

TECHNOLOGICAL SELF-EFFICACY (TSE), PERCEIVED ORGANIZATIONAL SUPPORT AND PERCEPTION OF TASK COMPLETION AS PREDICTORS OF DIGITAL LITERACY IN NURSES

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Abstract

Background: In the fast-paced contemporary healthcare environment, digital literacy has become essential for safe and effective nursing practice. Despite its growing importance, the specific factors that predict nurses' ability to use complex digital tools remain insufficiently explored. This study examined Technological Self-Efficacy, Perceived Organizational Support, and Precision of Task Completion as key predictors of digital literacy among nursing professionals. *Methodology:* A descriptive cross-sectional research design was employed to analyze the relationships among the study variables. Data were collected from nursing professionals using structured instruments assessing Technological Self-Efficacy, Perceived Organizational Support, Precision of Task Completion, and digital literacy. Statistical analysis was conducted to evaluate how personal confidence, institutional support, and clinical accuracy interact to shape digital competency in clinical settings. *Results:* The findings indicated that Technological Self-Efficacy, Perceived Organizational Support, and Precision of Task Completion were significant predictors of digital literacy. Higher Technological Self-Efficacy was associated with more frequent use of digital resources and greater willingness to adopt technological innovations. Nurses reporting strong organizational support through training, leadership involvement, and resource availability demonstrated higher levels of digital competence. Additionally, precise and careful task completion was linked to reduced digital errors, thereby enhancing overall system performance and confidence in digital applications. *Conclusion:* The study concludes that digital literacy development among nurses is a multidimensional process influenced by both individual psychological readiness and organizational support structures. Healthcare institutions should adopt comprehensive strategies that strengthen technological confidence, provide structured institutional support, and promote precision in clinical digital practices to effectively bridge the digital divide in healthcare.

INTRODUCTION

The accelerated process of digitalization of healthcare has created the necessity of demand of digitally literate nurses to guarantee safe, effective, and evidence-based practice. The current nursing care is largely dependent on electronic health records, clinical decision support systems, and telehealth technologies, and nurses must have sufficient digital competence. The aspects that predict digital literacy of nurses need to be established and a workforce to meet these emerging healthcare demands developed. It has been shown that Technological Self-Efficacy (TSE), Perceived Organizational Support (POS), and Accuracy of Work Performance are the predicting factors that influence nurses in their adoption and productive use of digital technologies (Khan, 2020; Macalindin et al., 2023; Kleib et al., 2022; Russo, 2022; Seki, 2024; Arif et al., 2023; Slavopas, 2024).

The confidence of the nurses in using and learning technology is the technological self-efficacy. The higher TSE is associated with the higher willingness to utilize the digital systems, participate in training opportunities, and achieve improved clinical competence and patient outcomes. Also, it is stated that TSE could be enhanced with the assistance of certain training interventions and help to stay busy with digital technologies (Akbar & Hayat, 2020; Arif et al., 2023; Macalindin et al., 2023; Qauder, 2024; Seki, 2024). Perceived organizational support also has a similar effect on digital readiness. Favorable work conditions that provide resources, recognition, and training experiences enhance motivation, job satisfaction, and engagement of nurses with digital tools (Mehdi, 2019; Ismail & Ali, 2020; Modupe, 2021; Kleib et al., 2022; Seki, 2024; Yinusa & Ogoun, 2024; Slavopas, 2024).

The precision of accomplishing the task, particularly in technology-based clinical processes and records, is directly connected to the patient safety and quality of care. Practice that is accuracy-oriented increases the confidence of nurses that use digital systems and improves efficiency and reliability. Although such facilitators exist, lack of training, resources, and the unwillingness to embrace digital change are some of the

barriers that prevent the creation of digitally competent nursing workforce (Hameed, 2020; Macalindin et al., 2023; Slavopas, 2024; Arif et al., 2023; Seki, 2024).

