



Barriers and facilitators of evidence-based practice from the perspective of nurses who working in northwestern psychiatric centers of Iran

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ABSTRACT

Evidence-based practice is an indicator of the quality of health and treatment care and plays an important role in improving the quality of nursing care. The purpose of the study was to determine the barriers and facilitators of evidence-based practice from the perspective of nurses working in psychiatric centers in the northwest of Iran. This research is a descriptive cross-sectional study with statistical population includes 270 nurses working in northwest psychiatric hospitals of country. Sample size was selected using census method. Data collecting tools consisted of two parts. The first part of the questionnaire included demographic information of nurses and the second part included a standard questionnaire of barriers and facilitators the evidence-based practice. The collected data were analyzed using descriptive and analytical statistics and SPSS software (ver. 21). The mean score of evaluating the barriers and facilities to apply the results of research in the field of practice in nurses on the Bases of practice knowledge dimension was 41.54 ± 10.85 , which they had a low score. The overall score in dimension of access barriers and review of evidences was 18.86 ± 7.19 , which nurses had a medium score. The mean of total score was 9.93 ± 3.23 , which nurses had a low score. In the dimension of barriers to practice change based on scientific evidences. Also, the mean total score in self-assessment skills dimension was 13.70 ± 4.56 , that nurses had a medium to low score. It is necessary to do needed facilities to reduce existing barriers in order to change the methods of care based on scientific evidences, with proper planning and policy making, and create an appropriate context for nurses in providing care with quality considering the essential role of nurses in maintaining care and promoting the health of the patients.

Keywords: Barriers, Facilitator, Nurses, Evidence-Based Practice

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INTRODUCTION

Nursing care as a supportive-facilitator activity is an integral part in the field of health care services. Nursing care is very important among all care provided in health care environments such as a hospital [1]. Nurses are responsible for the care they deliver to patients and they must be active

and skillful in providing the best and most quality care [2]. Correct use of researches based evidences and findings leads to enhance the quality and credibility of care and nurses will be responsive to their practice. Because provision of care is done based on scientific basis [3]. Therefore, the best justification for providing optimal and high quality care is research based nursing. Preparing nurses who can provide effective care in a complex and unsafe care environment is an international challenge. One of the areas of this preparation is evidence-based

practice. Evidence-based activity is a concept and has been created for medical education with the approach of using and valuing to research findings from clinical data and beliefs [4] and has been created as an indicator of health care quality [5].

Evidence-based practice is a framework for clinical performance that provides the best evidence for decision-making on patient care in the form of deliberate, explicit, and judicious use [6,7]. Evidence-based practice education steps include asking a critical clinical question, collecting the best and most relevant evidences, criticizing evidences, integrating evidences with clinical skill, patient priorities for decision making, and ultimately evaluating the outcomes of that decision [8]. In general, evidence-based practice is clinical actions based on scientific evidences that causes to improve and stabilize care outcomes in patients, but nevertheless implementation of this function is challenging [9].

Nurses design and implement and evaluation of the care plan to solve these problems with continuous scientific progress along with changing patient's status, by integrating their technical skills and their professional knowledge on the basis of scientific evidences, while acting in the form of a multidisciplinary group with the diagnosis of patient's problems [10]. In jobs like nursing, which should follow certain rules, practice must be coupled with knowledge in order to increase productivity [11]. Today, conducted studies in Iran show that the existence of gap between the research, the theory and the practice of different service provider groups is very high [12, 13].

The results of studies show that the lack of facilities and equipment, lack of time, lack of access to create the change, lack of experience and the capacity to use evidence, lack of mutual trust, lack of access to resources, lack of financial support, traditional thoughts, lack of knowledge, and lack of support for managers and physicians, are among important barriers not to use clinical researches [14, 15].

Gibbs has defined evidence-based nursing as a making priority of patient benefits through clinical decision-making using the best evidences of patient care [16]. Clearly, nursing care requires the use of a set of research evidences, and while evidence-based performance will also be highly

effective in promoting nursing professional identity [17]. Sackett et al., Evidence-based care as combination the best research evidences with Clinical experience and patient values in the care [18].

