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Nurses' attitude towards using research results in clinical practices of ICU units in educational hospitals

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ABSTRACT

Aims: Nowadays using research results is an important issue in nursing and it is linked to the quality improvement. Although in developed countries, professional nurses are trying to establish their practice based on research evidences, nursing care is a routine-oriented practice in Iran. Since for changing every kind of people's behavior we need to know their attitude towards that issue, this study was conducted to determine nurses' attitude towards using research results in clinical practices.

Methods: In this descriptive study, 234 ICU nurses of educational hospitals in Ardebil Medical Sciences University have been selected through census method in 2013. A two-part researcher-made questionnaire was used to measure the attitude. The first part measured demographic information and the second part measured the attitude towards research. Data analysis was done by using $SPSS_{18}$ statistical software and descriptive and inferential statistical tests.

Results: The results indicated that 69.2 percent of the samples had positive attitude and 27.4 percent had neutral attitude and 3.4% had negative attitude towards using research results in clinical practices. There was a significant statistical relationship ($p<0.05$) between level of studying clinical articles and the working ward with the mean of attitude score.

Conclusions: Most of the nurses have positive attitude towards using research results in clinical practices. Therefore designing some mechanisms for providing the conditions of using research results such as easy access to publications and introducing information resources is an effective step in implementation of research-based cares.

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1. Introduction

Conducting researches and using their results is one of the important and significant aims of health care professions. Therefore we need some methods to enable people to use results of the researches in practical activities. It has been frequently pointed out during the recent 20 years that nursing should be a research-based profession. This important issue needs using research results in nursing practices [1]. Kilen and Barn fader considered being

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skillful in research-based practices as one of the essential elements and as a criterion of qualification for those who are working in health profession in order to provide high quality cares; they believe that research-based practice is an effective practice and it leads improvement of patients' care outcomes [2]. Research-based care is promising movement towards high level of care [3].

Nurses are the biggest group of providing healthcare services and they play an important role in continuity of care, promotion and maintaining health in different levels of the health care system [4]. Therefore it is necessary for them to be aware of the present evidences regarding healthcare in order to use research results in this regard [5]. Nowadays using research results is an important issue in nursing and it is linked to the concept of quality improvement [6]. Using research results in nursing practice is a way for developing the profession, refining and expanding nursing knowledge base [7]. Krugman considered using researches results as one of the most important methods of empowering nursing and he believes that in the case of using research results, uncertain and traditional practice will be removed and care standards and nursing services quality will be improved by replacing a safe and certain care [8].

Findings indicated that large amount of nurses' knowledge was old in nurses who were older that forty years old, and cares with such old knowledge can't have high quality and good results [9].

Lack of adequate facilities for implementing research results, lack of adequate time for studying research results, lack of managers' awareness of the importance of research-based cares, lack of providing enough equipment, lack of holding conferences and seminars and lack of necessary and adequate skills in nurses for searching and using research evidences are reported as the barriers of performing research-based cares in Iran [10].

The necessity of providing nursing cares in complicated and hard conditions especially in ICU indicates the complexity and importance of clinical decision making in these wards. Considering that nurses who are working in ICU are responsible for providing specialist cares for patients who are suffering from severe problems in vital organs [11], providing high quality care, which are according to the standards is more important in these wards [12], for providing any kind of change in the people's behavior their attitude towards the issue should be considered. Being aware of people's attitude makes it possible to change their attitudes from a negative one to an appropriate one in the case of having negative attitude and it's an effective step in providing high quality nursing services. Therefore, this study is done with the aim of assessing nurses' attitude towards using research results in practices.

2. Methods

This descriptive study was conducted in 2013. Study population included all the nurses working in ICUs of educational hospitals of Medical Sciences University of Ardebil, who had bachelor and higher degree in nursing. 234 nurses were selected through census method. Inclusion criteria included; working in ICUs, having bachelor degree or higher in nursing and exclusion criteria included; lack of filling questionnaires by the samples of the study. A researcher-made questionnaire was the data collection tools, which included two parts:

The first part was consisted of demographic information including eight questions about age, gender, marital status and educational and professional information.

The second part of the questionnaire included seventeen questions that measured nurses' attitude towards research and using research results in clinical activities. Answers criterion was according to Liker scale; never (0), a little (1), I have no idea (2), much (3) and very much (4). Scoring questions with positive sense was from zero to four and scoring questions with negative sense was done in reverse order. The total score of every

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Table 1: Nurses' attitude towards using research results in clinical activities

Attitude towards using research evidences	Number	Percent
Negative	8	3.4
Indifferent	64	27.4
Positive	162	69.2
Total	234	100
Average	2.7280	
Standard deviation	0.55662	

questionnaire was four. Positive attitude included score higher than 2.5, neutral attitude 1.6-2.5 and negative attitude 0.5-1.5.

