

## Effectiveness of technological skill training programme on electronic documentation among clinical nurses

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### Abstract

**Introduction:** In recent years, healthcare organizations have aimed to provide more customer-oriented services. To achieve this goal, the quality of care needs to be improved, which, in turn, requires timely access to high quality information. Health information technology, especially electronic documentation has the potential to improve the efficiency and effectiveness of health care provider's the importance of the electronic documentation in health care is well known to everybody, the role of nurses to provide clinical care; they have a valuable role in successful implementation of electronic documentation systems. Nursing practice is continuously changing, and the need for appropriate documentation to address specific areas of nursing are essential to the provision of safe and effective care. Among the most important components of patient care are communication, clinical decision making, and patient safety through the documentation. It saves time, energy and man power also easy to access. The degree of clinical nurses supports the growth of technology and champion its use in the clinical settings is based on their documentation which subsequently improves the patient care.

**Aim:** The aim of the study is to evaluate the effectiveness of technological skill training programme on electronic documentation among clinical nurses.

**Objectives:** 1. to assess the pretest level of technological skills on electronic documentation among the clinical nurses.

2. To evaluate the effectiveness of technological skill training programme on electronic documentation among the clinical nurses.

3. To associate the posttest level of technological skills with selected demographic variables among the clinical nurses.

**Methodology:** The research approach used in the study was quantitative approach by using pre experimental one group pretest and posttest research design. The study was conducted at selected hospitals with 60 samples. The Samples were selected by using convenient sampling technique. The tool used for the study was demographic variables and computer skill assessment check list was used to collect data. Data were analyzed by using descriptive and inferential statistics.

**Result:** In pretest out of 60 samples 7(12%) had high level of technological skills 15(25%) had moderate level of technological skills and 38(63%) had low level of technological skills. In posttest out of 60 samples 39(65%) had high level of technological skills 20(33%) had moderate technological skills 1 (2%) had low level of technological skills. The effectiveness of technological skill training programme mean difference score was 37.56 and standard deviation was 9.18 and paired t-test value was 31.68 which was highly significant at level of  $P < 0.05$ . There is no significant association between the posttest level of technological skills with selected demographic variables.

**Keywords:** technological skill training programme, electronic documentation, clinical nurses

### 1. Introduction

The use information systems in the healthcare domain, Its main target is to gain Electronic documentation on the other hand, changing paper-based records to electronic/computerized records, the nursing practice veer towards computerized documentation of care nursing managers turned to use the electronic records to meet their clinical, administrative and legal informational requirements. Electronic Documentation are an important issue in the context of the health sector, which includes longitudinal health care information, stored in electronic form, to support the ongoing clinical care, education and research.

Electronic Documentation provide many advantages for nurses, including medication reminders, prevent drug interactions, immediate access to patient medical history and documentation of clinical care. Nurses have an important role to provide clinical care, thus they have a valuable role in successful implementation of electronic systems. If health care providers accept these technologies, we will have a successful documentation without their acceptance and participation, all

efforts to would be ineffective. The role of manpower readiness is a critical factor for the success implementation of electronic documentation beside, nursing- as the focus of care-has an important effect to implement information systems.

The aim of the electronic documentation includes (1) Improving the health care quality. (2) Preventing the medical errors. (3) Reducing the health care Cost. (4) Increasing the administrative efficiencies. (5) Decreasing the pepper work. (6) Expanding the access to affordable care. The electronic documentation also helps to provide better quality acre through availability, accessibility, and accuracy of data. Electronic documentation is highly dependent on information systems in the field of healthcare. Clinical nurses should possess the high technological skills on their documentation to provide safe and effective patient care.

### 2. Need for the study

Nursing practice is continuously changing, and the need for appropriate documentation to address specific areas of nursing are essential to the provision of safe and effective care.

Among the most important components of patient care are communication, clinical decision making, and patient safety through the documentation. It saves time, energy and man power also easy to access. The degree of clinical nurses supports the growth of technology and champion its use in the clinical settings is based on their documentation which subsequently improves the patient care.

Mahdi *et al.* (2014) the most positive attitude towards implementing electronic documentation was improving quality of health care services (86%) and improving the documentation (81%) and the most negative attitude was endangering work position (42.4%), increasing workload and time wasting (49.8%) and endangering information confidentiality and security (54.6%) As the results showed, to concern about information confidentiality and security, to increase the workload and costs was common negative attitude in all studies. Also, to make prevention of duplications and to improve quality of documentation were the most positive attitude. According to findings, the majority of nurses are of the opinion that electronic documentation Complicates service delivery therefore it may reduce motivation and trust to the system.

Casey & Wallis (2015) conducted a study on Acquiring informatics skills and demonstrating those competencies facilitates among the among 100 nurses to practice using informatics knowledge Experimental research design was used. He concluded that Nurses must understand how to access the right information at the right time: how to retrieve, store, and utilize information in order to make the correct decisions. Fundamentally, this is the core of nursing documentation.

