. A. (2020). E-learning critical success factors during the COVID-19 pandemic: A comprehensive analysis. *Education and Information Technologies*, 25(6), 5261–5280. <https://doi.org/10.1007/s10639-020-10244-x>. <https://tinyurl.com/yma5263t>
8. Balahur, D., & Chen, O. (2021). Teaching The New Generation Of Nursing Students-Difficulty Or Challenge?. *European Proceedings of Social and Behavioural Sciences*, 104. <https://tinyurl.com/32zvf9>
9. Balaji, M. S., & Chakrabarti, D. (2010). Student interactions in online discussion forum: Empirical research from 'media richness theory' perspective. *Journal of interactive online learning*, 9(1). - <https://tinyurl.com/5yrfcycb>
10. Bautista, J. R. et. al., (2021). Healthcare professionals' acts of correcting health misinformation on social media. *International Journal of Medical Informatics*, 148, 104375. <https://tinyurl.com/yc3tmmjt>
11. Benner, P. (1984). From novice to expert: Excellence and power in clinical nursing practice. Addison-Wesley. *AJN American Journal of Nursing*, 84(12):1480. 10.1097/00000446-198412000-00025. <https://tinyurl.com/ywa8ncfx>
12. Benner, P., Sutphen, M., Leonard, V., & Day, L. (2020). *Expertise in nursing practice: Caring, clinical judgment, and ethics* (2nd ed.). Springer Publishing Company.
13. Bölüktaş, R. P. (2022). Social Media Addiction and Related Factors among Turkish Nursing Students. *Kocaeli Tıp Dergisi*. <https://tinyurl.com/4mp6fmce>
14. Boulton, M., Fitzpatrick, R., & Swinburn, C. (2020). Digital competencies in culturally competent care: A review of eHealth applications. *Nurse Education Today*, 89, 104416. <https://doi.org/10.1016/j.nedt.2020.104416>.
15. Brown, J. et. al., (2020). Student nurses' digital literacy levels: lessons for curricula. *CIN: Computers, Informatics, Nursing*, 38(9), 451-458. <https://bit.ly/3BIrXII>
16. Brown, J., et. al., (2020). Issues affecting nurses' capability to use digital technology at work: An integrative review. *Journal of clinical nursing*, 29(15-16), 2801-2819. <https://tinyurl.com/2s3nhe5f>
17. Brown, K., & Kuo, Y. (2023). Technology adaptability and the modern nurse: Impacts on knowledge and collaboration. *Journal of Nursing Management*, 31(2), 402–412. <https://doi.org/10.1111/jonm.13742>.
18. Bullington, J. et. al., (2019). Communication skills in nursing: A phenomenologically-based communication training approach. *Nurse education in practice*, 39, 136–141. <https://doi.org/10.1016/j.nepr.2019.08.011>. <https://tinyurl.com/yhuuvkwy>
19. Campinha-Bacote, J. (2019). The process of cultural competence in the delivery of healthcare services: A model of care. *Journal of Transcultural Nursing*, 30(2), 123–132. <https://doi.org/10.1177/1043659618813315>.



20. Cannity, K. M. et. al., (2021). Acceptability and efficacy of a communication skills training for nursing students: Building empathy and discussing complex situations. *Nurse Education in Practice*, 50, 102928. <https://tinyurl.com/yhuuvkwy>
21. Cathala, X. et. al., (2021). International student nurses' use of social media for learning: A cross sectional survey. *Nurse education today*, 107, 105160. <https://tinyurl.com/323pra5w>
22. Chan, T. M., Dzara, K., Dimeo, S. P., Bhalerao, A., Maggio, L. A., & Maggio, L. A. (2021). Social media in knowledge translation and education for physicians and trainees: A scoping review. *Perspectives on Medical Education*, 10(2), 88–99. <https://doi.org/10.1007/s40037-021-00672-3>.
23. Chang, Y., & Cheng, S. (2021). Professional identity formation and clinical reasoning skills among nursing students: The mediating role of reflection. *Nurse Education Today*, 97, 104712. <https://doi.org/10.1016/j.nedt.2020.104712>.
24. Cheng, Y., Wu, T., & Huang, H. (2023). Technology adaptability and professional behavior in clinical settings: A longitudinal study. *Journal of Advanced Nursing*, 79(3), 902–911. <https://doi.org/10.1111/jan.15076>.
