Intelligent Patient Education: Saving Time and Increasing Nurses Efficiency

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Editorial

Abstract

Background: Patient education completes value chain process in presenting therapy and care services to patients. Thus, it is necessary to use the latest technologies in patients' education. The present study aims to design an educational software to provide the verified scientific, educational and care data of the patients.

Methods: The software is performed in three stages: 1- Formation of databases including the nursing care based on the latest educational and care standards 2- Design an intelligent software to present care education based on nursing process 3- For pilot study, the relevant software is installed on some systems and it is used in at least three hospitals.

Results: The mentioned software presents valuable data in accordance to the needs of patients. Some of the advantages of this software include: Customization of education as their reading is easier; Simplicity of use with software can increase the availability of data for the patients; This software helps the nurses to guide the patients to receive the trainings in each stage of care process.

Conclusion: Implementation of intelligent education system of patient reduces the frequency of visit to health centers and unnecessary admissions and this effectiveness cost of this system can save time and energy of disabled patients and increase the efficiency of nurses.

Keywords: Patient education, Electronic, Nursing, Intelligent

Introduction

Today, one of the practical applications of technology is consistency of specialized knowledge with information technology in health sector. Since 1960, the computer experts have determined that computes with high speed to perform the complex commands can help the physicians in diagnosis and treatment of diseases (schoof, 2014).

Now, some software including MYCIN, ABEL, CASNET have presented consultation in infectious diseases, eye diseases, etc. and it is useful in clinical decision making for diagnosis and treatment of diseases. Patient care is not an exception and with the development of technology and information systems, care services are presented effectively to the patients and their family. Despite the significance of this issue, there is no software to present consultation to nurses

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or patients in our country. Thus, the design of such system is useful for the patient and users and can help the nurses for decision making in care services (Adrian, 2015).

The patient education completes the process of value chain in presenting therapy and care services to patients. Thus, it is necessary to take benefit of the latest technologies to present the services.

Today, based on the shortage of skillful nursing force and increasing requirements of society to specialized services of nurses and high quality services, we need to design an information system based on the required skills to present consultation and educational services independently (Robert, 2011). Despite this fact that in our country, the performance of nurses on education and care decision making is based on traditional methods, accepting the formation of nursing information system in future to use nursing knowledge as systematic to transfer a part of decision making to decision making technologies to respond the increasing demands of patients can lead to some changes in this regard. In 2004, in three educational hospitals in Greece (Athens), software was designed based on the standard information systems in diagnosis, planning and implementation of nursing actions and the results were analyzed (Robert, 2010). This study was carried out on 120 admitted patients and nurses of hospital. After the software installation and its use by the participants (1.5 hour), they were asked to complete a questionnaire regarding the access to the required information, their update nature and system speed. The results showed that according to the majority of users, this software was easy to use and their required data were provided (Krames, 2009). The present study aimed to design educational software to provide and verified scientific, educational and care data of patients.

Methods

The main purpose of this study is the design of web-based educational software in some special diseases to provide the verified

scientific, educational and care data in according to the demands of the patients.

The special purposes of the study include the followings:

- Using standard diagnosis of nursing with the collaboration of experts and NANDA and NIC systems and their formation based on nursing process

- The increase of self-care of patients

- Reduction of work load of nurses

- The increase of quality of education and reduction of error

In this study, the software design is performed in three stages:

1- Formation of database including the medical diagnosis and nursing care (first phase: Diabetics, heart and blood pressure) based on the latest care and educational standards and survey of professional experts and cares coding.

2- The intelligent software design to present care education based on nursing process (assessment, problem diagnosis, planning, care and evaluation)

3- For pilot study, the relevant software is installed on some systems and it is used in at least three hospitals. The method is user-based.

The participants of the study are 30 nurses and patients.

The nurses and patients are invited to work with the software. After giving the required education, the participants are asked to give explanations to the administrators regarding the method to work with the system and the probable problems. Each user responds the questions on content and application of software. A questionnaire was provided by the researchers including the questions of the presented information, language, relevant images, educational quality and its process by the patient and nurse, the method of presenting the system guidance and the effect of the presented information and the motivation of the users for re-use of the system and demographic data of the participants.

All participants are asked to complete the questionnaire in the first time after working

with the system. Some of the required data in the questionnaire include as follows:

User's demographic data: Effectiveness of the system performance as the data entry time, data loading time, information management and easy to use with control panel of the quality of presented data by the system.

The language of existing data in the system and easy perception

Some of the ethical issues considered by the researcher include:

- All participants participated in the study based on their personal satisfaction.

- Explanation was given regarding different aspects of study.

All participants can leave the study environment at any time.

Results

The patients' education is one of the concerns of nurses. The mentioned software presents valuable data in accordance to the demands of patients. Some of the advantages of this software include:

- Customization of education as their reading is easier.

- Simplicity of use with software can increase the availability of data for the patients.

- This internet-based software helps the nurses to guide the patients to receive the trainings in each stage of care process.

For easy use of this software, the nurse or patient dedicates less time for learning the methods.

Discussion

The implementation of intelligent system of the patient education reduces the frequency of visit of patients to health centers and unnecessary admissions and effectiveness costs of this system can save time and energy of disabled and the efficiency of nurses is increased (Kish- Doto, 2014). This study attempts to introduce an intelligent system of patient education for further studies.

Conflict of Interests

Authors have no conflict of interests.

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