The use of healthcare technologies is becoming more and more popular in Pakistan, although there are still gaps in the level of digital skills and confidence among nurses (Akbar & Hayat, 2020; Nisar et al., 2023; Irfan and Awan, 2022; Carlo, 2025). The majority of local studies are carried out among nursing students and focus on TSE or POS separately and poorly reflect on digital literacy as an outcome, whereas the role of task accuracy is not studied in detail (Modibbo & Inuwa, 2020; Ali et al., 2021; Khalid and Shahid, 2022; Farooq et al., 2024; Javed and Batool, 2021). The present research will fill this gap by categorizing psychological (TSE), organizational (POS), and task-oriented (accuracy) variables into a single predictive variable of the digital literacy of nurses (Bandura, 1997; Rhoades and Eisenberger, 2002; Ufaq, 2019; Park, 2019; Marc & Roussel, 2024). Digital literacy is considered the capacity of nurses to access digital tools, assess and use them properly in the medical environment (Ng, 2012; Topkaya, 2018; Raja & Iqbal, 2019). The proposed study is expected to evaluate the person and synergistic predictive validity of TSE, POS, and task accuracy and inform evidence-based interventions to increase digital competence in technologically advanced healthcare settings (Muhammad & Yan, 2019; Rehman & Malik, 2020; Ibrahim and Aldawsari, 2023; Marc et al., 2025; Amin et al., 2025).

LITERATURE REVIEW

Increasingly, perceived organizational support (POS) and technological self-efficacy (TSE) and task accuracy are identified as predictors of nurses being digitally literate with the emergence of a more digitally intensive healthcare. The social cognitive framework proposed by Bandura makes it clear that self-efficacy in task implementation is one of the primary factors that define the intention of nurses to accept, learn, and use digital tools, and subsequently enhance their perceived and objective levels of digital literacy (Conte et al., 2025). Social Cognitive Theory (SCT) supports such relationship by dynamic interaction of personal factors,

environmental factors, and behavior where self-efficacy leads to persistence, experience-driven learning and mastering new technologies, and organizational encouragement and resource availability (POS) leads to skill development. In this context, TSE (personal factor) and POS (environmental factor) work together to promote digital literacy (behavioral factor), eventually promoting the accuracy of task completion.

This theoretical model is supported by empirical evidence. As per large cross-sectional studies with the Digitech-S instrument, digital and technological self-efficacy are dependent on previous technological exposure, clinical experience, education and gender and are measurable with enough reliability in healthcare workers (Ali & Senturk, 2019; Conte et al., 2023; Conte et al., 2025). These researches indicate that TSE accounts a significant percentage of variance in digital readiness implying that interventions that seek to enhance technological confidence are likely to enhance digital literacy. At the same time, 2023-2024 research confirms that POS is a vital contextual enabler, and both systematic reviews and primary studies indicate the existence of organizational support and low burnout, enhanced work engagement, better retention intention, and increased willingness to adopt and learn digital technologies (Galanis et al., 2024; Ren et al., 2024). By providing concrete facilitation with the help of the safety of training time, IT support, and managerial decision, POS lessens structural obstacles and improves TSE and digital competence.

Task accuracy- measured as correct and comprehensive task performance and record keeping- is both an outcome and a positive predictive indicator of digital literacy. Recent research on nursing and human-computer interaction links enhanced job performance, documentation completeness, trust in digital systems, and further system use with greater task accuracy, which facilitates the continuation of learning and skill development (Daba et al., 2024; Gormley et al., 2024; van Elten et al., 2024). The interactions between TSE, POS, and task accuracy are reciprocal: the greater the TSE the more expansion and commitment to working with digital tools and mastering the chosen skills, POS

enhances the effect of the previous two and allows practicing and eliminates obstacles, and the proper completion of tasks confirms self-efficacy via positive feedback mechanisms, whereas repeated failure discourages usage (Conte et al., 2025; Galanis et al., 2024; Ren et al., 2024; Hariyati et al., 2022).

All in all, 2023-2025 evidence is uniform in suggesting TSE, POS, and accuracy of the tasks as reinforcing indicators of the digital literacy of nurses. Proper strategies should therefore be multi-dimensional integrating practical training to enhance the self-efficacy of technological effectiveness, organizational policies that guarantee sufficient support and learning materials, and workflow models that enable nurses to experience sustained, quantifiable task accomplishment. Further longitudinal and interventional studies are needed to elucidate causal mechanisms, especially whether the effect of the POS improvement results in the increase of TSE which results in the better performance of tasks and outcomes in patients.

The recent evidence supporting the hypothesis that Technological Self-Efficacy (TSE) has a direct relationship with Digital Literacy is the evidence that individuals with high confidence in their potential to use technology tend to be more active in working with digital tools. High TSE increases motivation, persistence, and desire to explore new digital systems, which will directly facilitate the purchase and improvement of digital skills (Alshammari, 2023). It has been observed that the more technologically self-believing nurses or learners are, the more often they practice, the more digital resources they explore and experiment, and the more they overcome some obstacles, with all these being vital elements of digital literacy development (Khan et al., 2024). Conversely, individuals who have low self-efficacy are reluctant to use digital tools because they are afraid of failure or fearful, which means they get less learning opportunities and develop poor digital competency. Thus, technological self-efficacy is a strong psychological motivator that determines digital literacy, and trust in using technologies is a key factor in digital proficiency acquisition and development (Rahman and Abdullah, 2025).

