Effect of Information Literacy Skills on Clinical Decision-Making among Nurses

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Abstract

In the present technology–driven healthcare system, information literacy (IL) is a crucial skill that deserves attention and focus. As integral members of the medical profession, nurses must adopt IL skills to deliver high- quality patient-centered care by taking informed and evidence-based clinical decisions-making. To explore the effect of IL skills on clinical decision making (CDM) abilities of professional nurses; assess the relationship between these variables (IL skills and CDM) and to investigate the perceived IL skills and CDM abilities of nurses employed in private sector hospitals in Punjab, Pakistan. A quantitative nature survey was conducted using a questionnaire. Out of 500 conveniently selected participants, 306 responded. Data was analyzed using both descriptive and inferential statistics. Findings revealed that a positive correlation exists between information literacy skills and Clinical Decision Making of nurses. Regression analysis proved that there is a positive effect of IL skill on the CDM of nurses. Findings indicate that nurses possess strong IL skills and are competent in clinical decision making (CDM) abilities. The empirical evidence yielded by this investigation substantiates the hypothesis that a statistically significant and positive correlation was found between nurses' IL skills and CDM capacities of nursing professionals. Nurses professionals having full command of IL skills can make sound and well- informed decisions in CDM process, which guarantees the delivery of safe healthcare services in the workplace.

Keywords: Information Literacy, Decision Making, Nursing, Professional Nurses, Pakistan.

Background

Information literacy refers to the skill of effectively utilizing existing knowledge for an intended purpose (Lokse et al., 2017). Nurses are responsible for assessing patients and providing care in hospital settings. Policymakers expect professional nurses to base their decisions on the most current evidence (Kronenfeld et al., 2007). Therefore, it is essential for nurses to have information literacy skills in order to access current research findings and up-to –date information (Janavi et al., 2018). Information literacy is a key component of quality nursing practice, enabling nurses to access, evaluate and apply relevant data to provide the best possible care for patients. In today's rapidly evolving healthcare environment, the ability to find and critically assess reliable information is crucial for making informed clinical decisions (Melnyk & Fineout-Overholt, 2022). Due to the fast-paced advancement of medical knowledge, being information literate allows nurses to stay current with new treatments, technologies and protocols, ensuring they provide the best possible care. Furthermore, information literacy enhances critical thinking, empowering nurses to efficiently assess patients' data and make informed clinical decisions swiftly (Rafi, et al, 2019). Professional nurses who are information literate are better equipped to interact with colleagues, patients and families in an information-dense society (Sovik & Roykenes, 2023).

Research conducted in different discipline such as business, nursing and medicine has improved our understanding related to decision making process (Johansen & O' Brrien, 2015) Clinical decision making (CDM) is the selection of best suitable option from a range of available alternatives by healthcare professionals (Maharmeh et al., 2016). Due to the complex nature of CDM, Nurses and other medical professionals must possess extensive knowledge and expertise to find the most suitable information sources to obtain authentic information to make conversant clinical decisions about patient care. In the present fast-paced medical field and awakened patient population, nurses must possess information literacy skills to facilitate informed and evidence-based clinical decisions (Johansen & O'Brien, 2016). Because, possessing strong clinical decision-making ability is essential to ensure that patient receive adequate nursing care.

This study seeks to explore the effect size of IL skills on the clinical decision making among professional nurses. The aim of present research study is to contribute to the existing

body of knowledge by examining the effect of IL skills on CDM and exploring the relationship between these two concepts (IL & CDM).

The literature review has identified several scholarly studies that have explored the information literacy skills of physicians and professional nurses (Rosenfeld et al.,2002; Barnard et al.,2005 Cullen et al.,2011; Dixon et al.,2017) as well as their CDM capabilities (Mohammad & Ebrahem,2022; Alasmari,2018; Karra,2014) in their respective work places. Some prior studies have investigated the correlation between these factors and also observed the effect of information literacy on Clinical Decision Making (Jensen et al., 2016; Van Rooyen, 2016).

In Pakistan, this area is neglected so it is important to explore the phenomenon as a baseline. The present empirical study will be a valuable source for the ongoing research on IL and CDM generally and in the perspective of professional nurses specifically. The findings of the study will be helpful for employers and policymakers in making more effective policies for developing the information literacy skills of professional nurses.

