DOI: https://doi.org/10.53350/pjmhs2216782

ORIGINAL ARTICLE

Knowledge and Perception of Electronic Health Record among Nurses

SAIMA RIAZ[1*], SAMINA NAZIR[1], TABASSAM ZIA[2], TAHIRA YASMEEN[3], SADIA SHOUKAT[1], WAQAS LATIF[4]
[1]*Department of Nursing, College of Nursing-Children Hospital, Lahore-Pakistan*
[2]*Department of Nursing, College of Nursing Services Hospital, Lahore-Pakistan*
[3]*Department of Nursing, College of Nursing-Doctor Hospital, Lahore-Pakistan*
[4]*Department of Biostatistics & Epidemiology, UHS, Lahore-Pakistan*
Correspondence to Miss. Saima Riaz, Email: Saim.riaz@ymail.com Tel:+92-332-8452557

ABSTRACT

Background: Proper Nursing documentation covers all aspects of health care such as assessment standards, proper diagnosis, and identification of problems, planning and implementation of interventions.
Aim: To assess the Nurses' Knowledge and Perceptions regarding Electronic Documentation.
Study Design: Descriptive cross sectional study.
Methodology: The study was conducted at Institute of Nursing University of Health Sciences Lahore Pakistan whereas the data was collected at four tertiary care Hospitals of Lahore. A Non-probability convenient sampling was used. A sample of n=310 nurses was recruited for this study. A self-administered questionnaire was filled by each participant in about 30minutes. The questionnaire included three parts such as demographic data, Knowledge questions and Perception questions. The collected data was analyzed by using SPSS version 26. Chi square ware applied with P-value< 0.05 as significant.
Results: It was found that 26.45% of the study participants had poor knowledge regarding the electronic documentations who scored less than 50% of the correct responses. 32.58% of the nurses have average knowledge and they answered 50 to 65% correct questions. 37.74% participants' nurses answered 65-80% correct and have good knowledge regarding the electronic documentation. It was also found that 78.71% of the nurses had positive perceptions regarding electronic documentation.
Conclusion: It was concluded that there was lack of proper knowledge level but the perceptions toward the electronic documentation was positive among the participant nurses.
Keywords: Knowledge, Perception, Electronic Documentation and Nurses.

INTRODUCTION

Nurses have to follow many activities and skills which can lead them to provide quality care to patients, where Documentation helps a lot in delivering of quality patients' care. All over the shift, the nurses maintain a will manage record of every individual patient. Patient record is a legal document which is considered as a protection to the rights of patients and health workers. Good documentation among nurses is very important due to so many reasons. First of all it improves the quality of patients' care, ensure the protection of Nurses and Doctors, help in outcome assessment and support the community faith in Nursing. Proper Nursing documentation covers all aspects of health care such as assessment standards, proper diagnosis, and identification of problems, planning and implementation of interventions, evaluation of outcomes and collaboration among different units and health care settings[1].

To achieve high standards of quality nursing care, all nurses are supposed to follow the principle of developing and maintaining clear and understandable documentation so that everyone can read and understand patients' status and progress. Quality of documentation is really important because nurses are not working as individual rather they are working in teams where clear communication is essential for patients' better outcomes. The team needs to have coherence and clear understanding of communication channels where they need to ensure full clear communication of patients' progress and needs[2].

According to current needs of the patients and society, nurses are also needed to have an important role in knowing the use of technology in health care. Nursing informatics system is among one of their key responsibilities to make sure a safe and sound care with high quality. In the out patients clinics, the nurses have important role in informatics to record the Temperature, respiration, blood pressure and pulse rate and can be formed as a set of data.[3] Good documentation among nurses is very important due to so many reasons. First of all it helps to improve the patients' care outcomes, ensure the protection of Nurses and Doctors, help in outcome assessment and support the community faith in Nursing. Proper Nursing documentation covers all aspects of health care such as assessment standards, proper diagnosis, and identification of problems, planning and implementation of interventions, evaluation of outcomes and collaboration among different units and health care settings[1].Computer based electronic patients record is a new revolution in patients' management in term of advanced documentation. Due to electronic health record the availability of patient's data is now easy to access anywhere and anytime with the help of computers. Especially in the develop countries like Europe, all the Public and private hospitals are well equipped with electronic health record through which they can easily access different patients' data, which is very helpful to communicate their valued information very quickly and effectively[4].