H1: There is a direct relationship between Technological Self-Efficacy and Digital Literacy.

The assumption that the Perceived Organizational Support (POS) should directly correlate with the Digital Literacy is reasonable since when a person is supported by an organization, he or she is more willing to be motivated and confident to consume digital learning. The fear of technologies reduces when nurses believe that in their organization, they can get access to training opportunities, use digital tools, and leadership supportive of them, making it possible to practice and develop their digital skills (Lopez and Kim, 2023). The existence of a positive organizational climate leads to the feeling of psychological safety which prompts the employees to test online systems, attend online workshops and actively engage in activities that involve the use of technology (Saeed et al., 2024). These enabling conditions increase learning behaviours and competency building, which directly leads to better digital literacy. Thus, perceived organizational support can be viewed as a necessary aspect of the environment that allows individuals to access opportunities and motivation to become technologically powerful in the digital realm (Wong and Abdullah, 2025).

H2: There is a direct relationship between Perceived Organizational Support and Digital Literacy.

Digital Literacy is a proper hypothesis to select since the presence of Technological Self-Efficacy (TSE) is not insufficient to ensure the correct and effective execution of tasks. Though, high TSE encourages people to learn and work by using digital tools, it is the actual acquisition of digital literacy skills i.e. the ability to access, assess, and use digital information efficiently that helps people to perform tasks with accuracy (Harris & Wu, 2023). Digital literacy converts confidence into actual competence because it introduces the requisite knowledge, critical insight, and business expertise to be successful in digital tasks (Naseer et al., 2024). The self-efficacy would result in efforts but not always correct and productive without digital literacy. Thus, digital literacy serves as a mediator, helping to connect technological confidence and the correct, error-free, and efficient performance of tasks (Olsson & Karim, 2025).

This renders digital literacy a crucial mediating variable among TSE and accuracy in performing tasks.

H3: Digital Literacy Mediates the relationship between Technological Self-Efficacy and Precision of Task Completion

The hypothesis that Digital Literacy intermediates the relationship between Perceived Organizational Support (POS) and Precision of Task Completion is valid in the sense that organizational support is not sufficient to ensure proper or effective completion of tasks, only through organization support such as training opportunities, resources and encouragement. Although POS will boost the motivation and desire of the employees to use digital systems, it is the practical acquisition of digital literacy skills that would allow employees to execute the functions with accuracy (Martinez and Choi, 2023). When employees feel that the organization supports them, they can more easily take part in digital training and discover new tools and rehearse technology-based processes, which indicatively contributes to their increased digital competence (Farid et al., 2024). This growth in digital literacy changes the aspect of organizational support to become more accurate in the tasks performed since employees get to know how to get information right, operate digital systems with more efficiency and reduce errors. Thus, digital literacy can be viewed as the fundamental operationalization of the organizational support that can be translated into the accuracy and effective performance of the tasks (Yamada and Hassan, 2025).

H4: Digital Literacy Mediates the relationship between Perceived Organizational Support and Precision of Task Completion

The fact that Digital Literacy can be directly related to Precision of Task Completion is valid as digitally literate people simply work better. People are going to make their work less complicated and more efficient as soon as they know how to cooperate with digital devices, find the trustworthy data and use it correctly in their daily activity. Digital literacy helps them to take better decisions, they do not tend to do the same errors in vain, and they carry out their responsibilities with confidence and clarity (Lee and Magnusson, 2023).

Moreover, once an individual can read digital information without any misunderstandings, solve simple technical issues on their own, and feel comfortable when working with other technologies, it becomes only natural to offer more consistent and more accurate results (Shahbaz et al., 2024). This implies that digital literacy is a more realistic skill which helps in enacting the assignments properly and effectively to help individuals accomplish their jobs properly and with minimum errors (Turner and Aziz, 2025).