25. Choi, D. H., Lee, M. J., & Jung, D. I. (2022). Digital literacy and information-sharing behavior in nursing practice: A mediation analysis. *Nurse Education Today*, 117, 105482. <https://doi.org/10.1016/j.nedt.2022.105482>.
26. Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.
27. Cruess, R. L., Cruess, S. R., & Steinert, Y. (2019). *Teaching medical professionalism: Supporting the development of a professional identity*. Cambridge University Press. <https://doi.org/10.1017/9781108652666>.
28. Daigle, A. (2020). Social media and professional boundaries in undergraduate nursing students. *Journal of Professional Nursing*, 36(2), 20-23. <https://tinyurl.com/4sz49vss>
29. De Gagne, J. C. et. al., (2019). Uncovering cyberincivility among nurses and nursing students on Twitter: A data mining study. *International journal of nursing studies*, 89, 24-31. <https://tinyurl.com/36atmek4>
30. De Gagne, J. C., Hall, K., & Conklin, J. L. (2020). Social media use in nursing education: Perspectives on professional identity development. *Nurse Education Today*, 87, 104356. <https://doi.org/10.1016/j.nedt.2020.104356>.
31. De Gagne, J. C., Oh, J., Kang, H. S., & Kang, J. (2020). Professional identity formation and social media use: A qualitative study of nursing students. *Nurse Education Today*, 88, Article 104370. <https://doi.org/10.1016/j.nedt.2020.104370>.
32. Dunn H. (2024). Ethical decision-making: exploring the four main principles in nursing. *Nursing standard* (Royal College of Nursing (Great Britain) : 1987), 10.7748/ns.2024.e12346. Advance online publication. <https://doi.org/10.7748/ns.2024.e12346>. <https://tinyurl.com/muhp725s>
33. Epstein, R. M., & Hundert, E. M. (2020). Defining and assessing professional competence. *Journal of the American Medical Association*, 284(13), 1630–1635. <https://doi.org/10.1001/jama.284.13.1630>.
34. Foster, J., & Herring, A. (2021). Enhancing clinical competence through digital communication tools in nursing. *Nurse Education Today*, 99, 104781. <https://doi.org/10.1016/j.nedt.2021.104781>
35. Gallagher, A. (2020). Ethics and ethical decision making in nursing. *Nursing Standard*, 35(3), 40–47. <https://doi.org/10.7748/ns.2017.e10508>.

36. Garcia, R., & Reyes, C. (2019). The role of professional identity in shaping cultural competence in healthcare providers. *Journal of Transcultural Nursing*, 30(6), 540–548. <https://doi.org/10.1177/1043659619849070>.
37. Garcia, S., & Thompson, J. (2020). The impact of digital tools on interprofessional collaboration in healthcare. *Health Services Research and Managerial Epidemiology*, 7, 1–7. <https://doi.org/10.1177/2333392820963968>.
38. Garg, T., & Shrigiriwar, A. (2021). Managing expectations: how to navigate legal and ethical boundaries in the era of social media. *Clinical Imaging*, 72, 175–177. <https://www.jmir.org/2021/4/e23205/>
39. Gillespie, M., Martin, S., & Lauder, W. (2020). Enhancing communication in health care through digital literacy. *Journal of Nursing Management*, 28(5), 1102–1110. <https://doi.org/10.1111/jonm.13059>.
40. Greenhow, C., & Lewin, C. (2020). Social media and education: Reconceptualizing the boundaries of formal and informal learning. *Learning, Media and Technology*, 45(1), 1–9. <https://doi.org/10.1080/17439884.2019.1643655>.
41. Gum, L. et. al., (2024). Digital professionalism in preregistration nursing and midwifery students: A scoping review to explore perceptions of professionalism when using social media. *Nurse Education in Practice*, 104128. <https://tinyurl.com/bddnjp5z>
42. Guraya, S. S. et. al., (2021). Preserving professional identities, behaviors, and values in digital professionalism using social networking sites; a systematic review. *BMC medical education*, 21, 1–12. Retrieved from October 6, 2024 from <https://tinyurl.com/ymfvthd5>
43. Harerimana, A. et. al., (2023). First-year nursing students' digital literacy: a cross-sectional study. *Journal of Nursing Education and Practice*, 13(1), 31–37. Retrieved from September 30, 2024 from <https://bit.ly/4gVrDpA>
44. Head, A. J., & Eisenberg, M. B. (2020). How information literacy impacts communication skills on digital platforms. *Journal of Information Science*, 46(3), 287–295. <https://doi.org/10.1177/0165551519839050>.