Research Objectives

This research study intends to:

1. Determine the perceived information literacy skills of professional nurses working in private sector hospitals in Punjab, Pakistan
2. Identify their perceived Clinical Decision-making abilities
3. Examine the correlation between nurses' IL skills and clinical decision-making
4. Examine the effect of professional nurses' IL skills on their clinical decision-making

Hypothesis Development

The exponential growth of health information and production of huge data, necessitates new knowledge, skills and approaches to tackle this information explosion. That is why in the advent of the 21st century AACN (American Association of College of Nursing, 2008) focused on using IT (information technology) to support nurses in decision making at workplaces. Information literacy is not a novel notion amid healthcare practitioner as there are several research works which have reported its use in the training of physicians and nurses. Melnyk et al. (2018) posited that in the era of internet, information literacy is an essential skill for professional nurses. Similarly, Wu et al. (2022) explored that information literacy skills of more than half of the surveyed Chinese's professional nurses were at the middle level.

Fernández at al. (2016) examined that nurses acknowledge the acquisition of information literacy competences are necessary and useful for them. Wadson and Phillips (2018) also pointed out that professional nurses' face challenges in staying informed and about and effectively applying research-based evidence in their daily practice. Seo et al., (2017) indicated a need of education programs to guide clinical young nurses to employ correct information when solving ethical matters during nursing practice. Azami et al., (2020) examined that information literacy skills are indispensable for nurses to develop their performance in reducing medication error.

Information literacy in health sector is very important which has been emerged a gap area to be paying much attention. It is concluded on the basis of reviewed literature that IL skills are recognized as an essential competency which enhances a person's capacity to function more efficiently and meritoriously in the workplace. As nurses are major medical practitioners dealing with the precious lives of humans, have more in-depth knowledge of a patient's current condition than even doctors and other hospital administrators do. And, they are the first to diagnose that a patient is in danger or not. Hence, nurses need to be decision-makers and problem-solvers to take informed decision promptly. Overall, on the basis of aforesaid reviewed worthy scholarly literature we can hypothesize that:

H1 – There is a positive significant effect of information literacy skills on clinical decision-making among nurses.

Research Methods

This study undertakes the assessment of professional nurses 'perceived IL skills, evaluation of their CDM abilities, an examination of the relationship between these variables (IL skills & CDM) and an investigation of the hypothesis that IL skills have positive effect on CDM abilities of nurses. Surveys are considered suitable for co-relational research (Olakunle, 2019). So, survey research method is used in present quantitative study. Survey research method is mostly used to investigate the practices, preferences, approaches and outlooks of vast groups and individuals (Mills & Gay, 2019). A questionnaire was used as the instrument for collection of data in present study.

Instruments

A scholar should explore through extensive search of literature; before designing a new tool for his/her study that whether there are already available validated and reliable instruments

that meet the study objectives (Mertens, 2010). So, the researcher after ample searching of literature adopted two already validated scales (Rafi, et al, 2020).

1-Information Literacy' Workplace Scale by Farhan et al., (2020)

2- CDMNS-PT scale, formulated by Duarte (2021)

IL workplace scale developed by Farhan et al., (2020) comprising 20 statements for measuring information literacy. It was substantiated by its applicability to measure the information literacy skills of professionals' peoples within their workplace environments; this aligns well with the study's objective of measuring IL skills of professional nurses. Similarly, the CDMNS (clinical decision-making nursing scale) by Jenkins (1983) comprised on 40-statements is a lengthy scale so the researcher decided to utilize the CDMNS-PT scale, formulated by Duarte (2021) with 23 items, finds rationale in its specialized focus on assessing decision-making skills of nurses. These two scales related to IL skills and CDM of nurses were integrated into one resulting in one questionnaire including 20 and 23 items, respectively. However, the researcher acquired experts' opinion regarding face validity and content validity of measures. Reliability of both scales is presented in Table 1. The reliability assessment was observed a = .799 for 20 items of IL skills. While the reliability assessment observed a = .703 for 23 items of clinical decision making.

Table: 1Reliability of the Measures

Sr #	Variable	Items	Cronbach's alpha
1	IL	20	.799
2	CDM	23	.703

Population, Sampling Technique, and Sample Size

The professional nurses working in private registered hospitals situated in division Sargodha, Pakistan were selected as a target population for the present study. The city of Eagles Sargodha, is among the oldest agricultural and populist (population of about 8.1 million) cities of Pakistan. There is a list of registered private hospitals situated in division Sargodha released by the Government of the Punjab, Pakistan PHIMC (Punjab Health Initiative Management Company). In this list, there are 28 registered private hospitals in the division Sargodha. From these twenty-eight private registered hospitals with a total of 500 professional nurses were identified, and data for the present research study was collected from them.