Merriam Webster (2012) the development, implementation, and use of technology are integral to the practice of nursing. However, the use of technology in practice creates new educational needs for nurses in regards to possessing knowledge, behavior, and skills for practice. It is important that nursing professionals and other healthcare providers are educated and competent in the proper use of technology as applies to the various disciplines in healthcare. To be competent is to possess specific behaviors, knowledge, skills, and capacity within defined areas. Nurses, especially, must possess competence in nursing practice to provide safe and effective patient care

Hobbs (2012) indicated that healthcare providers have a few interests to use computers, but there is a positive correlation between their knowledge and attitude towards the use of computer

Hier *et al.* (2011) reported that using of computer by healthcare providers was 59.5% at home and 86.75% at work and using of Email was 88.2%(12). In the same study of Jebraeily *et al.* (2010) <sup>[1]</sup> clinician's use of computer was 55.4% at home and 53.6% at work and the use of Email and WWW was 59%. In Jebraeily's study the highest mean of computer skills by clinicians was Microsoft Word skill(75%) and the Microsoft Access skill was the lowest (40%)(1). The comparison of these studies showed that the mean ICDL skills (especially, Microsoft Word and Access) of nurses in this study is lower than of Hier and Jebraeily's study. In the research of Hostgaard and Nohr (2004), reported that nurses have less experience to use computer (15.6%) (8)

Jebraeily *et al.* (2010) <sup>[1]</sup> showed that nurses` level of computer skills was 53.4% (1). In this research, we found that

nurses` level of computer skill was 43.4%. This level is less than of Jebraeily *et al.* study and higher than of Hostgaard and Nohr study. Given that nurses dealing with computer in environments with information systems, it is necessary to improve their skills in this area, particularly in skills such as MS Office. Regarding knowledge about electronic documentation on average, the nurse's knowledge level was 51.2%. In Jebraeily *et al.* were 64%

Moody (2010) in a study that surveyed nurses` perceptions, attitude and preference on electronic documentation stated that nurses believe the documentation is a care facilitator (81%), improves clinical documentation (75%), threatens information confidentiality (54%) and increases workload (66%). In this study nurse believes that EHR improves clinical documentation (76.8%), threatens information confidentiality and security (81.4%) and increases workload (46.6%).

Amatayacul (2010) believe that to assess readiness of healthcare providers for implementing EHR, their computer skills, knowledge and attitude should be surveyed Terry and colleagues (2008) showed that the readiness of healthcare providers is related to their computer skills and knowledge about EHR. They stated that physicians, nurses and other providers who have high computer skills would welcome the implementation of electronic documentation

### 3. Statement of the problem

Effectiveness of Technological Skill Training Programme on electronic documentation among Clinical Nurses

### 4. Objectives

1. To assess the pretest level of technological skills on electronic documentation among the clinical nurses.
2. To evaluate the effectiveness of technological skill training programme on electronic documentation among the clinical nurses.
3. To associate the posttest level of technological skills with selected demographic variables among the clinical nurse

### 5. Hypothesis

There is a significant increase in the level of technological skills after receiving the technological skill training programme on electronic documentation than before among the clinical nurses.

### 6. Methods and materials used

The research approach used in the study was quantitative approach by using pre experimental one group pretest and posttest research design. The study was conducted at selected hospitals with 60 samples. The Samples were selected by using convenient sampling technique. Explained the study samples and got consent from the samples. Technological skill training programme was given for 3 days. The tool used for the study was demographic variables and computer skill assessment check list was used to collect data. Posttest was done by using the same tool. Data were analyzed by using descriptive and inferential statistics.

### 7. Results

In pretest out of 60 samples 7(12%) had high level of technological skills 15(25%) had moderate level of technological skills and 38(63%) had low level of technological skills. In posttest out of 60 samples 39(65%) had

high level of technological skills 20(33%) had moderate technological skills 1 (2%) had low level of technological skills. The effectiveness of technological skill training programme mean difference score was 37.56 and standard deviation was 9.18 and paired t-test value was 31.68 which was highly significant at level of  $P < 0.05$ . There is no significant association between the posttest level of technological skills with selected demographic variables.

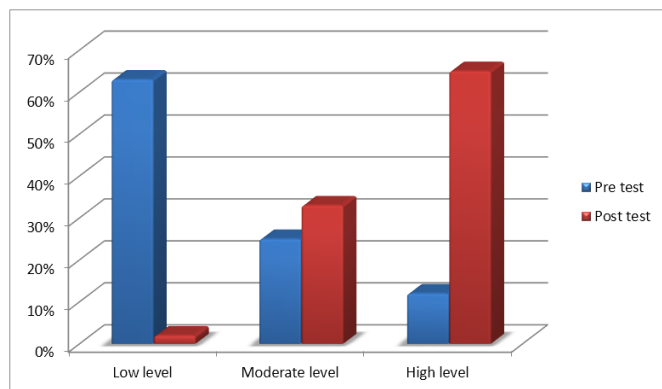


Fig 1

## 8. Conclusion

The study concludes that the technological skill training programme on electronic documentation used for improving the nursing computer skills increase the adaptation, moving forward to improve from knowledge phase to implementation and confirmation phase through electronic documentation which leads the clinical nurses to provide better evidence based quality care to the patients. Much like stethoscope electronic documentation is an essential tool to proving the best nursing care for the patients. Preparing the clinical nurses to utilize this tool to accomplish the highest level of competency care in their clinical area.

## 9. Recommendations

The similar study can be done on the larger scale. The similar study can be conducted by using true experimental research design. Comparative studies can be done between nursing and other health care professional.

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