Among nursing branches, mental health nurses play a critical role in providing care and development of mental health services to different groups, including patients who often have complex care needs [19]. Many of the mental health nursing functions are influenced by old traditional practice and testing and error rather than being based on scientific evidences [20].

Acceptance of evidence-based practice is one of the requirements for its implementation, while acceptance of evidence-based practice in nursing is slow [16]. Despite the various studies on evidence-based practice, the scope of its use in clinical practice is low and it seems that there is a need for greater study of value or application in practice and by identifying barriers from the perspective of nurses, especially mental health nurses, this matter is more considered due to their high sensitivity to care. Therefore, this research was conducted with the aim to investigate the barriers and facilitators of evidence-based practice from nurses' point of view in northeast psychiatric centers of country.

MATERIALS AND METHODS

This research is a descriptive cross-sectional study with statistical population includes 270 nurses working in northwest psychiatric hospitals of country. Samples were selected using census method. The criteria for entering the study included: nurses with a bachelor's degree or a nursing with master degree working in psychiatric centers for at least six months who were excluded from the study if they did not want to participate in the study. The data collection tool that included two parts; the first part of the questionnaire included demographic information of nurses including age, sex, marital status, employment status, work experience, work shift, job satisfaction rate and English proficiency, and the second part included a standard questionnaire of barriers and facilitators of evidence-based practice:

Development of Evidence-Based Practice Questionnaire (DEBP). A standard questionnaire that measures barriers and facilitators of

evidence-based practice. This questionnaire has dimensions of barriers and facilitators of evidence-based practice that includes dimensions (principles of scientific knowledge, barriers to access and reviewing evidences, barriers to change the practice based on scientific evidences, facilities and support for changing the performance and skills of self-assessment). The questionnaire had been based on Likert 5 rank scale (never = 1 and rarely = 2 and sometimes = 3 and often = 4 and always = 5) and range from 49 to 245, and reflects the views of participants. The interpretation of the questionnaire was based on the mean and standard deviation report of each participant.

The reliability of this questionnaire has been calculated by Yadav (2012) with Cronbach's alpha coefficient of 87% and he also has used construct validity for validity of this questionnaire [21]. Validity of the questionnaire was confirmed by faculty members and some experts from Tabriz Medical Sciences University. The validity of the translation of this questionnaire was also returned by the professor of the language of the faculty from English to Farsi and from Persian to English. Reliability of this questionnaire was calculated by internal correlation method using Cronbach's alpha measurement method. The researcher, after coordinating with the nursing administration and the nursing office of the concerned hospitals, obtained a list of qualified nurses for study who were working in one of the selected medical centers and after coordinating with the relevant units and explaining the goals of the study, the questionnaire was provided to eligible nurses. An informed consent form, outlining the study goals and objectives, voluntary participation, and participant anonymity was obtained. Finally were collected the questionnaires.

Data Analysis

Finally, the collected data were analyzed using SPSS21 software, descriptive and analytical statistical tests, Pearson correlation and Spearman at a significant level of less than 0.05.

RESULTS

The results showed that the majority of nurses participating in the study were women (54.2%) and (69.2%) were married nurses and (80.2%) had full-time work hours. Other demographic

characteristics of nurses have been shown in Table (1).

In assessing the responses of nurses to the dimensions of barriers and evidence-based practice facilities in the dimension of scientific knowledge principles, the highest mean (2.26 ± 1.18) was related to the response of the participants to the item "My personal experience about care of patients in Length of time "and the lowest mean (1.46 ± 1.08) was related to the "Information that I get from the local auditing reports".

The highest mean (2.26 ± 1.8) was for respondents to respond to the item "I do not have enough time to find research reports" in dimension of barriers to access and review scientific evidences and the lowest mean (1.59 ± 1.03) was related to the item "I do not have enough confidence in judging the quality of research reports". the highest mean (2.38 ± 1.14) was related to respondents' responses to the item "our working group culture does not accept practice change" and the lowest mean (1.55 ± 1.9) was also related to the "I do not feel confident about starting to change my practice in the dimension of barriers, the change in performance based on scientific evidences".