Convenience sampling technique was used to select participants from targeted population in present study. Although the sampling size was 223 participants calculated by the Taro Yamane (1967) equation. But to enhance the generalizability and to minimize sampling error, a total of 500 paper-based questionnaires were distributed among all the respondents for data collection.

Data Collection Procedures

The population of the study was composed of professional nurses working in private registered hospitals in Division Sargodha, Pakistan. Results are reported by the researcher in Table 2. Nurses were invited to take part in this research study voluntarily. As the area of the research study was geographically broad, So, the researcher adopted various ways like personal visits, post mails & and emails, and telephone calls, etc. to collect data from the respondents. A total of 500 questionnaires were disseminated across different districts within the Sargodha Division. The distribution was stratified, with 200 questionnaires allocated to Sargodha District and 100 questionnaires each to Mianwali, Khushab and Bhakkar districts, proportional to their respective population densities. The researcher distributed these 500 questionnaires, after the permission of concerned authorities in these hospitals mentioned in table 2, out of which 306 responses were received, which were used in this research study. As the respondents were from different districts of division Sargodha, Pakistan, where a large majority of respondents (n=166, 54.2%) were from district headquarter Sargodha, followed by Bhakkar (n=61, 19.9), Mianwali (n=48, 15.7) and (n=31, 10.1%) were from Khushab district. Collected questionnaires were entered into SPSS for the purpose of analysis.

Table: 2 Participating districts and responses

S#	Districts Name	Frequency	Percent
1	Mianwali	48	15.7
2	Bhakkar	61	19.9
3	Khushab	31	10.1
4	Sargodha	166	54.2
	Total	306	100.0

Results and Discussion

Demographic Profile and Analysis

A comprehensive breakdown of the demographic characteristics of nurses working in private registered hospitals located in Division Sargodha Pakistan has presented in Table 3. Firstly, a notable observation was that the sample consisted exclusively of female nurses employed in Pakistani private hospitals with no male respondents represented in the survey. This gender distribution reflects the prevailing trend in the nursing profession, where women typically dominate the majority of the workforce in Pakistani private hospitals. This phenomenon is consistent with global patterns, where nursing is often perceived as a feminized profession.

Regarding professional roles within the nursing domain, the data illustrates that the vast majority of respondents, 92.2% of the sample, hold the position of staff nurse; while a smaller proportion, 7.5% is designated as head nurses, which hold supervisory positions. Moving on to experience levels; the largest segments of respondents, comprising 34.6% have accumulated between 6 to 10 years of experience. Notably, a significant proportion of nurses (26.8%) had relatively limited experience, ranging from 1 to 5 years. However, the data reveals a gradual decline in the number of nurses as experience levels increase beyond 10 years. Regarding age distribution, the data portrays a varied representation across different age brackets. The majority of nurses, constituting almost half of the sample 49.0%, fall within the 20 to 30-years age range. These findings indicate that nursing workforce in these private hospitals is relatively young and energetic, with a significant proportion of nurses in the early stages of their careers. The presence of a youthful workforce indicates a potential for innovation, adaptability and a fresh perspective in addressing the complex healthcare needs of the population. However, there is a notable presence of nurses in older age groups as well, with significant proportions falling within the 31 to 40-year and 41 to 50-year and older age brackets, comprising 31.7% and 18.0% of the sample, respectively.

Table: 3 Demographics of respondents (n = 306)

Sample Characteristics	F	Percentage
Gender		
Female	306	100.0
Male	0	0

Designation		
Head Nurse	24	7.5
Staff Nurse	282	92.2
Experience		
1-5	82	26.8
6-10	107	34.6
11-15	75	24.5
16-20	35	11.4
21 and above	7	2.3
Age		
20-30	150	49.0
31-40	97	31.7
41-50	55	18.0
51-60	4	1.3
TOTAL	306	100.0

