Nurses' Readiness for Transforming to Use the Electronic Information System in The National Cancer Institute, Egypt

Wesam A. Th. Fargaly, Eglal Ahmed Abd-Elwahab, Fatma Ahmed Abed , Rana Hamdy, Nora Atef *, Dalia Negm Eldin

Nursing Administration, Cairo University.

Abstract

Background: A new reality mandates that adopting electronic information systems (EIS) is recognized as essential for advancing nursing processes and improving the quality of patient care. However, Egyptian health organizations have paid little attention to adopting health information systems, resulting in inadequate staff preparedness as a challenge to EIS compliance and application. **Objectives:** This study aimed to assess nurses' readiness to use the electronic information system. **Material and Methods:** A descriptive cross-sectional study was conducted at the National Cancer Institute (NCI) in Egypt, involving a convenience sample of nursing staff (n = 402) willing to participate. The nurses completed a self-administered questionnaire as part of the study. **Results:** Among the 402 nurses who participated in the survey, more than half (53.2%) were female. The mean age was 32.55 ± 10.47 years, with an age range of 21 to 58 years. More than half of the participants (54.0%) held a technical diploma. The overall readiness for EIS was 76.6%. Most of the study participants (81.27%) exhibited a positive attitude toward using EIS. In comparison, most (72.5%) highly perceived EIS usability and demonstrated acceptable computer skills (74.69%). **Conclusion:** Overall, the readiness among nurses is encouraging, and their highly positive attitudes and perceptions toward EIS suggest that the implementation of EIS would be welcomed at NCI.

Keywords: Attitude, EIS, Nurses, Perception, Readiness.

INTRODUCTION

The adoption of electronic health records (EHR) systems has become vital in many healthcare facilities around the world. However, their utilization in developing nations remains limited. These systems are designed to assist clinical and nursing staff with their daily tasks by electronically processing patient data. EHR systems have the potential to improve the accuracy and quality of patient information while

*Corresponding author: noraatef148@yahoo.com

reducing the costs associated with accessing medical care.

They are expected to affect healthcare services in the near future, making them essential technological tools for both current and future healthcare. (1)

Nursing informatics plays a crucial role in helping nurses understand the importance of integrating informatics into clinical nursing practice across various specialty areas. (2) Furthermore Informatics competency has become essential for nurses to perform their professional roles more safely, effectively, and efficiently. It also aids in developing strategies to enhance nurses' informatics practice. (3)

Integrating nurses' informatics competencies, basic computer skills, and their perceptions and attitudes toward computerization will facilitate the incorporation of informatics into formal nursing training programs. This, in turn, will improve nurses' ability to manage and utilize healthcare information effectively. (4)

Nurses' perceptions and attitudes toward EHR are positively influenced when communication skills and training emphasize improving patient care. This approach fosters evidence-based practices that support the sustainability of the best practices for EHR implementation and innovation. (5)

Therefore, understanding nursing perceptions and experiences, involving nurses in the long-term EHR implementation plan, and developing a change-management process based on prior analyses are effective strategies to enhance EHR acceptance among nursing professionals. (6)

This study aims to assess nurses' overall readiness, attitudes, perceptions, and computer skills for using the electronic information system, which are comprehensive factors influencing their work environment. The findings will guide organizations in adopting information systems that align with nurses' needs.

Subjects and Methods

Research design: Cross-sectional study

Study population and setting the target population: Nurses with at least one year of experience who work at the National Cancer Institute (NCI), Cairo University, accepting to participate in the study and filling the questionnaire, nurses with experience lower than one year or refuse to participate were excluded from the study.

The study included 402 nurses and was conducted from May to August 2024.

Study tool and questionnaire: Data was collected through a validated questionnaire adopted from Fargaly and Abd El-Wahab. [7] It includes two parts.

Part (I) is classified into two domains: Socio-demographic data and work-related data for the participants' computer usage, which has (three subscales) within 12 elements.

