Information seeking and retrieval skills of nurses: Nurses readiness for evidence based practice in hospitals of a medical university in Iran

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ABSTRACT

Background: With the explosion of medical information, and emergence of evidence-based practice (EBP) in healthcare system, searching, retrieving and selecting information for clinical decision-making are becoming required skills for nurses.

Aims: The aims of this study were to examine the use of different medical information resources by nurses and their information searching and retrieving skills in the context of EBP.

Method: A descriptive, cross-sectional study was conducted in four teaching hospitals in Iran. Data were collected from 182 nurses using a questionnaire in 2014.

Results: The nurses indicated that they use more human and printed resources than electronic resources to seek information (mean = 2.83, SD = 1.5; mean = 2.77, SD = 1.07; and mean = 2.13, SD = 0.88, respectively). To search online resources, the nurses use quick/basic search features more frequently (mean = 2.45, SD = 1.15) than other search features such as advanced search, index browsing and MeSH term searching. ($1.74 \leq$ mean ≤ 2.30, SD = 1.01). At least 80% of the nurses were not aware of the purpose or function of search operators such as Boolean and proximity operators. In response to the question measuring skills of the nurses in developing an effective search statement by using Boolean operators, only 20% of them selected the more appropriate statement, using some synonyms of the concepts in a given subject.

Conclusion: The study showed that the information seeking and retrieval skills of the nurses were poor and there were clear deficits in the use of updated information resources. To compensate their EBP incompetency, nurses may resort to human resources. In order to use the

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latest up to date evidence independently, nurses need to improve their information literacy. To reach this goal, clinical librarians, health information specialists, nursing faculties, and clinical nurse educators and mentors can play key roles by providing educational programs. Providing access to online resources in clinical wards can also encourage nurses to learn and use these resources.

1. Introduction

Worldwide evidence-based practice (EBP) has emerged as an important initiative in healthcare system [1]. EBP highlights a shift among healthcare professionals from a traditional practice to the best research-based practice [2]. EBP in nursing is the procedure of clinical decision-making by nurses using the best research evidence, clinical expertise and patient values [3].

EBP has been recognized as the gold standard for delivery of compassionate and safe care as well as promoting excellence in nursing care [2]. It has also been suggested as an essential skill for nurses in the 21st century [4]. Nurses spend considerable time and efforts providing healthcare and have a central role for determining and implementing acceptable standards of clinical nursing practice [5]. With the high amount of healthcare information produced every day, finding, retrieving and using existing evidence is a major concern for nurses. They are under pressure by professional expectations and policy makers to use information and scientific evidence to support their clinical judgment and decision-making [6] as well to provide accurate information to patients and their families [2].

Despite the exploding availability of healthcare information and the ongoing pressure by authorities, application of research-based evidence in nursing practice is limited [5,7,8]. A number of barriers to nurses' use of research evidence in practice have been identified by studies addressing nurses' EBP [9–11]. The most important barriers include information overload; lack of knowledge, skill or experience with the resources or respective technology; complexity of electronic information resources, and organizational procedures and policies; lack of value for research in practice; and difficulty in accessing or understanding research materials. Studies addressing EBP showed that healthcare providers do not use electronic resources such as online databases very often, even though access to electronic resources has been increased. They tend to seek professional information from human resources such as colleagues, doctors, superiors and other healthcare providers [1–3,9,12–19].

In order to implement EBP effectively, information literacy would be a pre-requisite. Hence, nurses need to develop their information seeking and retrieval skills to be able to attain relevant and accurate information required in their practice [10,12,20]

Majority of the studies addressing nurses' EBP mainly focused on nurses' use of information resources and barriers of information seeking, while only a few have adequately investigated their information searching skills, such as use of various search features, and formulation of correct search strategies. In Iran, traditional practice of nursing and the theory-practice gap are major challenges in healthcare system [21]. In addition, there are also limited studies on nursing information seeking and retrieval skills, and the appropriate strategies for implementing EBP in nursing practice. For EBP to become widespread in reality and research results to be implemented and adapted in daily practice, the first necessary step would be a comprehensive assessment of the current situation. The results can help to highlight potential drawbacks on both personal and organizational levels and to encourage required initiatives to promote EBP.

The aims of this study were to examine (1) the extent to which nurses use different medical information resources, (2) their information searching and retrieval skills and (3) their awareness and skills to use different search operators, in the context of EBP.

2. Methods

2.1. Study design and setting

This descriptive cross-sectional study was conducted at four referral teaching hospitals affiliated with Kerman University of Medical Sciences in Kerman, the largest city in Southeast Iran, from January to April 2014. The implementation of healthcare policies is centralized in Iran [22] and the ministry of health governs all hospitals. Therefore, the distribution of healthcare providers is similar in all hospitals around the country.

All four hospitals in this study have medical libraries available to all employees and provide access to printed indices and electronic databases, such as MEDLINE and CINAHL. Moreover, all employees can access online resources in hospitals' computer sites. One hospital also provides access to the recent printed nursing journals. There is no online access to resources in clinical wards.

The target population was all nurses employed at the time of data collection ($n = 730$). The sample size ($n = 195$) was determined based on the Cochran formula ($d = 0.06$, $\alpha = 0.05$). Nurses were eligible for the study if they had an academic degree of nursing and worked more than 1 year as a nurse. We used proportionate simple random sampling (based on the proportion of eligible nurses in each hospital and clinical ward) to recruit participants. Therefore, from the populations of 242, 238, 140 and 110 nurses in four hospitals, 64, 63, 39, and 29 nurses were enrolled respectively.