Descriptive Statistics

RO1: Perceived Information Literacy Skills of Professional Nurses

Using five-point Likert scale, the professional nurses revealed their perceived IL skills level on 20 items. The provided table 4 showed the results of this survey conducted among professional nurses focusing on their perceived information literacy skills. As concerned information acquisition; the participants ranked their agreement with several statements related to information gathering on a Likert scale. Mean values, ranges from 4.23 to 4.25 specify a quite notable consent with these statements. As concerned, evaluation of information; the mean values ranging from 3.79 to 4.23, suggest a general sense of confidence in their capability to identify inaccuracies, errors, and evaluate the reliability of information acquired from various sources. As regards to the utilization of Information the mean values range from 4.20 to 4.39, provide an awareness of the participants' self-assessed expertise in information use. The mean values in the context of being aware with ‘information environment’ ranges from 4.05 to 4.29, reflecting the participants' conformity with these statements. As concerned the information experiences; the mean values for this set of items range from 3.55 to 4.09, showing the

participants' consensus with self-perceived capability to learn from their information experiences. However, revising thinking based on group discussions or information collected, as well as being prompted to reflect or act apart the boundaries of their profession due to new information, seems to evoke a slightly lower level of agreement by the participants. Relating to observance of information ethics; the mean values for these statements ranges from 3.74 to 3.81, indicating the participants' average concede and commitment to information ethics. The moderate mean values suggest that participants generally recognize the importance of obeying to ethical considerations when handling information. These ethical considerations include paying attention to information security within print and electronic environments, obtaining, storing, and disseminating information by relevant laws and regulations, as well as understanding when to appropriately credit sources or maintain the secrecy of the sources.

Table: 4 Perceived information literacy skills of professional nurses (n=306)

Statements	M	SD
Information Acquisition	4.23	.468
When looking for information I can easily identify the right in-formation sources (e.g. company employees, intranet, online sources, and clients).	4.25	.488
I can access relevant information efficiently.	4.24	.484
I engage in discussions with colleagues to share and gather information.	4.20	.653
Information Evaluation	3.79	.658
I can identify consensus and conflicts among information sources.	4.23	.916
I am able to spot inaccuracy and errors in information from different sources.	4.10	.893
I can elevate information credibility.	4.10	1.099
Information Use	4.32	.671
I can apply information to drive informed decision-making and problem solving.	4.39	.835
I effectively use information to improve work practices.	4.38	.755
I effectively use information to challenge traditional thinking and to see things in different ways.	4.20	.910
Awareness of the Information Environment	4.14	.644
I am familiar with organization’s information sharing policies.	4.29	.796

I am aware of our company's information access resources.	4.15	.841
I am aware of our team's information sharing protocols.	4.07	.883
I am familiar with our organization's information management system.	4.05	.869
Learning from information Experience	3.84	.700
I can point out useful sources and processes for future information gathering and application.	4.09	.854
I look for innovative ways to apply new information.	3.97	.885
I refine my thinking based on group discussions and new information.	3.76	1.073
Information inspires me to think and act beyond my job.	3.55	1.148
Information Ethics	3.79	.658
I manage information in compliance with laws and regulations.	3.81	.850
I know when to credit or protect information sources.	3.81	.914
I prioritize information security across company media.	3.74	.991

Scale: 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

RO2- Perceived Clinical Decision-making Abilities of professional Nurses

Results of a survey conducted to assess nurses' clinical decision-making abilities, behaviour, practices, and procedures are shown in the table 5. The mean values for the set of statements related to define problems and set objectives range from 3.94 to 4.28, reflecting the participants' high levels of agreement. The relatively high mean values suggest that participants generally display a strong commitment to patient-centered care and consider various factors when making decisions. This includes defining problems, developing objectives and assisting patients in making collaborative decisions. Participants also estimated of being objective when their personal values conflict with those of the patient. They also express an inclination to consider expert advice, peer consensus, and future family welfare in their decision-making process.

Regarding search and data processing habits and strategies during their decision-making processes at workplace the mean values for these statements range from 3.44 to 4.06, illustrating the Participants' self-perceived approaches to search for and processing data when making clinical decisions. Some participants appear more proactive in gathering data, while others may rely more on existing information or their mental lists of options. Overall, the results

indicated nurses' ability to strike a balance between data processing and relevant information-searching process to make knowledgeable decision.

As regard to elevate alternatives and implementation of actions during CDM processes; the mean values for this set of statements range from 2.52 to 3.45, reflecting the insights into the participants' self-perceived approaches to evaluating alternatives, planning, and executing actions when making clinical decisions. The relatively low mean values suggest that participants generally display a commitment to considering risks and benefits when taking decision about patients However, some participants appear less inclined to actively seek input from peers or to explore alternatives while making decisions at workplace.