Part (II) is categorized into three subscales: The Nurses' Attitude Scale (NAS), which contains 18 elements; the Nurses' Perception Scale (NPS), which contains 19 elements; and the Nurses' Computer Skills Scale (NCSS), which contains 13 elements.

The scores were calculated as follows: 1 point for a correct answer and 0 points for an incorrect answer. The sum of attitude, perception, and skills scores is the overall readiness score. The cut-off levels were hypothesized as < 60% low, moderate ≥ 60% - < 85%, and high ≥ 85%.

Procedure: The study is voluntary, and each participant has the right to refuse to participate, and confidentiality of the information was assured. The investigators created the Google form questionnaire, which was distributed to nursing staff throughout the hospital.

A pilot study was conducted on a subset of the sample population to assess the questionnaire's consistency and clarity. The reliability of the questions was assessed using Cronbach's alpha, yielding coefficients of 0.871, 0.761 and 0.889 for attitude, perception and skills questions, respectively.

Sample size

Based on a study by Jebraeily *et al.* [8], who found that an overall readiness level was 61.6%. A sample of 363 nurses will be sufficient to provide a 95% confidence level for a single proportion and with a 5% margin of Error. This sample was increased by 10% to account for expected non-responses or refusal rates, so the total sample needed was 402 nurses. Sample size calculation was done using Epi info version 7.1.5.2.

Statistical design: Data management and analysis were performed using Statistical Package for Social Sciences (SPSS) vs. 23. Numerical data was summarized using means and standard deviations or medians and ranges, as appropriate. Categorical data was summarized as numbers and percentages.

Ethical consideration: All procedures performed in the study followed the ethical

standards of the institutional research committee and the 1964 Helsinki Declaration and its later amendments. Ethical approval for the study was obtained from the Ethics Committee (code EB2409-204-036-191)

Results

A total of 402 nurses participated in the study. More than half of the participants (53.2%) were female, with a mean age of 32.55 years, ranging from 21 to 58. More than half of (54.0%) had a technical diploma in nursing. Majority of participants (84.3%) were staff nurses. Most of the participants (58.5%) had 5 to 10 years of experience in the field (Table 1).

The majority of study participants (89.3%) reported using a computer. Additionally, 41.8% of the participants were willing to take computer training courses, indicating a strong readiness for further training. Furthermore, 38.3% learned their computer skills through self-acquired methods.

Regarding computer use in the workplace, 48.5% of participants interacted with computer-based medical devices, and a significant majority (85.8%) indicated that the new electronic system application was easy to learn (Table 2).

Regarding the nurses' attitudes, the highest percentages (ranging from 92.3% to 97.5%) indicated that using a computer ensures the safety of patient information, improves access to information at any time, facilitates easy retrieval, aids in scheduling appointments, provides a compact storage solution for patient data, and contributes to a comprehensive database.

Additionally, 89.8% to 70% of participants agreed that using a computer reduces errors in managing patient data, decreases the time spent compared to paper-based documentation, is preferred over traditional paper systems, and enhances accuracy and interconnectivity.

These results reflect a strong consensus and positive attitudes among the participants regarding the benefits of electronic information systems (Table 3).

Table 4 illustrates the nurses' perceptions, with the highest percentages, ranging from 89.6% to 75% of study participants, agreeing on several key points. These include the necessity for nursing staff to receive computer skills training, including such training in basic nursing education, and using computer skills as criteria for nurses' promotions. These findings indicate a strong agreement

regarding the importance of computer skills and their impact on nursing practice.

Table 5 presents the computer skills competencies of nurses at the beginner user level. The results indicate that a significant majority (88.6%) of nurses can identify the basic components of a computer system.

Additionally, 80.1% can open and close a Word document, while 72.4% can edit Word documents and perform data entry tasks. Regarding keyboarding skills, 92.5% of nurses can type in Arabic, whereas only 83.6% can type in English. Furthermore, 86.3% of nurses can recognize the positions of keys on the keyboard.