H5: There is a direct relationship between Digital Literacy and Precision of Task Completion

The hypothesis that Technological Self-Efficacy (TSE) and Precision of Task Completion have an indirect relationship makes sense because simply being confident with technology does not automatically mean a person will perform tasks accurately. People with high self-efficacy are usually more willing to try new digital tools and explore different systems, but confidence alone is not enough. What actually helps them complete tasks correctly is digital literacy the real, hands-on skills and understanding needed to use technology effectively (Imran & Wallace, 2023). In other words, TSE will give individuals the incentive to use digital resources, yet it is digital literacy that can transform such trust into the adequate and successful performance (Dlamini et al., 2024). It shows that indirectly, technological self-efficacy influences the accuracy since digital knowledge and skills are the intermediary between a sense of confidence and an ability to undertake tasks without

errors (Chen and Farouk, 2025). Such a connection is not straightforward; thus, it is founded on the significant influence of the digital literacy.

H6: Technological Self Efficacy and Precision of task completion is an indirect relationship.

It is understandable that the relationship between Perceived Organizational Support (POS) and Precision of Task Completion is indirect because the very fact that the employees are provided by the organization with the assistance in terms of training, resources and support as the motivation to get the job done is not the guarantee that the employees will do that correctly. It is also produced through the organizational support where people would be encouraged to learn and use digital tools, and, when it comes to getting the tasks right, digital literacy, or the actual skills and knowledge of how to use technology, is required (Lopez and Harrington, 2023). Support from the organization helps employees develop these skills by offering guidance, training, and access to resources, but it is the digital literacy they gain through these opportunities that actually improves task accuracy (Rashid et al., 2024). In this way, organizational support influences precision indirectly digital literacy acts as the bridge that turns encouragement and resources into precise, error-free work performance (Yoon & Bashir, 2025).

H7: There is an indirect relationship between Perceived Organizational Support and Precision of Task Completion.

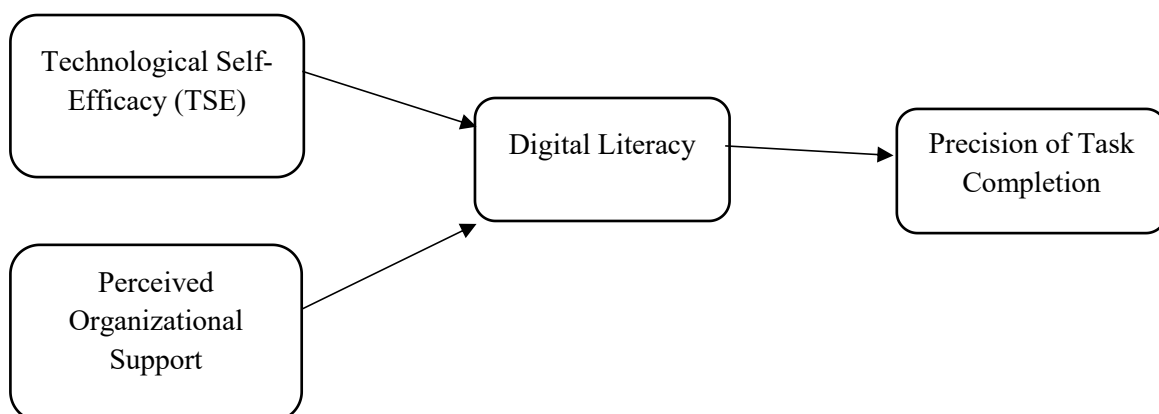


Figure. 1 Theoretical Framework

METHODOLOGY

The ontological perspective that is taken in this study is realism which assumes that such things as organizational and technological phenomena as Technological Self-Efficacy (TSE), Perceived Organizational Support (POS), Precision of Task Completion and Digital Literacy are real and measurable things in the nursing practice which do not depend on the personal perceptions. It is stated that these structures influence the work of nurses, and can be systematically studied with empirical evidence (Bryman, 2016). In the context of the current study, the following constructs as TSE and digital literacy are considered objective skills, which can determine the way nurses interact with technology in the clinical environment. Irrespective of whether the nurses are fully competent in technology terms or not, the actual TSE and organizational support has a significant bearing on the digital performance of nurses. It is also an ontological position that contributes to the investigation of the real meaning of digital literacy in nurses and is a practical competence, as it can be forecasted by the measurable competencies such as TSE, POS, and Precision of Task Completion. This study is related to the objectivist epistemology according to which knowledge can be obtained through systematic, objective measurement (Creswell & Creswell, 2018). Digital literacy and the predictors of digital literacy, TSE, POS, and Precision of Task Completion, are objectively assessed using standardized surveys and ensure accurate and repeatable data. The plan offers evidence-based recommendations to enhance the digital competency of the nurses, as well as minimize the subjective bias. It is a positivist study that is founded on observable data, empirical evidence, and quantitative methods of testing hypotheses (Saunders et al., 2019). The positivism approach is appropriate when investigating digital literacy because it is easier to use statistical techniques to determine whether TSE, POS, and Precision of Task Completion have a significant impact on digital literacy among nurses. This paradigm employs statistical analysis, numerical scoring, as well as structured surveys to measure constructs. It becomes possible to locate the