Electronic health and nursing record has benefits like it improves communication structure among different healthcare personals involved professionals to ensure the progress of care needed by the individual patients. In absence of documentation of patients plan and record, nursing care is considered incomplete which can lead to poor outcomes of health care agencies.[5,6] Electronic Health record has a meaningful use in reducing Health Disparities; ensure high safety and quality, and improving nursing care efficiency. It is also a great source of patients and family involvement in care, improved coordination which plays a role in patients' information private and confidential. Electronic health record is essential to have an improved communication, have high quality of health and nursing care, have a decline in medical errors, and to reduce the wasted paper use in hospitals. In the absence of proper training, mostly nurses are resistant to adopt electronic health record and show a negative attitude towards its implementation in health care setup. Therefore it has been suggested that nurses need such simulated training regarding electronic health record to reduce the resistance[7].

In developing countries like Pakistan, there are many hindrances to adopt a successful health information technology. Among the so many reasons, the insufficient infrastructure is a highlighted factor, which is due to lack of proper electrical system and lack of appropriate solar power system. Also the negative attitude and lack of proper IT knowledge among the health care workers is another reason of not having an established Electronic Health record in the developing countries[8]. In Pakistan, No such studies have been observed, the approach of electronic medical documentation is still in infancy period, and therefore there is still a

Received on 28-12-2021
Accepted on 05-06-2022

need to study the knowledge and perceptions of Nurses at hospitals.

The objective of the study was to assess the Nurses' Knowledge and Perceptions regarding Electronic Documentation.

METHODOLOGY

The study was conducted at Institute of Nursing University of Health Sciences Lahore Pakistan whereas the data was collected at four tertiary care Hospitals of Lahore. A Non-probability convenient sampling was used. A sample of n=310 nurses was recruited for this study. A self-administered questionnaire was filled by each participant in about 30minutes. The questionnaire included three parts such as demographic data, Knowledge questions and Perception questions. The knowledge was measured as poor Knowledge<50%, average Knowledge 50-65%, good Knowledge 65-80% and excellent Knowledge>80% correct Responses. Perceptions were considered as positive if the participants scored 18 or above on agreements scale out of 24 and Negative perceptions score less than 18 out of 24. Permission of this study was granted by the institutional Ethical Committee.

Statistical analysis: Data was analyzed by using SPSS v.26. The data is presented in the form of percentages and frequencies for different variables. The questions of knowledge and perceptions were analyzed against standards expected knowledge MCQs, Yes or No and at a Likert scale assessment.

RESULTS

Results showed that majority of the participants enrolled were females (n=301) while males (n=09) were few in numbers. Majority of the participants were below 30 years of age as shown in table-1.

Results showed that 26.45% of the study participants had poor knowledge regarding the electronic documentations who scored less than 50% of the correct responses. 32.58% of the nurses have average knowledge and they answered 50 to 65% correct questions. 37.74% participants' nurses answered 65-80% correct and have good knowledge regarding the electronic documentation. Only 3.2% study participants had excellent knowledge that scored more than 80% correct responses to the knowledge questions as shown in table-2. It indicated that 78.71% of the nurses had positive perceptions regarding electronic documentation and they scored more than 18 on agreement scale out of 24 points (table-2).

Table-1: Descriptive data of participants (n=310)

Variables	Groups	Frequency	%age
Gender	Males	09	2.9
	Females	301	97.1
Age (years)	20-25	148	47.8
	26-30	106	34.2
	Above 30	56	18
Qualification of participants	General Nursing	164	52.9
	BS Nursing	142	45.8
	MSN/MPH	04	1.3

Table-2: Overall Knowledge Score and Perception of Participants (n=310)

Variables	Groups	Frequency	%age
Knowledge Status	Poor	82	26.45
	Average	101	32.58
	Good	118	37.74
	Excellent	9	3.23
Perception Status	Positive	245	78.71
	Negative	65	21.29

Almost **81(**26.13%) participant were from medical departments, 51(16.45%) from surgical units, 54(17.42%) participants were working at ICUs, 15(4.839%) were from CCU, and 17(5.484%) participants from Emergency. Distribution of working area for nurses was demonstrated in figure-1. Table-3 indicated that the PIC was found different in terms of knowledge from rest of the three hospitals because the p value was less than 0.05 which was significant.

.