Table 6 illustrates the relation between nurse's demographic characteristics and knowledge, attitude, perception and skills. We found that nurses with age >40, head nurses, and those with more than 30 years of experience had higher attitude than others did ($p<0.001$ for each).

Sex, Education and residence do not affect attitude. Regarding perception nurses with older age (>40years), those who had Bachelor degree of nursing, also head nurses and those with experience from 15-30 years ($p =0.007, 0.002, <0.001, 0.003$ respectively). Sex and Residence do not affect perception .regarding skills those with younger age (<=40), males, those who had Associated technical diploma or Bachelor degree, head nurse and those with experience <15 years had higher skill level than others only residence not affect skills.

The overall readiness of nurses for EHR implementation was 76.26%, indicating a moderate level of readiness. Among the study participants, 81.27% exhibited the highest levels related to the attitude scale, followed by the computer skills scale at 74.69% and the perception scale at 72.5% (Graph 1).

Discussion

This study evaluated the readiness of nurses at NCI to implement EHR. The assessment focused on three key areas: attitudes, perceptions, and computer skills. According to Amatayacul, evaluating healthcare providers' readiness for EHR implementation requires examining their computer skills, knowledge, and attitudes. (9)

Similarly, Terry *et al.* found a correlation between healthcare providers' readiness and their knowledge and computer skills regarding EHR. They noted that physicians, nurses, and other providers with strong computer skills tend to support the implementation of EHR more positively. (10)

The socio-demographic data of the study participants indicated that the majority were female, making up 53.2% of the sample, with a mean age of 32.55 years. Most nurses hold a technical diploma in nursing.

This finding may be attributed to governmental settings struggling to attract qualified nurses due to inadequate salaries, insufficient ongoing education, unclear roles and responsibilities in clinical environments, a lack of recognition for nursing, and poor working conditions. Additionally, the distribution of nurses across different units was relatively balanced, with similar percentages in each unit.

The study revealed that 90.3% of participants had prior experience with computers. However, only 56.5% used a computer whenever the opportunity arose.

This finding contrasts with Salameh and colleagues, who noted that only 40% of their study sample used a computer in rural health facilities in Tanzania and Ghana .[11]

Additionally, it diverges from the study by Sukums *et al.*, which found that nearly all participants used a computer daily. [12] These discrepancies may suggest a relatively low interest in computer usage among the nurses in this study.

The overall attitude of nurses in the study showed that more than three-quarters of participants had a positive outlook on adopting EIS. They recognized the significance of data safety, accessibility, direct benefits, and technology integration in various contexts.

These results are consistent with previous research assessing nurses' acceptance and attitudes toward using EIS in Palestinian governmental hospitals, where a majority also acknowledged the necessity of computer-based documentation and exhibited high attitude scores. [13]

A positive attitude toward the hospital's EIS indicates a greater readiness and acceptance for successful EIS implementation, which can streamline training programs. These findings align with a study by Saleh *et al.* in Saudi Arabia, which assessed nurses' attitudes and factors influencing electronic health record usage.

Their results showed a significant relationship between a positive attitude toward information technology and an increased intention to use it. [14] Understanding nurses' attitudes can reflect their acceptance and willingness to adopt EIS, corresponding with their perceived strong IT acceptance. [15]

Additionally, the results indicated that over half of the nurses had a strong perception of using EIS. Previous studies have demonstrated that perceived usefulness and ease of use significantly influence nurses' satisfaction and attitudes, facilitating quicker and easier system adoption. [16]

The current study supports findings from Chand and Sarin, who noted that perceived usefulness scored higher than ease of use. Their statistical analysis also revealed a positive relationship between system competency and nurses' satisfaction. [17]

The current study found that about three-quarters of nurses had acceptable skills. Most nurses could identify the basic components of a computer system and manage simple tasks like opening, closing, and editing a Word document.