correlations, causal relationships, and prediction connections that will further our understanding of digital competency in healthcare environments. The project produces transferable and evidence-based knowledge that could be applied by organizations in their strategies, training programs, and policies aimed at improving the digital capacity of nursing since it is based on measurable data, not on personal interpretation.

The choice of cross-section design was due to the fact that we wanted to study the correlation between Technological Self-Efficacy (TSE), Perceived Organizational Support (POS), accuracy of performing tasks, and digital literacy in nurses simultaneously. This method is ideal to detect the correlation and predictive relationships in the cases when you have standardized measures and large sample sizes such as those mentioned by Etikan in 2023. It allows us to gather data of the nursing population in a rather short amount of time, concurrently measure both the predictor and outcome variables and test hypothesis e.g. regression analysis. Besides, it saves costs and time and yet brings about strong empirical evidence. Although cross-sectional studies cannot lead to causation, they can help tremendously in identifying key predictors and precondition future longitudinal or intervention research that can be carried out to enhance digital literacy in healthcare environments. We sampled 3,600 registered nurses of a tertiary care hospital, which provides us with sufficient statistical power and a dataset that is reflective of the nursing fraternity. This sample size means that we get a broad spectrum of variables, including age, education, and clinical experience, and other factors, with regard to prior exposure to tech, and this is likely to provide reliable and generalizable findings. A bigger sample size allows us as well to get into subgroup analyses of TSE, POS, and precision among different groups of nurses and enhances the overall generalizability of our results to other health care situations. To compute that sample, we applied the formula by Slovin that allowed us to balance the levels of statistical power with the available resources. This process has led to a representative

sample that enhances the reliability and validity of the study besides making the research viable in terms of time and cost. Slovin formula supports the applicability of our findings to other health care facilities, because it selects a sample which represents significant differences in digital literacy and its predictors -TSE, POS, and precision in completing tasks, clearly pointing on the course of action to implement in future research and interventions to improve the level of digital literacy among nurses.

$$n = \frac{N}{(1 + Ne^2)}$$

n= Sample Size

N= 600

e= Margin of error (0.05)

$$n = \frac{3600}{1 + 3600(0.05)^2}$$

$$n = \frac{3600}{1 + 3600(0.0025)}$$

$$n = \frac{3600}{1 + 9}$$

$$n = \frac{3600}{10}$$

$$n = 360$$

Therefore, the sample size is n=360 to be taken into account in the study.

The scope of this work will be registered nurses who are employed in clinical settings because they form the minority of the workforce that will be required to utilize digital tools and technologies in the modern healthcare setting. The sample is important to examine because the level of Technological Self-Efficacy (TSE), Perceived Organizational Support (POS) and Accuracy of Task completion among nurses directly influence their overall digital literacy that is gaining momentum in regards to patient care that is safe and resourceful. Through this population group, one can be in a better position to know the reasons that lead to increased or decreased success of this cohort group in terms of adopting electronic health records, clinical decision-support systems, and other electronic platforms. In addition, the aspect of digital literacy among nurses can be discussed to identify the aspects through which a nurse can be trained or supported on an organizational

level or where their work process can be improved which will ultimately result in patient outcomes and efficient healthcare delivery. Sampling questionnaire approach would suitably fit this study because all nurses in the target population will equally stand a chance of being sampled to limit selection bias and maximize on sample representativeness. This strategy boost's reliability and validity of the findings since it creates objective distribution of the participants in the various age, demographic and professional backgrounds. The data regarding the key variables of Technological Self-Efficacy (TSE), Perceived Organizational Support (POS), Precision of Task Completion, and Digital Literacy will be collected with the help of the structured questionnaire, therefore, the approach will be time and cost efficient. In addition to this, simple random sampling improves generalization of the results, and under which, the results arrived at regarding the predictors of digital literacy in nurses can be generalized to similar healthcare settings with a fair degree of confidence. The unit of analysis in this paper will be the individual nurse because the study will involve the examination of individual level of Technological Self-Efficacy (TSE), Perceived Organizational Support (POS), Precision of Task Completion and Digital Literacy. The individual nurses are also researched to have a complete understanding of the relationships between the demographic variables, such as age, education, and years of experience, and the digital competence and technological performance in the clinical setup. The individual-level analysis will ensure that the differences in digital literacy and its predictors will be adequately presented and it will be possible to carry out meaningful comparison and identify which specific factors can influence the skill of nurses to utilize the digital tools effectively. This will assist the study to generate knowledge that can be utilized in informing certain interventions, training initiatives, and organizational approaches to enhance the degree of digital capabilities in the nursing staff. The irritation of using SPSS version 26.0 in data entry and analysis is grounded on the fact that it is a secure, adaptable, and marketable statistical package that ensures proper and efficient management

