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CHALLENGES OF EVIDENCE-BASED NURSING AMONG IRANIAN NURSES

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ABSTRACT

Internet and web-based technology have provided new opportunities for the education, research, and professional development of nursing. This study seeks to identify barriers to the use of evidence based information resources by nurses after the introduction of information technology. Participants in this study were the nursing staff of health care institutions of Semnan province in Iran. The mean score of staff attitudes about lack of skill was 2.29 and about environmental factors was 1.81. It seems that regular broad organizational approaches such as organizational culture, information literacy culture, and evidence-based practice can facilitate the use of quality information.

INTRODUCTION

Information technology can affect the health status of communities in two ways, both directly and indirectly. It can directly improve the quality of health services provided to individuals and support disease prevention activities. In addition, it can indirectly affect different items such as the household economic status and social infrastructures. The use of information technology in the health system has significant benefits, for instance it can increase the access to information and up-to-date resources of Medical Sciences for health care professionals [1]. In our country, health care organizations have made some efforts to highlight the impact of Information and Communication Technology on the overall improvement of health related issues. Hence, the health sector has proposed strategies in the form of a national strategic plan for developing the utilization of information and communications technology in health. Moreover, lack of specific objectives for the utilization of new technologies, superficial use of technology, and lack of sufficient awareness of information technology capabilities are considered as some weaknesses in the country [2]. Thus, in order to solve the mentioned problems and to extend the application of information technology in the health sector, it seems necessary to promote the best technology-based practices and select appropriate targets. In the meantime, understanding the potential impact of information technology on health services can be considered as a basis for strategic planning.

In the field of health services, nursing jobs are an important link in the chain of patient care services, because nurses are often considered as coordinators as well as suppliers of patient care [3,4]. Nursing system, like other branches of the health care system, has undergone changes caused by the development of health information and communication technology [5,6]. Internet and web-based technology have provided new opportunities for the education, research, and professional development of nursing [7-9]. However, the findings of several studies conducted at the international level indicate that nurses, compared with other professionals particularly physicians, are less interested to use web-based technologies and information resources available in the internet [10,11]. In today's world, we are observing many innovations and rapid changes in the field of health care [12-14]. Clinical team and especially nurses, that have a critical role in the provision of care for patients, must keep pace with the latest developments made on clinical care and keep their clinical information updated. Research has shown that the nurses who carry out their actions based on scientific evidences are able to make better choices, provide care services with a higher quality, reduce the duration of hospital stays, and decrease the related costs; in other words, they provide better cost-effective services for patients and organization. In addition, such nurses are able to be professionally more responsive to the patients and thus they are more confident and have a stronger professional identity [15,16]. Research has shown that several factors such as lack of time, lack of access to resources, lack of financial support, traditional thoughts, lack of knowledge, as well as lack of management and physicians support hinder the use of updated sources of information by the nurses [15,17]. According to another research, some factors such as lack of applied nursing research, lack of enough time, and lack of organizational support are among the main obstacles to the use of information resources by nurses [18,19].

In recent years significant changes have been made in the field of nursing in our country, among which we may note the followings: holding computer skills training (ICDL) courses for nurses in order to promote and improve the computer literacy skills of nurses and to use electronic resources in the health care environment; holding weekly science seminars in hospitals; increasing nurses access to nursing professors and students which act as information resources available in the clinical environment; reduction of the workload of nurses in teaching hospitals due to the cooperation of students and teachers to treat patients; reduction of working hours of nurses to 8 to 24 hours per week [20-22], and establishing internet sites in hospitals. Taking into consideration the above mentioned items, a series of obstacles that have been reported by nurses in previous studies in Iran are expected to be eliminated. Due to changes in the field of nursing, it is expected to have a raise in nurses' access to the best clinical information so that they could

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have the opportunity to utilize the research-based information in their clinical decisions. Therefore, it is necessary to investigate the quality of information resources used by nurses in the clinical setting. The question is that, taking into account the existing facilities in the health care environment, what sources of information can nurses utilize? This study seeks to identify barriers to the use of evidence based information resources by nurses after the introduction of information technology.

METHODS

Sample and setting

Participants in this study were the nursing staff of health care institutions of Semnan province in Iran. The research was conducted from July 2015 to April 2016. Census sampling was used in this study. A total of 485 questionnaires were distributed; 392 were returned, which represented a response rate of 80.8%. A covering letter was prepared for distribution with the survey document, which described the purposes of the study and explained that a response to the survey would indicate the consent of the participant to take part in the research. It also assured participants of the confidentiality of their responses.

Measures

The questionnaire used in this study was developed by the authors, after reviewing related literatures. It was divided into four sections. The first section focused on demographic information (sex, age, work experiences, computer course and education). The second section comprised a scale to measure the attitudes of the participants in relation to environmental barriers in their organization such as access to human resources and care plan, lack of access to scientific literatures in clinical settings and lack of permit to change care plan. The third section measured lack of skill of the study subjects such as inability to understand scientific literatures, lack of skill to search of literatures, lack of skill to use of library, lack of skill to use of databases, lack of skill to use of internet and the four section evaluated the study subjects' believes such as lack of belief to evidence based practice and the impact of scientific results on patient care. The attitudes on each item were measured on a 3-point Likert type scale, where disagree=1, no disagree and no agree=2 and agree=3. The primary questionnaire was reviewed for content validity (through the content validity index (CVI)), and evaluated by 10 experts, who offered feedback in relation to the simplicity and clarity of questions, and the relationship between questions. Then the questionnaire pilot tested on 32 staffs, randomly selected from all the health care institutions. Based on their responses, further revisions were made and some items rephrased. Cronbach's alpha coefficient was used to check the reliability of scores on the individual items that measured attitudes. The coefficient was 0.812.