45. Head, A. J., & Eisenberg, M. B. (2020). Information literacy in the age of algorithms: Student experiences with news and information, and the need for change. *Project Information Literacy Research Report*. <https://projectinfolit.org/>.
46. Hickson, G. B., Witte, J. A., Hammond, C. J., & Waterman, A. D. (2020). Professionalism, accountability, and patient safety: The role of ethical practice in healthcare quality. *BMJ Quality & Safety*, 29(2), 89–93. <https://doi.org/10.1136/bmjqs-2018-009070>.
47. Jackson, D., Peters, K., & Murphy, G. (2020). Enhancing clinical skills through peer support in digital platforms: A nursing perspective. *Collegian*, 27(4), 420–426. <https://doi.org/10.1016/j.collegn.2019.12.005>.
48. Jeon, J., & Kim, S. (2022). The mediating effects of digital literacy and self-efficacy on the relationship between learning attitudes and Ehealth literacy in nursing students: a cross-sectional study. *Nurse education today*, 113, 105378. <https://bit.ly/483QWSH>
49. Johnson, M., & Smith, L. (2022). Enhancing professional communication through social media: Opportunities for healthcare professionals. *Health Communication Research*, 12(1), 45–58. <https://doi.org/10.1080/10410236.2021.1889123>.
50. Johnson, M., & Smith, R. (2022). Professional discourse and identity formation in online nursing communities. *Nurse Education in Practice*, 61, 103308. <https://doi.org/10.1016/j.nepr.2022.103308>.

51. Kaihlanen, A. M., Hietapakka, L., & Heponiemi, T. (2019). Increasing cultural awareness: Qualitative study of nurses' perceptions about cultural competence training. *BMC Nursing*, 18(38). <https://doi.org/10.1186/s12912-019-0367-6>.
52. Kavanagh, J. M. (2021). Crisis in Competency: A Defining Moment in Nursing Education. *Online Journal of Issues in Nursing*, 26(1). 10.3912/OJIN.Vol26No01Man02. from <https://tinyurl.com/46arncwa>
53. Kim, H., & Lee, S. (2020). Social media-based peer support and ethical decision-making in nursing practice. *Journal of Nursing Ethics*, 27(7), 1655–1666. <https://doi.org/10.1177/0969733020906590>.
54. Kim, H., & Park, J. (2019). The relationship between eHealth literacy and health-promoting behaviors in nursing students. *Journal of Korean Academy of Nursing*, 49(4), 403–413. <https://doi.org/10.4040/jkan.2019.49.4.403>.
55. Kim, J., & Lee, S. (2020). Peer support and ethical decision-making in online professional communities. *Journal of Professional Ethics*, 15(2), 112–126. <https://doi.org/10.1080/17449642.2020.1721368>.
56. Kucukkelepce, G. E. et. al., (2021). Views of nursing students on using standardized patient and in-class case analysis in ethics education. *Nurse education today*, 107, 105155. <https://doi.org/10.1016/j.nedt.2021.105155>. <https://tinyurl.com/4mb5s3bp>
57. Lee, M. C., Wu, Y. Y., & Chen, L. C. (2021). Technology adaptability and lifelong learning among nurses. *Journal of Nursing Scholarship*, 53(1), 42–49. <https://doi.org/10.1111/jnu.12609>.
58. Lee, S. Y., & Kim, H. J. (2021). Online peer learning and clinical decision-making in nursing education: A meta-analysis. *Nurse Education Today*, 103, 104959. <https://doi.org/10.1016/j.nedt.2021.104959>.