Content validity method was used for assessing validity of the tools; after library studies and translating several articles regarding the topic of the study, the questionnaire form was prepared and was given to some of the professors. Opinions and suggestions of the mentioned board led to the final form of the questionnaire. Chronbach's alpha method was used in this study for measuring reliability of the questionnaire. Before the beginning of the study, the questionnaire was given to twenty people who had the characteristics of the subjects of the study. After filling the questionnaires, data were entered in SPSS 18 statistical software and Cronbach's alpha coefficient was calculated (α=0.78).

Data analysis was done through SPSS 18 statistical software. Descriptive statistic was used for describing demographic variables and attitude score and variance analysis and independent t-test were used for assessing their relationship with the mean of attitude score.

Table 2: The relationship between the attitude score and the amount of nurses' studying of scientific articles

The amount of study	Frequency	Attitude score average	Standard deviation
Daily	5	2.3059	0.57994
Weekly	26	2.7217	0.57354
Monthly	48	2.6045	0.38400
Rarely	139	2.5116	0.40367
Never	16	2.2136	0.37579
Total	234	2.5333	0.43489

df=4, F=3.916, p=0.004

Independent t-test was used for assessing relationship of two-level variables such as education level and gender with the mean of attitude score and variance analysis test was used for assessing relationship of multilevel variables such as age and the amount of studying with the mean of attitude score.

3. Results

95.3 percent of the samples were female. 133 (57.1 percent) were in the age range of 20 to 30 years old and 96 (41.2 percent) were from 31 to 40 years old and 5 (1.7 percent) were from 41 to 50 years old. The average ages of the subjects of the study were 30.35±4.518 years old. 97.9 percent of the samples of the study had bachelor degree and half percent had Master degree. Most of the samples of the study (82.3 percent) were working in the rotational shifts. 39.3 percent of the samples of the study were working in ICUs and 3.4 percent were working in cardiac catheterization. It has been achieved in this study that most of the samples of the study (58.2 percent) have been studying scientific articles rarely and only 2 percent of them have been studying scientific articles every day. 11.1 percent of the samples have been studying scientific articles every week, 20.3 percent every month and 8.4 percent did not have any scientific study at all. Regarding the aim of the study, 69.2 percent of the samples had positive attitude, 27.4 percent had neutral attitude and 3.4 percent had negative attitude towards using research results in clinical practices [table 1].

Variance analysis tests and independent t-test were used for determining relationship between personal characteristics and the mean of attitude score. There was no significant relationship between age and work shift of the nurses participating in the study with the mean of score attitude by using variance analysis test (p=0.658) and (p=0.103). Also there was no significant statistical relationship between gender and the average of score attitude by

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Table 4: The relationship between attitude score and nurses' education level

Education level	Frequency	Attitude score average	Standard deviation
Bachelor	228	2.5197	0.42676
Master	6	3.1056	0.35393
Total	234	p=0.003	

using t-test (p=0.108), but there was a significant relationship between the amount of nurses' studying and the mean of score attitude through variance analysis test (p=0.004). Samples of the study who have been studying scientific articles every week had higher attitude mean of attitude score in compare with other groups (table 2).

There was a significant statistical relationship between workplace and the mean of attitude score through using variance analysis test. Nurses who were working in post-cat care wards had higher mean of attitude score in compare with other groups (p=0.028) (table 3).

There was a significant statistical relationship between education level and the mean of attitude score by using independent t-test (p=0.003) and nurses with higher education level (master degree) had higher mean of attitude score (table 4).

4. Discussion

Attitude is one of the important variables in using research results and it seems that psychological and theological issues such as beliefs, perception and believe in research and its results can be effective in using research results [1]. Results of this study showed that most of the samples of the study have positive attitude towards using research results in clinical practices and they believe that it's time to do nursing practices according to the studies and researches and science of the new world. Valizadeh et.al achieved the same results in their study and most of the nurses of their study had positive attitude towards research [13].