Procedure

The final version of the questionnaire was distributed among the participants. Those who had been included in the pilot testing of the instrument were excluded from the study. Questionnaires were self-administered, completed anonymously, and returned to the researcher within 72 hours.

Data analysis

Kolmogorov- Smirnov test indicated that data distribution was normal. Means and standard deviations were calculated for individual items on the attitude scale, which measured participants' attitudes towards the barriers. A total attitude score for each of the section was calculated based on the mean scores for each of the items (low score ≤2; high score >2). A low score indicated a negative attitude, while a high score indicated a positive attitude. Correlation test was used to analyze the data.

RESULTS

[Table 1] shows the study subjects' demographic characteristics.

Table 1: Participants' characteristics

Characteristics	Groups	N	%
Age (Year)	*25.5±8.4		
Work experiences (Year)	*9.25± 8.8		
Sex	Female	250	77.2
	Male	73	22.8
Education	Bachelor degree	354	90.4
	Master degree	33	8.4
	PhD	5	1.3
Computer course	Yes	136	34.5
	No	236	65.5

*Mean ±SD

The mean score of staff' attitudes about lack of skill was 2.29 and about environmental factors was 1.81. [Fig. 1]

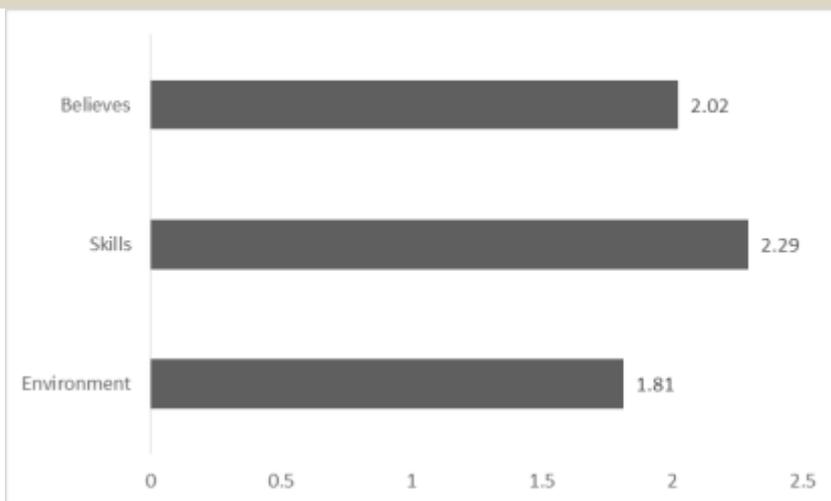


Fig. 1: Mean score of the study subjects' attitudes towards barriers

DISCUSSION

The results of the study showed that more than half of the studied nurses attended training courses on working with computers and searching the databases, however, the nurses and nursing students had little interest in the use of electronic journals and databases such as Pubmed. The results of other studies are consistent with the findings of this study. They found that journal articles and research papers were rarely used as sources of information [23-25]. Moreover, Koivunen, Valimaki & Hatonen found that nurses working in psychiatric hospitals had dramatic defects in the use of the Internet and databases [26]. The findings of the present study are also consistent with results of a study by Dee and Stanely [27]. They found that nursing students, compared with the nurses, were more interested to use electronic databases. Studies have shown that electronic databases have a vital role in the clinical setting and could help decision-makers in public health issues and are also effective in patient survival [28]. The results indicate that the role of clinical librarians in hospitals is neglected. This is widely accepted that evidence-based practices and skills of students can be developed by information specialists and librarians; such practices and skills become significant when the students enter into clinical fields [29]. According to the results, some of the nurses believe that online resources do not contain reliable and credible clinical information. As a result, online resources are not an ideal source of health information for them. However, it seems that these resources can be helpful to identify the information-seeking behaviors of the studied subjects.

The results showed that the problem with understanding the scientific literature was a major hurdle for the subjects. The results of Bertulis' study is consistent with the findings of this study. He found that the structure of research papers and statistical language may also be among the barriers to the use of electronic resources [30]. In general it is believed that improving the critical thinking skills, understanding the language of the research, interpreting research findings, and forming research based working groups and journal clubs can be among the useful strategies. In addition, this approach may motivate nurses and nursing students to utilize high-quality information for making their clinical decisions [20].

The results showed that lack of trust in evidence-based practices and in the impact of scientific findings on patient care in the clinical setting is a major obstacle for students and nurses. The results suggest that poor information literacy of nurses plays a major role in the formation of this manner of thinking. The results of Formoso and et al's study are consistent with the findings of the present study. They indicated that such an attitude is effective in the use of electronic information resources. In addition, they found the culture of information literacy should be promoted among nurses [31]. In other words, organizational plans and commitment to create a good culture of information literacy could affect the successful implementation of evidence-based nursing care [32].

This study indicates nurses have become accustomed to a specific structure. It was a pre-defined framework that was based on the use of partners' comments. It is now widely accepted that the change from the current practice to evidence-based nursing practice is faced with resistance, and nurses are reluctant to use research-based information sources. It seems that regular broad organizational approaches such as organizational culture, information literacy culture, and evidence-based practice can facilitate the use of quality information and affect the behavior of nurses.

CONFLICT OF INTEREST

None

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FINANCIAL DISCLOSURE

None

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