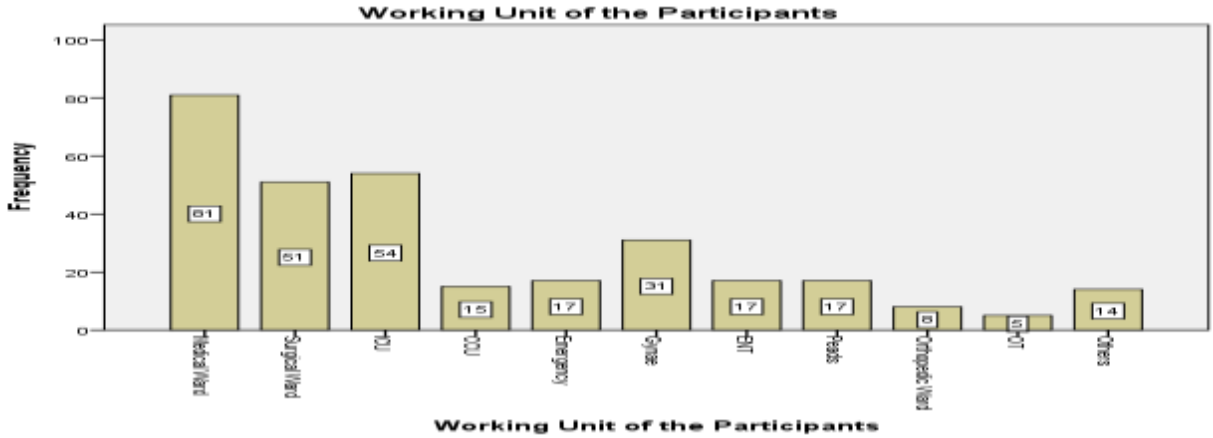

Table-3: Difference of knowledge between Individual Hospitals

(I) Hospitals	(J) Hospitals	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Services	Shalamar	.213	.198	.704	-.30	.73
	Ittefaq	.000	.198	1.000	-.51	.51
	PIC	.873*	.192	.000	.38	1.37
Shalamar	Services	-.213	.198	.704	-.73	.30
	Ittefaq	-.213	.198	.704	-.73	.30
	PIC	.660*	.192	.004	.16	1.16
Ittefaq	Services	.000	.198	1.000	-.51	.51
	Shalamar	.213	.198	.704	-.30	.73
	PIC	.873*	.192	.000	.38	1.37
PIC	Services	-.873*	.192	.000	-1.37	-.38
	Shalamar	-.660*	.192	.004	-1.16	-.16
	Ittefaq	-.873*	.192	.000	-1.37	-.38

DISCUSSION

Current study findings show that 26.45% of the study participants had poor knowledge regarding the electronic documentations, 32.58% of the nurses have average knowledge, 37.74% participants' nurses have good knowledge regarding the electronic documentation and 3.2% study participants had excellent knowledge. A similar study was found in support where 75% staff nurses had good computer knowledge, 50.8% and 30.8% had average and fair computer skills respectively.[9] Another study conducted on the current awareness about telemedicine technology reported a response rate of 361(12%). Among them 83% of them had heard about telemedicine and some considered telemedicine to be of limited interest[10].

This current study indicates that 78.71% of the nurses had positive perceptions regarding electronic documentation and they scored more than 18 on agreement scale out of 24 points. On the other hand very few participants (21.29%) had negative perceptions regarding the electronic documentation and scored below 18 on agreements scale of 24.

A previous study conducted to determine the perception of nurses about Electronic documentation revealed the favorable perception of the nurses. More than 74% of the nurses show the positive perception towards HER[11]. In contrast another study on nurses' perception regarding electronic nursing documentation reveals that 23.1% of the nurses administrator say that electronic nursing documentation is more challenging and take lot of time and effort 26.9% strongly disagree and show negative perception on the uses of electronic nursing documentation due to lack of awareness of the computer.[12] Another previous study reveals that nurses show the positive perception on the use of electronic health records but the use of this standard practice is not up to the mark[13].

According this present study, a huge majority 96.5% of the study participants said that electronic documentation is more secure and clear as compare to paper work. A similar previous study was conducted where around 63% of the nurses say that doctor's handwriting is so difficult to read so, Electronic Health Records are easy and convenient to read as it keep all records clear.[14]

In this present study it was found that a good number of nurses 25.5% strongly agreed and 62.6% agreed that Electronic Health Records facilitate improved delivery of patient education, whereas 11% and 1% disagreed and strongly disagreed respectively. On another statement that Electronic Health Record Save time, energy & reduce work burden on nurses, 54.5% strongly agreed, 43.5% agreed, and 1.9% disagreed regarding this statement. According to a previous studies, perceptions about using the EHR system showed perceiving that the data entered into the system as important for patient care, and that the system itself is integrated in nurse daily work as the top reported positive perceptions (97%, each)[15,16].