Table: 5 Perceived clinical decision-making abilities of professional nurses (n=306)

Statements	M	SD
Definition of the problem and development of the objectives	**4.16**	**.444**
I involve patients as active information sources.	4.28	.871
I value expert advice even if it differs from my own views.	4.25	.762
I consider the family's future welfare in my clinical decision.	4.24	.865
I remain objective when my values clash with those of my patient.	4.22	.568
I value peer agreement in decision making.	4.21	.951
While examining the consequences of the options I might choose, I am aware of the positive outcomes for my patients/clients.	4.20	.805
I support patients/clients to exercise their rights in making decision related to their care.	4.19	.544
I consider peer opinion when evaluating choices.	4.16	.991
I choose options that I have used successfully in similar contexts in the past.	4.12	.845
The situational factors at the time determine the number of options that I explore before making a decision.	4.08	.673
I consider institutional priorities and standards in clinical decision making.	4.04	.867
Finding out about the patient/client's objectives is a regular part of my clinical decision-making.	3.94	.892
Search and Data Processing	**3.91**	**.597**
I create a mental list of possible solutions before making a decision.	4.06	.887
I consider even the remotest consequences before making a choice.	4.02	.921

While examining the consequences of options, I might choose, I generally think through "If I did this, then."	4.01	.902
I maintain a written record of the potential benefits and drawbacks while evaluating an important clinical decision.	3.85	1.08
I gather all relevant information to ensure knowledgeable decisions.	3.44	1.43
Evaluation of Alternatives, planning, and Implementation of Action	**2.64**	**.670**
I evaluate risks and benefits for high impact outcomes.	3.45	1.06
Past experiences don't dictate my risk-benefit analysis for decisions about patients/clients.	3.35	1.33
I don't typically prioritize the patent's risks and benefits when making decisions.	2.85	1.23
I don't seek peer suggestions for my clinical decisions.	2.72	1.35
My finding of alternatives seems to be largely a matter of luck.	2.56	1.26
My professional values don't align with my personal values.	2.52	1.29

Scale: 1= strongly disagree, 2=disagree,3=undecided,4=agree,5=strongly agree

RO3: To examine the effect of information literacy skills on clinical decision-making among these nurses

The table 6 summarizes the results of regression analysis and illustrates relationship between CDM (clinical decision making) and knowledgeable IL (information literacy) skills of professional nurses.

The hypothesis tests that if ILs (Information Literacy skills) have a significant effect on CDM (clinical decision making).The dependent variable CDM was regressed on predicting variable (IL skills) to test the hypothesis H1.It displays that the ILs can take part an important role in shaping CDM (b=..434, p<oo1), these results indicate the positive effect of the IL skills on CDM abilities of professional nurses. Moreover the R^2 =.188 depicts that model explains 18.8% of the variance in CDM.

Table 6 displays also information about the relationship between IL skills and CDM of nurses. Pearson correlation is employed to check the relationship between these two constructs. The Pearson correlation coefficient (r) value between IL and CDM is calculated to be .434. Cohen (1992) and Pallant (2013) criteria to measure association between variables denoted *r* >0.10 for a weak association, r > 0.30 for a moderate level association and *r* > 0.50 as a strong

association between these variables. Based on this criterion the strength of association between IL skills and clinical decision-making is of moderate level among these professional nurses. It signifies a positive relationship between information literacy skills and clinical decision-making among these professional nurses, while the p value is < 0.01 which means that statistically relationship is significant and the direction of correlation suggests that as information literacy skills increase, the proficiency in clinical decision-making increases. This observation provides an empirical support for the notion that nurses with higher information literacy skills have a tendency to exhibit enhanced CDM abilities.

Table: 6 Regression analysis and Correlation between IL & CDM

Hypothesis.	Regression weights	Beta coefficient (β)	R^2	p-value	Hypothesis	Pearson r ILS	Pearson r value CDM
H1	IL → CDM	.434.	.188	.000	Accepted	1	.434**

Note: p<0.05, IL: Information Literacy, CDM: Clinical Decision Making

Discussions

These results revealed that the practicing nurses perceive themselves competent in Information literacy skills as they were capable of acquisition, evaluation and use of information. They were also confident about their alertness of information environment, obtaining knowledge from information experience and ethical use of acquired information. These findings of the present study were partially aligned with the results of Hasan (2014) who investigated that health information literacy level of Norwegian nurses is of satisfactory level. However, these results contradicted the results of Cullen et al. (2011) who described that IL skills were even taught to medical professionals at undergraduate education level but they lacked IL skills in finding and applying best evidence in practice. Furthermore, these results are accorded with the results of Basit et al. (2021), who informed that majority of the medical professionals were found proficient in defining need, access, evaluation and ethical use of information.