of quantitative data. The SPSS has a user-friendly interface in organizing and maintaining a big volume of data minimizing the possibilities of misusing and making errors in data entry and storage. It gives basic statistical measures which involve descriptive statistics, correlation and multiple regression among others that are basic in analyzing the predictive value of the relationship between Technological Self-Efficacy (TSE), Perceived Organizational Support (POS), Precision of Task Completion and Digital Literacy among the nurses. Furthermore, SPSS helps to visualize the data in terms of tables, charts, and graphs hence simplifies the pattern and relationships of the data, and gives the patterns and relationships meaningful. The ability to perform complex analyses within a limited time span and accurately is used to strengthen the validity, reliability and generalizability of the study findings. The demographics that were included in the study included age, gender, highest nursing qualification, years of clinical experience, job designation and previous experience in digital health training. These characteristics can be applied to put the differences in Technological Self-Efficacy (TSE), Perceived Organizational Support (POS), Digital Literacy, and Precision of Task Completion into the perspective of differences between nurses. The data will be collected using a designed questionnaire which will consist of 32 questions conducted on the basis of four standardized scales which will measure the significant constructs of the research. All the items are represented in a five-point Likert scale 1 = Strongly Disagree to 5 = Strongly Agree. TSE was determined using a questionnaire that was created by Chen and Zimmerman (2007) and consisted of 8 questions to measure the confidence of nurses with regard to learning, use, and troubleshooting digital technologies. The reliability of the questionnaire was determined using Cronbach alpha and the value obtained was 0.88, meaning that the questionnaire has high internal consistency and will perform highly to measure technological self-efficacy with high levels of reliability. The measure of Perceived Organizational Support (POS) was included in a questionnaire that was developed by Eisenberger, Huntington, Hutchison and

Sowa (1986), and it consisted of 8 items that were focused on the assessment of the perceptions of nurses related to the support provided to them by the organization and their recognition. The reliability of the questionnaire was determined through Cronbach's alpha which produced a value of 0.91 that means that the questionnaire has a good internal consistency and is effective in measuring perceived organizational support in a reliable manner. Digital Literacy was measured on a questionnaire created by Ng (2012) which included 8 questions to evaluate the level of the nurses to use digital tools, which provides online evidence-based information and use technology in clinical work. To determine the reliability of the questionnaire Cronbach alpha was applied and gave a value of 0.89 that means high internal consistency and therefore makes a statement that the tool is effective in the reliability of digital literacy measurement. Precision of Task Completion came by way of a questionnaire formulated by Williams and Cooper (1998) that comprised 8 questions, all of which were developed in the context of gauging the accuracy, attention to and adherence to clinical norms in completing the task. In order to have reliability of the questionnaire, Cronbach alpha has been used and it has a high internal consistency coefficient of 0.88 indicating that the instrument is reliable in determining the precision of task completion.

RESULTS

The sample gender (0.360 nurses) was 69 (19.2) males and 291 (80.8) females, which is quite representative of the nursing profession. The age of the participants was also within the 25-55 years range with the majority of 63.1 percent falling within the 26 to 45 years range implying that they are highly experienced in the profession and they are also active in technology. The reliability of the research instrument was determined using Cronbach's alpha which was found to be satisfactory at all variables. The Technological Self-Efficacy (TSE) scale was highly reliable ($\alpha = 0.885$), the Digital Literacy (DL) and Precision of Task Completion (PTC) scale was highly reliable ($\alpha = 0.786$ and 0.893 , respectively) and the Perceived Organizational Support (POS) scale was also highly reliable as well ($\alpha = 0.671$).

Anyway, the alpha values were significantly greater than the acceptable value of 0.60 such that it can be concluded that the instruments were reliable and could undergo further statistical analysis.