In the study of Mehrdad in 2008, although 77.3 percent of the nurses were not skilled for doing research activities, they had a positive attitude towards research and using research results [1]. This finding indicates that nurses are aware of the value and importance of using research in their professional practices. The study of Mac Klory and Brown, which was done on the nurses and other health professions in an educational hospital of special care for children in Ontario in Canada and its aim was assessing the attitude towards research and using that in clinical practices, it has been shown that more than half of the samples of the study had the formal research training course, Although this research training courses in some participants may be related to previous years. The two variables of the way of searching texts and high level of education were related to the positive attitude towards research in this study [14].

Table 3: The relationship between the attitude score and the nurses' working ward

Working ward	Frequency	Attitude score average	Standard deviation
ICU	92	2.4744	0.45635
NICU	30	2.6735	0.34923
PICU	17	2.4738	0.28891
ICU open heart	15	2.5078	0.45544
CCU	16	2.6572	0.37488
Cat lab	10	2.1846	0.60155
Post cat	15	2.6933	0.52508
dialysis	39	2.5724	0.35157
Total	234	2.5325	0.43225
df=7, F=2.290, p=0.028			

Although in the present study most of the nurses had positive attitude towards using research evidences in clinical practices, it has not been the same in all the conducted studies in this regard. In the study of Lai in 2010, which was done in Malasia, most of the nurses had negative attitude towards research evidences-based cares [15]. As it has been shown in the previous studies, using research in practice can be effective according to the nurses' belief and

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attitude towards it. Also Handeli et.al in their study, which was about using research in practice, confirmed that there is a significant relationship between nurses' belief and attitude towards research and using it [16]. Olad writes in s this regard; "everywhere that the ability of doing research is increased, attitude towards research practices is getting positive and vice versa [17].

In this study, we also assess the amount of nurses' study and its relationship with the mean of attitude score. Results of the study showed that most of the samples study scientific articles rarely and only a little number of the samples (2.2 percent) study scientific articles every day. There was a significant statistical relationship between nurses' attitude and the amount of studying by using variance analysis test (p=0.004).The mean of attitude score in nurses who had weekly study was higher than other groups. But in the study of Agha-Hoseininet.al in 2012, there was no significant relationship between nurses' attitude and their study hours during a week [18].

Also in the study of Amini, there was no remarkable number of the nurses working in ICUs of Zanjan hospital who were studying the articles related to their field [19], in the study of Mehrdad, 75.3 percent of the nurses had studied nursing Persian magazines during the last six months, it is while it was only 22 percent who studied English magazines [1]. Also in the study of Egroud and Hans Danish nurses who were working in ICUs did not study nursing scientific magazines frequently despite their positive attitude [20]. Also in the study of Tahmasbi-Fard, only 32 percent of speech and language pathologists stated that they usually read less than two articles during a month [21]. Since nurses have high volume of work, they do not have enough time to study research articles and it's not possible for them to specify a time for studying scientific articles [22].

Poor access, not knowing English and high volume of work are the factors that cause nurses to not study research articles and they are far from providing research-based cares consequently. Although merely studying research articles does not change practice, it's an important step in using research-based cares. It has been shown in this study that nurses with higher level of education have more positive attitude towards research-based cares. Since the method of providing research articles and the professional language of the articles are very important in understanding the research, perceiving the concept of using research is one of the most important factors that cause the nurses to be research-oriented.

There are many studies, which indicate that research findings have been used in clinical practice in a limited way. Results of the study of Parahou et al. regarding the usage of research results by nurses of patients with mental disabilities in Northern Ireland showed that there is still much left to cover the aim of research-based practice. In their studies, only one-fourth of the respondents reported that they often or always use research results in their practices [23]. The achieved data of the studies done in Australia, England and America are indicating that although doing researches are increasing, using findings by the clinical nurses for promoting patients' care quality is limited [24]. Also despite increase of quantity and quality of nursing researches and increase of nursing practices variety, there is still severe decrease of using research findings in nursing care activities and providing services for the patients and the results achieved from the studies were not a reasonable basis for the nursing professional practice [1] and although nurses have positive attitude towards research and research-based practices, transferring research evidences to practice for nursing and education is slow and sometimes unsuccessful [25].

5. Conclusions

This study indicates that although nurses of ICUs have positive attitude towards using research results in clinical activities, it's not enough alone for using researches results at bedside. Shortage of the amount of studying by

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the nurses of the study indicate that poor access, not knowing English and high volume of work are the factors that make the nurses to be far from studying research articles and providing research results-based cares. Although studying research articles does not change the practice alone, it's an important step in using research findings at bedside. Therefore developing research culture and using its results in nursing needs doing collaborative researches in nursing groups and using research results in clinical activities should be as one of the organizational planning of the hospitals and health services centers.

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