This finding contrasts with a study conducted in a public hospital in Kenya, where half of the nursing staff demonstrated good proficiency in word processing. However, the Kenyan study did show that about two-thirds of the nursing staff had an e-mail account, indicating a higher level of engagement with technology in that context. [18]

It was found that there was a significant relationship between nurses' skills toward EHRs and sex, as males rated more positive skills than females. This means that there is a significant sex disparity in nurses' skills on EHRs, with male nurses generally holding a more positive opinion of these systems. Being a male was also a major factor in provider preparedness, lending credence to meet the idea that men are more comfortable and enthusiastic about using technology than women. [19]

The overall readiness level of nurses for using EIS was 76.26%, indicating that most nurses have a positive attitude toward EIS. This finding is notably higher than that reported by Jebraeili *et al.* and Habibi *et al.,* who found overall EIS readiness to be approximately 50% and 57.2%, respectively, with relatively low levels of readiness in computer skills. [8, 20]

Study limitations: This study has several limitations. First, cross-sectional and longitudinal studies are recommended to provide more investigations about the factors that affect nurses' readiness to EHRs. Second, this study used a convenience sample that is prone to biases and is less likely to represent the population. Finally, the method of data collection used in this study was a self-administered questionnaire without any confirmation of stated compliance by direct observation. Future studies are needed to

include large populations in Egypt to increase the generalizability of results.

Conclusion

The overall readiness among nurses is promising. Their highly positive attitudes and perceptions toward EIS indicate strong support for its implementation at NCI

Recommendations

- The hospital administration should take appropriate measures to establish a robust ICT infrastructure essential for the effective use of EHRs.
- Academic nurse leaders should prioritize the development of nursing informatics skills among nurses through ongoing education and training programs. This can include workshops and certification courses. By fostering a culture of continuous learning, nurse leaders can empower nurses to utilize informatics tools to enhance clinical decision-making, improve patient outcomes, and streamline workflows in various healthcare settings

Declarations

Competing interests: The authors declare that they have no conflict of interest.

Funding: none.

Acknowledgments: The authors would like to acknowledge all the participants for their cooperation.

Informed Consent: Informed consent was obtained from all participants included in the study.

References

1. Lulin, Z., Owusu-Marfo, J., Asante Antwi, H. Nurses' Readiness in the Adoption of Hospital Electronic Information Management Systems in Ghana: The Application of the Structural Equation Modeling and the UTAUT Model. Sage Open, 2020; 10(2). https://doi.org/10.1177/2158244020931814
2. Khezri H, Abdekhoda M. Assessing nurses' informatics competency and identifying its related factors. Journal of Research in Nursing. 2019 Nov; 24(7):529-38.
3. Kinnunen UM, Kuusisto A, Koponen S, *et al.* Nurses' informatics competency assessment of health information system usage: A cross-sectional survey. CIN: Computers, Informatics, Nursing. 2023 Nov 1; 41(11):869-76.
4. Gaughan MR, Kwon M, Park E, *et al.* Nurses' experience and perception of technology use in practice: a qualitative study using an extended technology acceptance model. CIN: Computers, Informatics, Nursing. 2022 Jul 1; 40(7):478-86.