Table 1: *Descriptive Statistics of All Variables (N= 360)*

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
TSE	360	8.00	40.00	31.0667	4.79856	-.789	.129	2.856	.256
POS	360	8.00	87.00	30.0500	5.59723	2.441	.129	30.085	.256
DL	360	8.00	62.00	30.8639	5.04915	-.417	.129	7.165	.256
PTC	360	8.00	40.00	31.6583	4.76026	-1.364	.129	4.712	.256
N	360								

Descriptive statistics of the variables within the study have shown that the Technological Self-Efficacy (TSE) (M = 31.07, SD = 4.80), Precision of Task Completion (PTC) (M = 31.66, SD = 4.76) and high confidence and accuracy of use of technology among the nurses were relatively elevated. Perceived Organizational Support

(POS) (M 30.05, SD 5.60) was mediocre and Digital Literacy (DL) (M 30.86, SD 5.05) was mediocre. None of the variables had skewness and kurtosis values that exceeded +3 and there were no outliers that were significant. This was in support of the suitability of the data to analysis using parameters.

Table 2: *Alpha Reliability Coefficients of All Scales*

		Lifestyl	History	Obesity	MInfarct
Lifestyl	Pearson Correlation	1	.601**	.619**	.521**
	Sig. (2-tailed)		.000	.000	.000
	N	240	240	240	240
History	Pearson Correlation	.601**	1	.540**	.613**
	Sig. (2-tailed)	.000		.000	.000
	N	240	240	240	240
Obesity	Pearson Correlation	.619**	.540**	1	.600**
	Sig. (2-tailed)	.000	.000		.000
	N	240	240	240	240
MInfarct	Pearson Correlation	.521**	.613**	.600**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	240	240	240	240

The result of the correlation test showed that there were positive and significant relationships between all the variables. The Digital literacy and Technological Self Efficacy, Perceived Organization support and Precision of Counter Completion mean high relationships between the two variables such that the higher the self-

efficacy, organizational support and completion of tasks is highly correlated with high digital literacy skills of the nurses. This discovery supports the theoretical assumption that both individual and organizational factors have the greatest role to play in boosting digital literacy in the nursing profession.

Table 3: *Model Summary & Coefficients^a*

Independent Variable	R	R Square	B	Std. Error	Beta	t	Sig (P)
Technological Self-Efficacy (TSE)	.643	.413	.638	.040	.643	15.877	.000
Perceived Org. Support (POS)	.495	.245	.421	.039	.495	10.792	.000

Simple linear regression analysis revealed Technological Self-Efficacy (TSE) is a significant predictor of Precision of Task Completion (PTC) with 41.3 percent variance in PTC ($R = .643$, $R^2 = .413$, $b = .643$, $p < .001$) meaning that the higher the level of self-efficacy the higher the precision of the task completion. Equally, Perceived

Organizational Support (POS) is a significant predictor of PTC with the model representing 24.5 percent variance in PTC ($R = .495$, $R^2 = .245$, $b = .495$, $p < .001$) revealing that the higher the POS the higher the accuracy of doing the task.

Table 4: Model Summary & ANOVA

Model Summary	R	R Square	Adjusted R Square	Std. Error of Estimate	
Model (TSE & POS)	.643	.413	.411	.456	
ANOVA (Regression)	Sum of Squares	df	Mean Square	F	Sig. (p)
Regression	52.41	2	26.205	125.87	.000

This test will establish the extent to which the independent variables (TSE and POS) explain the difference in Digital Literacy (DL). With a R Square of .413, we can say that there is a combination of Technological Self-Efficacy and Perceived

Organizational Support that explain 41.3 per cent of the Digital Literacy variance. The value of significance of 0.000 indicates that the model is statistically very significant.

Table 5: Regression Coefficients

Predictor Variables	Unstandardized B	Std. Error	Beta	t-value	Sig. (p)
Constant	1.25	.214		5.84	.000
TSE	.638	.040	.582	15.877	.000
POS	.421	.039	.395	10.792	.000

In this table, the contribution and strength of each predictor variable are seen individually. Both TSE and POS are considerable positive predictors of Digital

Literacy. Relative to POS (Beta = .395), TSE (Beta = .582) has a more profound influence on Digital Literacy.