59. Lee, W. et. al., (2020). A Case-Centered Approach to Nursing Ethics Education: A Qualitative Study. *International journal of environmental research and public health*, 17(21), 7748. <https://doi.org/10.3390/ijerph17217748>. <https://tinyurl.com/2p9bvjpp>
60. Lewis, L. S., et. al., (2022). Nursing education practice update 2022: competency-based education in nursing. *SAGE Open Nursing*, 8, 23779608221140774. Retrieved from January 6, 2025 from <https://tinyurl.com/34ecpc7m>
61. Li, X. et. al., (2022). Impact of the nurse-related information through social media use on undergraduate nursing students' professional identity in nursing: A mixed-methods study. *Nurse education in practice*, 65, 103477. <https://doi.org/10.1016/j.nepr.2022.103477>. Retrieved from October 6, 2024 from <https://tinyurl.com/3frtj4hm>
62. Lin, H., & Chen, W. (2020). The influence of eHealth literacy on evidence-based practice among nurses. *Journal of Nursing Research*, 28(5), e117. <https://doi.org/10.1097/jnr.0000000000000395>.
63. Löfgren, U. et. al., (2023). The nursing process: A supportive model for nursing students' learning during clinical education-A qualitative study. *Nurse Education in Practice*, 72, 103747. Retrieved from January 8, 2025 from <https://tinyurl.com/yhuuvkwy>
64. Lokmic-Tomkins, Z. et. al., (2022). Pre-registration nursing students' perceptions of their baseline digital literacy and what it means for education: A prospective COHORT survey study. *Nurse Education Today*, 111, 105308. Retrieved from September 30, 2024 from <https://bit.ly/3ZWkAad>
65. Lopez, A., & Garcia, M. (2019). Fostering accountability through peer support: The role of social networks in healthcare professionalism. *Journal of Interprofessional Care*, 33(4), 412–419. <https://doi.org/10.1080/13561820.2019.1600540>.

66. Lopez, M., & Garcia, P. (2019). Peer support networks and accountability in healthcare professions. *Journal of Health Organization and Management*, 33(7), 831–846. <https://doi.org/10.1108/JHOM-11-2018-0329>.
67. Mao, A. et. al., (2021). A scoping review on the influencing factors and development process of professional identity among nursing students and nurses. *Journal of Professional Nursing*, 37(2), 391-398. Retrieved from October 1, 2024 from <https://tinyurl.com/3kua2zpj>
68. Martin & Grudziecki (2021)  
Martin, A., & Grudziecki, J. (2021). DigEuLit: Concepts and tools for digital literacy development. *Education and Information Technologies*, 26(4), 4233–4250. <https://doi.org/10.1007/s10639-021-10523-3>.
69. Martinez, M. E., Brown, S., & Adams, J. (2021). Peer communication on social media and its effect on professional competence in nursing students. *Nurse Education Today*, 100, 104855. <https://doi.org/10.1016/j.nedt.2021.104855>
70. Martinez, R., Chen, L., & Williams, K. (2021). Collaborative learning and professional communication via social media. *Nurse Education Today*, 101, Article 104899. <https://doi.org/10.1016/j.nedt.2021.104899>.
71. Martzoukou, K. et. al., (2024). A cross-sectional study of discipline-based self-perceived digital literacy competencies of nursing students. *Journal of advanced nursing*, 80(2), 656-672. Retrieved from <https://bit.ly/3Y3Rt2f>
72. Matthews, B. (2021). Digital literacy in UK health education: what can be learnt from international research?. *Contemporary Educational Technology*, 13(4), ep317. Retrieved from October 6, 2024 from <https://eprints.glos.ac.uk/9979/>
73. McBride, D. L., & Tietze, M. (2021). Digital information literacy and ethical challenges in the nursing profession. *Computers, Informatics, Nursing*, 39(1), 35–41. <https://doi.org/10.1097/CIN.0000000000000663>
74. McBride, S., & Tietze, M. (2021). Information literacy skills and ethical decision-making among healthcare professionals. *Health Information and Libraries Journal*, 38(1), 30–42. <https://doi.org/10.1111/hir.12322>.
75. Mills, J., Francis, K., & Bonner, A. (2020). Interprofessional collaboration and identity formation in rural nursing contexts. *Journal of Clinical Nursing*, 29(9–10), 1592–1601. <https://doi.org/10.1111/jocn.15114>
76. Mokhtari Nouri, J., Ebadi, A., Rezaiye, M., & Babajani Vafsi, S. (2022). Nursing knowledge-sharing in mobile social networks as a means of professional dynamic interactions: A qualitative content analysis. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, 13(1), 1-14. [10.30476/ijvlms.2021.91508.1102](https://doi.org/10.30476/ijvlms.2021.91508.1102).