Limitations: Resources were limited with financial constrains.

CONCLUSION

It was concluded that there was lack of proper knowledge level but the perceptions toward the electronic documentation was positive among the participant nurses. In the light of above discussion, need of an hour is to have proper workshops on electronic documentations among nurses.

Author's contribution: SR&SN: Conceptualized the study, analyzed the data, and formulated the initial draft, **TZ&TY:** Contributed to the proof reading, **SS&WL:** Data Collection and analysis.

Conflict of interest: None

Funding: None

REFERENCES

1. ABELL, C. H., BRAGG-UNDERWOOD, T., ALEXANDER, L., ABELL, C. E. & BURD, V. 2015. Nurses' Knowledge and Attitudes toward Implementation of Electronic Medical Records. *International Journal of Faith Community Nursing,* 1**,** 74.
2. ABRAMSON, E. L., MCGINNIS, S., MOORE, J. & KAUSHAL, R. 2014. A statewide assessment of electronic health record adoption and health information exchange among nursing homes. *Health services research,* 49**,** 361-372.
3. ABU RADDAHA, A. H. 2017. Nurses' perceptions about and confidence in using an electronic medical record system. *Proceedings of Singapore Healthcare***,** 2010105817732585.
4. ADAMS, S. L. 2015. Nurses Knowledge, Skills, and Attitude Toward Electronic Health Records (EHR).
5. ADELEKE, I., ADEJOKE, A., ACHINBEE, M., ANAMAH, T., ZAKARI, I. & WASAGI, M. 2015. ICT knowledge, utilization and perception among healthcare providers at national hospital abuja, Nigeria. *American Journal of Health Research,* 3**,** 47-53.
6. ALIPOUR, J., ERFANNIA, L., KARIMI, A. & ALIABADI, A. 2013. Electronic health record acceptance: A descriptive study in Zahedan. *Southeast Iran. J Health Med Inform,* 4**,** 2.
7. BOWMAN, S. 2013. Impact of electronic health record systems on information integrity: quality and safety implications. *Perspectives in Health Information Management,* 10.
8. BREDFELDT, C. E., AWAD, E. B., JOSEPH, K. & SNYDER, M. H. 2013. Training providers: beyond the basics of electronic health records. *BMC health services research,* 13**,** 503.
9. BURKLE, T., KUCH, R., PASSIAN, A., PROKOSCH, U. & DUDECK, J. 1995. The impact of computer implementation on nursing work patterns: study design and preliminary results. *Medinfo. MEDINFO,* 8**,** 1321-1325.
10. BURNIE, D. J. 2010. Electronic health records documentation in nursing: nurses' perceptions, attitudes and preferences.
11. CARROLL, C., PATTERSON, M., WOOD, S., BOOTH, A., RICK, J. & BALAIN, S. 2007. A conceptual framework for implementation fidelity. *Implementation science,* 2**,** 40.
12. CHAND, S. & SARIN, J. 2017. Perception of nurse administrators regarding electronic nursing documentation. *International Journal of Research in Medical Sciences,* 3**,** 3503-3509.
13. COCHRAN-SMITH, M. 2005. Studying teacher education: What we know and need to know. Sage Publications Sage CA: Thousand Oaks, CA.
14. DOWDING, D. 2013. Are nurses expected to have information technology skills? The NHS knowledge and skills framework requires staff to have communications and computer knowledge commensurate with their roles. Dawn Dowding reports on a study to identify whether employers are conforming to this standard. *Nursing Management,* 20**,** 31-37.
15. EBRAHEM, R., EL-DIN, S., HABIB, N. & EL KHEIR, S. A. Nurses' Knowledge, Attitude and Practices of Nursing Informatics System in Outpatient Clinics of Children's Cancer Hospital (57357) at Cairo.
16. FURST, C. M., FINTO, D., MALOUF-TODARO, N., MOORE, C., ORR, D. A., SANTOS, J., SUTTON, K. & TIPTON, P. H. 2013. Changing times: enhancing clinical practice through evolving technology. *Medsurg Nursing,* 22**,** 131.