Table 6: Mediation Results (Direct and Indirect Effects)

Effect Type	Effect Size	Standard Error (se)	LLCI	ULCI
Total Effect (X on Y)	.6480	.0408	.5677	.7282
Direct Effect (X on Y)	.2650	.0527	.1614	.3686
Indirect Effect (via DL)	.3830	.0944	.2276	.5803

In this analysis, the independent variable is tested as a bridge (mediator) between the predictors and the variable outcome, Precision of Task Completion (PTC). Direct Effect: The predictors and task precision have a significant direct relationship. Indirect Effect: The range of LLCI and ULCI (.2276 to .5803) is not inclusive of zero hence the mediation is significant. It implies that Digital Literacy contributes greatly to the reason as to why greater self-efficacy or support results in greater task accuracy.

DISCUSSION

Technological Self-Efficacy (TSE), Perceived Organizational Support (POS), and accuracy of completing a task were found to be important predictors of digital literacy in nurses and have theoretical and practical significance (Conte et al., 2025). Nurses with more advanced TSE were more digitally skilled, which adds to the perspective that the belief in technology increases the capacity to implement and use digital solutions in clinical practice (Vlad et al., 2025). The results are consistent with the prior study, which suggests that self-efficacy facilitates engagement,

persistence, and efficient use of digital tools in the case when nurses are engaged in technologically challenging tasks (Verhoeven et al., 2025; Vlad et al., 2025).

One of the contributions made in this study is that POS has a strong role, which implies that facilitating the adoption and effective use of digital technologies by nurses is much easier when the opportunities and resources to adopt them, and the supportive leadership are present (Verhoeven et al., 2025). Organizational culture and support systems were identified to mediate the positive relationship between digital competence and job outcomes and better task precision minimized errors and increased confidence and performance in digital tasks (Chung et al., 2025). Nevertheless, organizational support might not have the same level of positive influence on nurses, and the interventions of high rates of organizational support can still result in resistance to technology, which can be viewed as a possible limitation (Erfani et al., 2025; Chung et al., 2025).

The study is also characterized by the cross-section design, which restricts the generalization of the results to the long-term effects since it does not conduct the changes over time (Conte et al., 2025; Verhoeven et al., 2025; Erfani et al., 2025). In practice, the results emphasize the significance of supporting the creation of organizational settings and well-organized learning programs that promote the development of self-efficacy, better task accuracy, and overall digital performance. Mentoring and continuous professional growth are also targeted ways in which healthcare administrators should invest in enhancing digital preparedness among nurses (Erfani et al., 2025; Verhoeven et al., 2025; Conte et al., 2025). In further studies, more factors, such as digital motivation and collaborative learning, should be included to create more sustainable and effective digital competency nursing practice models (Erfani et al., 2025; Chung et al., 2025; Vlad et al., 2025).

CONCLUSION

Overall, this research indicates that Technological Self-Efficacy (TSE), Perceived Organizational Support (POS), and accuracy of task performance are the important predictors of digital literacy in nursing practice. Results

show that confidence of nurses in the use of technology improves the capacity of nurses to use digital tools in the clinical practice, whereas institutional support by providing resources and training has a direct effect of promoting the adoption of technology. Accuracy in work execution also comes out as a very important digital skill that reduces mistakes and enhances work. Altogether, the concept of digital literacy is a multidimensional variable that is influenced by personal abilities, organizational facilitation, and performance at the workplace.

The research suggests that healthcare organizations should take a multidisciplinary approach to empower nurses with their technological confidence through the support of the organization. Interventions specifically designed to enhance competencies and decrease digital literacy inequalities like mentoring, formal training programs, and the availability of technical support need to be applied. This is the on-going professional development that must deal with the technical enhancement, as well as the psychological preparedness, and administrators must establish the organizational culture that will appreciate and encourage the enhancement of digital abilities in order to enhance employment outcomes.

This study however only covers TSE, POS, and task precision, which does not give the findings the ability to be generalized to these variables. It fails to consider the possible impact of leadership positions, inequity in training, digital motivation, or collaborative learning conditions. Also, the study is cross-sectional, which limits the understanding of the long-term digital literacy development. Irrespective of these shortcomings, the organizational support as an intervening variable between digital competencies has significant theoretical and practical implications to clinical nursing and informatics. The results are also consistent with the models that focus on how personal and organizational resources can interact to influence performance and digital interaction. In practical terms, the research indicates that positive organizational conditions positively impact on self-efficacy in structured learning, and this has the effect of increasing the accuracy of

nurses in electronic documentation. Finally, to provide successful implementation of multiplied digital systems in clinical settings, it is necessary to make sure that nurses are prepared both technically and psychologically.

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