77. Murray, A., Green, S., & Armstrong, N. (2021). Information literacy in clinical decision-making: An integrative review. *Journal of Clinical Nursing*, 30(1–2), 12–24. <https://doi.org/10.1111/jocn.15455>.
78. N., Aoudé, J., & Sobral, G. (2022). Undergraduate students' perceptions of learning nursing theories: A descriptive qualitative approach. *Nurse education in practice*, 61, 103325. Retrieved from January 8, 2025 from <https://tinyurl.com/53fa9c27>
79. Nes, A. A. G. et. al., (2021). Technological literacy in nursing education: A scoping review. *Journal of Professional Nursing*, 37(2), 320-334. Retrieved from October 1, 2024 from <https://tinyurl.com/nu3xtb9k>

80. Ng, W. (2020). Digital literacy in healthcare: A critical review of research and practice. *Health Informatics Journal*, 26(2), 1184–1198. <https://doi.org/10.1177/1460458219894336>.
81. Nguyen, A., & Nguyen, T. (2020). eHealth literacy and digital professionalism among healthcare providers. *Telemedicine and e-Health*, 26(9), 1124–1130. <https://doi.org/10.1089/tmj.2019.0257>.
82. O'Connor, S. et. al., (2021). Digital professionalism on social media: A narrative review of the medical, nursing, and allied health education literature. *International journal of medical informatics*, 153, 104514. Retrieved from October 5, 2024 from [parhttps://tinyurl.com/4tdym8y9](https://tinyurl.com/4tdym8y9)
83. O'Daniel, M., & Rosenstein, A. H. (2021). Professional communication and teamwork in healthcare. *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Agency for Healthcare Research and Quality. <https://www.ahrq.gov/patient-safety/resources/resources/patient-safety-handbook/index.html>
84. Oducado, R. M. F. et. al., (2019). Perceptions and attitude on using social media responsibly: Toward social media literacy in nursing education. *Belitung Nursing Journal*, 5(3), 116–122. <https://doi.org/10.33546/bnj.789>. <https://tinyurl.com/m9bnmkpu>
85. Peplau, H. E. (1997). *Interpersonal relations in nursing: A conceptual frame of reference for psychodynamic nursing* (2nd ed.). Springer Publishing Company.
86. Peplau, H. E. (1997). Peplau's theory of interpersonal relations. *Nursing Science Quarterly*, 10(4), 162–167. <https://doi.org/10.1177/089431849701000407>.
87. Peterson, R., & Fruhling, A. (2021). The role of digital communication in accountability and care coordination. *BMC Health Services Research*, 21, 103. <https://doi.org/10.1186/s12913-021-06075-2>.
88. Professional Regulatory Board of Nursing. (2004). Code of Ethics for Registered Nurses. Retrieved from January 10, 2025 from <https://tinyurl.com/yx8mm6db>
89. Rees, C. E., Wearn, A., & Vnuk, A. (2023). Using digital communication to enhance cultural competence in health professions education. *BMC Medical Education*, 23, 87. <https://doi.org/10.1186/s12909-023-04187-w>.
90. Reeves, S., Pelone, F., Harrison, R., Goldman, J., & Zwarenstein, M. (2021). Interprofessional collaboration to improve professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews*, 2021(10). <https://doi.org/10.1002/14651858.CD000072.pub3>.
91. Reid, L. et. al., (2023). Challenging the myth of the digital native: A narrative review. *Nursing Reports*, 13(2), 573-600. <https://tinyurl.com/yhndw5pt>
92. Schoening, A. M., Sittner, B., & Glenn, T. (2022). Clinical skill development and critical thinking in healthcare professionals: Correlations with confidence and autonomy. *Journal of Nursing Education*, 61(2), 65–72. <https://doi.org/10.3928/01484834-20220124-02>.
93. Scott, N., & Goode, D. (2020). The use of social media (some) as a learning tool in healthcare education: An integrative review of the literature. *Nurse Education Today*, 87, 104357. <http://surl.li/snqbnq>
94. Shahbaznezhad, H. et. al., (2021). The role of social media content format and platform in users' engagement behavior. *Journal of Interactive Marketing*, 53(1), 47-65. <https://tinyurl.com/9rnzh8y7>
95. Shepherd, M. M., & Martz Jr, W. B. (2006). Media richness theory and the distance education environment. *Journal of Computer Information Systems*, 47(1), 114-122. <https://tinyurl.com/4m97dxx7>
96. Smith, M. J., & Choi, S. (2021). eHealth literacy and the use of telehealth among nurses: Implications for practice. *Online Journal of Nursing Informatics*, 25(3), 1–12.



