# Applications of Information Technology in Nursing During 2005-15: Evidence from Iran

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**Abstract.** In this ever-changing health care environment, nurses employ technologies and information systems to accomplish the intentions of the practice of nursing. Information technology supports the basic and advanced nursing practices in all settings. This review provides evidence about applications of information technology in Iranian nursing. We systematically searched all papers about applications of information technology in nursing in Iran that were indexed in SID, Magiran, Iran medex, PubMed and scopus databases. This study indicated that 12 (%52) studies used information technologies in the nursing education domain. Also, in 6 (%26) studies telenursing was used for patient care. 3 (13%) of the articles were related to the impact of the use of computer-based information system on nursing practice. In 2 (%9) papers the researchers developed computerized software for nursing processes. The results of this study indicate the use of information technology in nearly every aspect of nursing in Iran.

**Keywords.** Information Technology, Nursing, Systematic review

## 1. Introduction

Nursing, one of the most important roles in all health care setting, is also affected by information technology [1]. Information Technology supports the basic and advanced nursing practices in all settings [2]. Caring and technology must go hand in hand to assist forthe management and processing of nursing data, information, and knowledge to support the practice of nursing and the delivery of nursing [3,4].

Hence, the objective of this study is to systematically review studies about applications of information technology in Iranian nursing.

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## 2. Methods

We systematically searched all English and Persian papers about applications of information technologyin nursing in Iran that were indexed in SID, Magiran, Iran medex, PubMed and scopus databases from January 2005 until Aug 2015. A data collection form was designed to extract required data, such as types the authors' names, year of publication, study population,type of study, type of information technologies, application of health information technology.

## 3. Results

In this study, 23 out of 2343 retrieved articles were selected as relevant and reviewed by the authors. All results were screened so that the year of publication was between 2005 and 2015.The Study population consisted of nurses, nursing student, and patients.The principle potential study designs included analytical-descriptive, developemental, prospective, quasi-experimental, randomized clinical trials (RCT) .

This study indicated that 12 (%52) studies used information technologies such as simulations, e-learning, educational software and tele-education in the nursing education domain. Also, in 6 (%26) studies telenursing was used to track patients and adherence to thetreatment planviaTelephone and Short Message Service. It was mentioned that telephone follow-up was more efficient. 3 (13%) of the studieswere related to the impact of the use of computer-based information systemon nursing practice. In 2 (%9) papers the researchers developedcomputerized software for nursing processes.

## 4. Discussion

Overall, the results of this study indicate the use of information technology in nearly every aspect of nursing in Iran, including, nursing education, better doing the tasks, promoting nursing skills, making appropriate- timely decisions, providing a persuasive and effective tool to track patients. Despite the various utilization of information technology in nursing education, a limited number of methods has been used to develop application of nursing processes in Iran.

It is suggested that further studies to be conducted concerning the design and development of the computer softwares for nursing process and care planning at health care centers.

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