5. Tengeh, L. N. Knowledge, perceived skills and attitude of nurses regarding the use of electronic health records in selected primary health care facilities in the Western Cape (2020). http://hdl.handle.net/11394/7639
6. Graham HL, Nussdorfer D, Beal R. Nurse attitudes related to accepting electronic health records and bedside documentation. CIN: Computers, Informatics, Nursing. 2018 Nov 1; 36(11):515-20.
7. Fargaly WA, Abd El-Wahab EA. Nurses' readiness for using the electronic information system at a selected hospital in Giza Governorate. Med. J. Cairo Univ. 2016; 84(3):221-7.
8. Jebraeili M, Ahmadi M, Hajavi A, *et al.* Electronic health records: personnel readiness assessment 2010; 17-24.
9. Amatayakul M. EHR? Assess readiness first: there's no denying interest in electronic health records is increasing. Healthcare Financial Management. 2005 May 1; 59(5):112-4.
10. Terry AL, Thorpe CF, Giles G, *et al.* Implementing electronic health records: Key factors in primary care. Canadian Family Physician. 2008 May 1; 54(5):730-6.
11. Terry AL, Thorpe CF, Giles G *et al.* Implementing electronic health records: Key factors in primary care. Canadian Family Physician. 2008 May 1; 54(5):730-6.
12. Sukums F, Mensah N, Mpembeni R, *et al.* Health workers' knowledge of and attitudes towards computer applications in rural African health facilities. Global health action. 2014 Dec 1; 7(1):24534.
13. Alrasheeday AM, Alshammari B, Alkubati SA, *et al.* Nurses' attitudes and factors affecting use of electronic health record in Saudi Arabia. InHealthcare 2023 Aug 25; 11(17): 2393. MDPI.
14. Saleh S, Khodor R, Alameddine M, *et al.* Readiness of healthcare providers for eHealth: the case from primary healthcare centers in Lebanon. BMC Health Services Research. 2016 Dec; 16:1-1.
15. Schenk, E. C., Ward-Barney, E., Estill, P. *et al.* RN perceptions of a newly adopted electronic health record. JONA: The Journal of Nursing Administration, 2016; 46(3): 139-145.
16. Schenk E, Marks N, Hoffman K, *et al.* Four years later: examining nurse perceptions of electronic documentation over time. JONA: The Journal of Nursing Administration. 2021 Jan 1; 51(1):43-8.
17. Chand S, Sarin J. Confident or confused: Nurses' perception and acceptability of electronic nursing

documentation. International Journal of Health Sciences and Research. 2019; 9(10):197-203.

18. Lulin, Z., Owusu-Marfo, J., Asante Antwi *et al.* Nurses' Readiness in the Adoption of Hospital Electronic Information Management Systems in Ghana: The Application of the Structural Equation Modeling and the UTAUT Model. Sage Open, 2020; 10(2). https://doi.org/10.1177/2158244020931814
19. Abdulai, A. F., & Adam, F. (2020). Health providers' readiness for electronic health records adoption: A cross-sectional study of two hospitals in northern Ghana. PloS one, 15(6), e0231569.
20. Habibi-Koolaee M, Safdari R, Bouraghi H. Nurses readiness and electronic health records. Acta Informatica Medica. 2015 Apr; 23(2):105.

Table (1): Participants' Demographics Characteristics (n =402).

Variables		**n**	**%**
Sex	Male	188	46.8
	Female	214	53.2
Age/ years (Mean±Sd) Range		32.55±10.47 (21.0-58.0)	
	Technical diploma in nursing	225	56.0
	Associate technical diploma in nursing	137	34.1
	Bachelor's degree in nursing	33	8.2
	Others	7	1.7
Job	Staff Nurse	339	84.3
	Head Nurse	9	2.2
	Nursing supervisor	54	13.4
Experience	<15 years	270	67.2
	15-30 years	90	22.4
	>30 years	42	10.4
Residence	Urban	267	66.4
	Rural	135	33.6

Table (2): Work-related data for the participants' computer usage (n =402).

Variables		n		%
Frequency of computer usage	Use the computer daily.	88		21.9
	Use the computer more than once a week.	44		10.9
	Used the computer when had a chance.	227		56.5
	Never used the computer.	43		10.7
Training experiences & courses	Pass computer course training successfully.	16		4.0
	Learn computer skills by self-acquired learning.	154		38.3
	Have formal computer training course.	64		15.9
	The willing to get computer training.	168		41.8
Computer use at work	Deal with any computer-based medical devices.	No	207	51.5
		Yes	195	48.5
	Know information about the new electronic system application.	No	63	15.7
		Yes	339	84.3
	Using a computer requires a lot of mental effort.	No	154	38.3
		Yes	248	61.7
	The new electronic system application is easy to learn.	No	57	14.2
		Yes	345	85.8

Table (3): The nursing staff's attitude towards the electronic information system (n =402).