Likewise, IL skills these professional nurses perceived themselves competent in their ability in defining problem, developing objectives, evaluation of alternatives, searching data and implementation of action in Clinical Decision-Making process. The literature supports

these findings as Mohammed et al, (2022) conducted a study in, Egypt and described that nurses' clinical decision making and their knowledge are positively correlated.

The results of present study also indicated IL skills as positive correlative and predictor of CDM among professional nurses. Findings of this study are also partially corroborated with the results of the correlational research work of Dixon,et al, (2017) who reported that there were no significant variations in results of mean of IL (information literacy) between professional nurses and physicians and good performance of self-reported information system usage was connected with information literacy. The existing literature also supports these results as Cheek and Doskatsch (1998) investigated that information literacy could be used by nurses as a vital critical resource for lifelong learning. Van (2016) explored that medical professionals identified that mobile technology was a great plus quality to access different information sources for clinical decision making. Furthermore a study from Brazilian context Jensen et al., (2016) identified informatics abilities essential to decision making in nursing management. Dauer et al., (2022) developed a multidisciplinary science course to prepare and develop critical thinking and skills for finding and applying information for decision-making. Ibrahim et al., (2020) also examined the effectiveness of information literacy for medical students measured by librarians.

Thus, we can conclude that improved nurses CDM capabilities are result of their increased IL skills. These findings provided an understanding and vision to medical librarians; policy makers and potential stakeholders related to nursing profession to ruminate IL skills importance as it is positively associated with professional nurses' performance in clinical decision-making process in hospitals.

Conclusion

It is concluded that Pakistani professional nurses perceived themselves competent in information literacy skills and proficient in their ability of clinical decision making. This study also provides persuasive evidence of the significant and positive relationship between Information Literacy Skills and Clinical Decision Making among these nurses. Information Literacy skills are vital for navigating the ever-increasing volume of healthcare information and making informed decisions. By recognizing the value of IL skills and integrating it into nursing education and practice, we can enhance the quality of patient care and contribute to better healthcare outcomes. Because professional nurses equipped with better information

literacy skills can do well- informed, cognizant and knowledgeable decisions at workplace in healthcare context.

Implications

The results have profound implications for both theory and practice. In terms of theoretical background, this study adds to the body of knowledge as regards the usefulness of IL skills in nursing education, especially for professional nurses employed in hospitals, as there hasn't been any prior research of this kind in the literature while in practical perspective, these findings could support policy and practice in improving nursing education because Information Literacy abilities had a positive and significant effect on CDM of professional nurses. These findings could be helpful for policymakers, medical libraries, schools of nursing affiliated with Punjab Nursing Council and PNC (Pakistan Nursing & Midwifery Council).

Suggestions

With regard to the suggestions present study provides a foundation or to be wiser a stepping stone for further research into this area. While it has been established a positive relationship between ILs and CDM, there is room for further exploration. Future studies may investigate the interplay or mediating role of other factors (such as knowledge sharing behaviour, age, experience, lifelong learning attitude, workplace setting and academic career) between IL skills and clinical decision-making. Extend research to diverse healthcare professionals such as doctors/medical officers, student of MBBS and nurses (students). Introduce professional development activities and refresher courses that will enhance their (nurses) IL skills, which will be beneficial for them for lifelong learning. Encourage collaboration between healthcare and academic institutions to conduct further research and share best practices related to IL skills and CDM.

Limitations

This study acknowledges several limitations. Firstly, this study employed a self-assessment method to investigate the perceived levels of information literacy and CDM abilities of professional nurses. The Self-assessment method may be biased, as participants may overestimate their IL skills and CDM (clinical decision making) abilities.

Secondly, the data was collected exclusively from professional nurses employed in the private sector hospitals .Consequently; the results may not be applicable to nurses practicing in public sector hospitals. Thirdly, the data were collected solely from profession nurses and student

nurses were not included in it. Furthermore, the convenience sampling approach may compromise the generalizability of the findings.

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