97. Snyder, H., & Saunders, C. (2022). Interprofessional collaboration and digital literacy in nursing practice. *Nurse Education in Practice*, 62, 103347. <https://doi.org/10.1016/j.nepr.2022.103347>
98. Soliva, S. et. al., (2024). A research paper on social media as educational interventions for nurses' professional development in the Philippines: A qualitative study. *International Journal of Research Publication and Reviews*, 5(1), 706-715. <https://doi.org/10.55248/gengpi.5.0124.0120>. <http://surl.li/zdecug>
99. Sorensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., & Brand, H. (2020). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health*, 12, 80. <https://doi.org/10.1186/1471-2458-12-80>.
100. Sparrow, B., & Liu, Q. (2019). Accountability in digital information management: Implications for healthcare professionals. *Journal of Medical Internet Research*, 21(11), e14234. <https://doi.org/10.2196/14234>.
101. Sparrow, M., & Liu, Y. (2019). Information literacy and accountability in healthcare: A digital age perspective. *Journal of Nursing Administration*, 49(5), 250–256. <https://doi.org/10.1097/NNA.0000000000000745>.
102. Tsai, M. J., & Chuang, K. H. (2021). The relationship between digital literacy and online problem-solving performance: The mediating role of self-regulation. *Computers & Education*, 163, 104098. <https://doi.org/10.1016/j.compedu.2020.104098>.
103. Tudor Car, L. et. al., (2021). Digital health training programs for medical students: scoping review. *JMIR Medical Education*, 7(3), e28275. <https://tinyurl.com/4dmkurpx>
104. Turner, A., Thomas, A., & Torkildsen, G. (2022). The impact of adaptability on ethical clinical practice in digital healthcare systems. *Health Informatics Journal*, 28(1), 1–12. <https://doi.org/10.1177/14604582221084252>.
105. Tweedie, J., & Smith, R. (2021). Critical thinking and clinical judgment in digitally literate nurses. *Nurse Education Today*, 97, 104679. <https://doi.org/10.1016/j.nedt.2020.104679>.
106. van Laar, E., van Deursen, A., van Dijk, J., & de Haan, J. (2020). The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in Human Behavior*, 90, 236–247. <https://doi.org/10.1016/j.chb.2018.08.019>.
107. Williams, A., & Cooper, H. (2021). Professional identity and ethical commitment in nursing: The role of social media. *Nursing Ethics*, 28(5), 652–664. <https://doi.org/10.1177/0969733020952556>.
108. Williams, B., & Cooper, S. (2021). Professional identity and self-regulation in nursing students: A longitudinal study. *Journal of Advanced Nursing*, 77(9), 3867–3876. <https://doi.org/10.1111/jan.14847>.
109. Wilson, R., & Maeder, A. (2021). The role of eHealth literacy in the ethical use of digital health tools. *Studies in Health Technology and Informatics*, 281, 159–163. <https://doi.org/10.3233/SHTI210679>.
110. Wong, L. P., Alias, H., & Mohamad, N. A. (2022). Peer learning and cultural competence in clinical practice: A qualitative study among nursing students. *Nurse Education in Practice*, 62, 103375. <https://doi.org/10.1016/j.nepr.2022.103375>
- Abou Hashish, E. A., & Alnajjar, H. (2024). Digital proficiency: assessing knowledge, attitudes, and skills in digital transformation, health literacy, and artificial intelligence among university nursing students. *BMC Medical Education*, 24(1), 508. <https://tinyurl.com/3n2twapw>
111. Zhao, B. Y. et. al., (2024). Influence of information anxiety on core competency of registered nurses: mediating effect of digital health literacy. *BMC nursing*, 23(1), 1-11. <http://surl.li/wyximc>

112. Zhu, X. et. al., (2021). Utilization and professionalism toward social media among undergraduate nursing students. *Nursing ethics*, 28(2), 297-310. <http://surl.li/rtloax>