Variables	Agree		Disagree	
	n	%	n	%
Using computer secure the patient's information from being lost.	385	95.8	17	4.2
Using computer improve access to information at any time.	392	97.5	10	2.5
Using computer reduce errors in handling patients' data.	361	89.8	41	10.2
Using a computer, diminish time spent than using paper-based documentation.	301	74.9	101	25.1
I prefer using a computer to traditional paper-based document system.	321	79.9	81	20.1
Shifting to the Electronic information System (EIS) will improve the accuracy and inter-connectivity.	357	88.8	45	11.2
The computer system aid to know patient's scheduling appointments.	371	92.3	31	7.7
Working in front of a computer does not fit with my work demands.	168	41.8	234	58.2
Using computer system lead to many problems.	121	30.1	281	69.9
Search about any investigation or information related to previous patient visits in paper file, may lose time and hinder the work continuity.	288	71.6	114	28.4
I feel that the more training I receive, the more I am more apt to use a computer.	375	93.3	27	6.7
I feel that the user age hinder to use a computer.	189	47.0	213	53.0
Using The EHS reduces the oral orders from the medical staff.	343	85.3	59	14.7
Using computer keep patient information safe and can retrieve easily.	389	96.8	13	3.2
Using computer make nurses satisfied during work.	301	74.9	101	25.1
Using computers provides small area and save places for patients' data storage.	389	96.8	13	3.2
Using a computer is useful in scientific research due to the presence of the comprehensive database.	385	95.8	17	4.2
I feel worried for shifting between papers to paperless systems.	205	51.0	197	49.0

Table (4): Nursing staff's perception of the electronic information system (n =402).

Variables	Agree		Disagree	
	n	%	n	%
The computer skills training have to be involved in the basic nursing training.	353	87.8	49	12.2
Nursing staff requires being trained on computers.	360	89.6	42	10.4
Using a computer will enable me to accomplish tasks more quickly.	312	77.6	90	22.4
Using computer improves my job performance.	144	35.8	258	64.2
Use of computers enables easy documentation by nurses.	194	48.3	208	51.7
Computerization Improves the quality of patient care.	314	78.1	88	21.9
Nursing abilities to run the EIS are increasing the nursing professionalism.	360	89.6	42	10.4
Computer usage competencies should be criteria for nurses' promotion.	348	86.6	54	13.4
Many nurses are knowledgeable about computers.	216	53.7	186	46.3
Uses of computer enhance nurse-patient relationship and care.	271	67.4	131	32.6
The EIS application, particularly, should be separated in a special department.	172	42.8	230	57.2
EHS has benefited weight than application difficulties.	347	86.3	55	13.7
I perceived that the current infrastructure is not able to support the EIS implementation in the hospital.	261	64.9	141	35.1
Using EIS improves my productivity and continuity of care.	322	80.1	80	19.9
Recording patient information on the computer will lead to loss of patient data confidentiality.	108	26.9	294	73.1
EIS might be helpful, but it is not certainly required in my job.	180	44.8	222	55.2
Using EIS makes work easier and facilitate my job.	318	79.1	84	20.9
Using EIS improves the image and reputation of hospital among the health sectors.	359	89.3	43	10.7
It is easy to remember how to perform tasks using a computer.	308	76.6	94	23.4

Table (5): Computer Skills competencies at the beginner user (n =402).

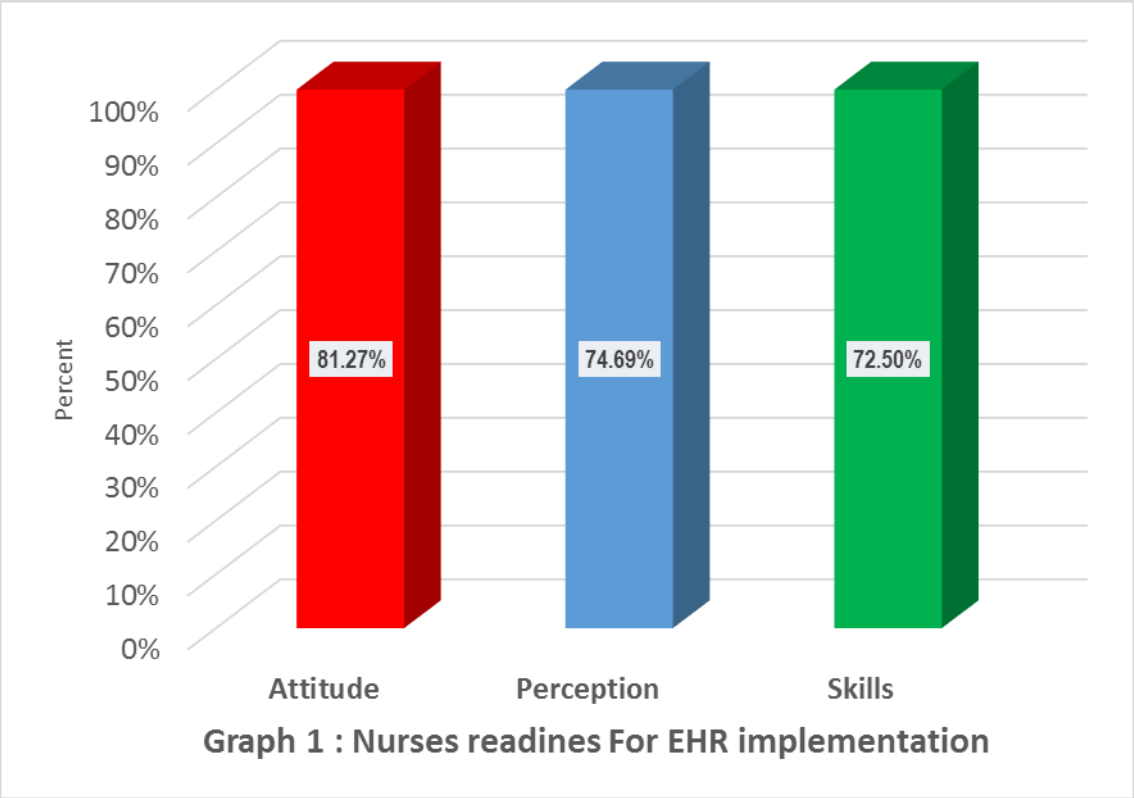
Variables	No		Yes	
	N	%	n	%
Word processing Can you Identify the basic components of the computer system?	46	11.4	356	88.6
Open & close word document.	80	19.9	322	80.1
Edit word document (data entry).	111	27.6	291	72.4
Keyboarding Alphabetic& Numeric character typing with the Arabic language.	30	7.5	372	92.5
Alphabetic& Numeric character typing with the English language.	66	16.4	336	83.6
Recognize the keys' place on the keyboard.	55	13.7	347	86.3
Identify the computer commands keys.	141	35.1	261	64.9
Spreadsheets Enter data into an Excel.	243	60.4	159	39.6
Insert columns and rows.	218	54.2	184	45.8
Internet Connection and E-mail programs Using internet resources to search for online medical literature?	51	12.7	218	54.2
Download & upload data or information.	351	87.3	106	26.4
Use-mail (e.g., creates, send, respond, use attachments).	296	73.6	110	27.4
I have not E-mailed at all.	337	83.8	65	16.2

Table (6): relation between nurse's demographic characteristics and knowledge, attitude, perception and skills

Variables		attitude	Perception	Skills
		Mean±SD	**Mean±SD**	**Mean±SD**
Age	<=40	14.16±3.51	13.44±4.18	10.34±2.73
	>40	15.94±2.46	14.73±4.31	7.99±3.92
	P value *	**<0.001**	**0.007**	**<0.001**
Sex	Male	14.57±3.13	13.88±3.90	10.52±2.68
	Female	14.69±3.54	13.70±4.54	9.00±3.55
	P value*	**0.715**	**0.675**	**<0.001**
Education	Technical diploma in nursing	14.48±3.53	13.36±4.46a	8.96±3.52a
	Associate technical diploma in nursing	14.51±3.27	13.74±3.90a	10.66±2.42b
	Bachelor degree in nursing	15.69±2.34	16.06±3.31b	10.45±3.21ab
	P value**	**0.145**	**0.003**	**<0.001**
Job	Staff nurse	14.35±3.42a	13.43±4.26a	9.86±3.10a
	Head Nurse	16.89±1.27ab	17.00±3.43b	10.67±3.12ab
	Nursing supervisor	16.06±2.57b	15.48±3.62b	8.63±4.02b
	P value**	**<0.001**	**<0.001**	**0.024**
Experience	<15 years	14.03±3.52a	13.28±4.14a	10.33±2.78a
	15-30 years	15.68±2.88ab	14.83±4.49b	8.77±3.64b
	>30	16.29±1.70b	14.79±3.87ab	7.76±4.00b
	P value**	**<0.001**	**0.003**	**<0.001**
Residence	Urban	14.79±3.47	13.94±4.43	9.55±3.37
	Rural	14.33±3.10	13.48±3.86	10.03±3.02
	P value*	**0.201**	**0.311**	**0.164**

(*) independent sample t test, ** Analysis of variance test, p value set significant at ≤0.05

Variables sharing different letters are statistically differ from each other.



Graph 1 : Nurses readines For EHR implementation

الملخص العربى

مدى استعداد الممرضين للتحول لاستخدام نظام المعلومات الإلكتروني في المعهد القومي للأورام، جامعة القاهرة، مصر

وسام أحمد ثابت فرغلي، إجلال أحمد عبدالوهاب، فاطمة أحمد عابد، رنا حمدي، نورا عاطف، داليا نجم الدين

إدارة التمريض جامعة القاهرة

الخلفية: الواقع الجديد يقتضي الاعتراف باعتماد نظام المعلومات الإلكتروني لعمليات التمريض المتقدمة وجودة رعاية المرضى. لا تولي المنظمات الصحية المصرية اهتمامًا كبيرًا باعتماد نظام المعلومات الصحية، وبالتالي فإن الاستعداد غير الملائم للموظفين يمثل تحديًا للامتثال لتطبيق نظام المعلومات البيئية. **الأهداف:** تقييم مدى جاهزية هيئة التمريض لاستخدام نظام المعلومات الإلكتروني. **المواد والطرق:** تم إجراء دراسة وصفية مقطعية في المعهد القومي للسرطان مصر، بما في ذلك عينة مناسبة من طاقم التمريض (العدد = ٤٠٢) الذين لديهم الرغبة في المشاركة في هذه الدراسة. تم استخدام استبانة طاقم التمريض المعتمدات أو استخدام نظام المعلومات الإلكتروني لتقييم الاستعداد تجاه نتائج :من بين ٤٠٢ ممرضة شاركت في الدراسة، كان أكثر من نصفهم (٥٣,٢٪) من الإناث. وكان متوسط العمر (١٠,٤٧±٣٢,٥٥) سنة ويتراوح بين (٢١,٠-٥٨,٠) سنة. غالبية المشاركين في الدراسة (٥٤,٠٪) حصلوا على الدبلوم الفني. وبلغت نسبة الاستعداد العام ٧٦,٦%، وكان لدى غالبية المشاركين في الدراسة (٨١,٢٧%) اتجاه إيجابي نحو استخدام الذكاء الاصطناعي، وكان معظمهم (٧٢,٥%) لديهم إدراكاً عالياً لاستخدام الذكاء الاصطناعي، وكان لديهم مستوى مقبول في مهارات الحاسوب (٧٤,٦٩%). **الاستنتاج:** الاستعداد العام بين طاقم التمريض أمر مشجع. تشير مواقفهم وتصوراتهم الإيجابية العالية تجاه اعتماد نظام المعلومات الإلكتروني إلى أن تنفيذه مرحب به في المعهد القومي للأورام.