The highest mean (1.63 ± 1.02) was related to respondents' response to the item "nursing colleagues support change in practice" and the lowest mean (1.33 ± 1.04) was also related to the item "the doctors with whom I work are supporting change in practice in the dimension of facilities and support for change in practice". The highest mean (2.09 ± 1.05) was related to the respondents' response about item "using the Internet for information search" and the lowest mean (1.62 ± 1) was related to the "review organizational Information" in the dimension of self-assessment skills (Table 2).

The mean total score of the dimensions of the principles of practical knowledge was (41.54 ± 10.85) in examining the barriers and facilitators than applying the results of research in the practice field in the dimension of the principles of practical knowledge, which, according to the score limit that can be obtained between 22 to 110, is considered the lower score. The results showed that nurses had a medium score. The total score in dimension of access barriers and the review of evidences was (18.86 ± 7.19), which is considered a

medium score with respect to the score range that can be obtained between 10 to 50. The mean total score in dimension of barriers to change practice based on scientific evidences was (9.93 ± 3.23) , which, according to the score range between 5-25, can be said that nurses had a low score. Also, considering that the mean total score in the dimension the facilities and support for changing

the practice was (6.02 ± 2.56) in the score range of 4-20, it could be said that the nurses also had a low score in this dimension. The mean total score in the self-assessment skills dimension was (13.70 ± 4.56) that according to the score of 8-40 that can be obtained, it can be said that nurses had a medium to low score (Table 3).

Table 1. Demographic characteristics of nurses.

Variables(n=270)		Number (%)
Gender	Female	123(54.2)
	Male	104(45.8)
Marital status	Single	65(28.6)
	Married	157(69.2)
	Divorced	5(2.2)
Professional status	Matron	1(0.4)
	Supervisor	11(4.8)
	Head nurse	5(2.2)
	Nurse	210(92.5)
Hospital	Razi	118(52.0)
	Fatemi	21 (9.3)
	Isar	42(18.5)
	Urmieh	46(20.3)
Employment status	Formal	116(51.1)
	Promissory	69(30.4)
	Contractual	42(18.5)
Job satisfaction	Fully unsatisfied	9(4.0)
	Unsatisfied	42(18.5)
	Satisfied	159(70.0)
	Fully satisfied	17(17.5)
Work time	Full time	182(80.2)
	Part time	45(19.8)
Work alteration	Yes	159(70.0)
	No	68(30.0)
Mastery in English Language	Low	76(33.5)
	Medium	139(61.2)
	Much	12(5.3)
Work history		10.26 \pm 5.51

Table 2: Frequency of nurses' response to items of DEBP questionnaire in nurses.

DEBP Questionnaire	Questionnaire item	Mean score
Bases of practice knowledge	Information I learn about each patient/client as an individual	2.04 \pm 1.12
	My intuitions about what seems to be 'right' for the patient/client	2.09 \pm 1.04
	My personal experience of caring for patients/clients over time	2.26 \pm 1.18
	What has worked for me for years	2.00 \pm 1.11
	The ways I have always done it	1.94 \pm 1.07
	Information my fellow practitioners share	2.06 \pm 1.07
	Information senior clinical nurses share	1.91 \pm 1.07
	What doctors discuss with me	1.61 \pm 1.08
	New treatments and medications that I learn about when doctors prescribe them for patients	1.96 \pm 1.06
	Medication and treatments I gain from pharmaceutical or equipment company representatives	1.56 \pm 1.06
	Information I get from product literature	1.79 \pm 1.06
	Information I learned in my training	2.19 \pm 1.00
	Information I get from attending in-service training/conferences	2.06 \pm 1.15
	Information I get from local policy and protocols	1.81 \pm 1.16
	Information I get from national policy initiatives/guidelines	1.71 \pm 1.09
	Information I get from local audit reports	1.46 \pm 1.08
Articles published in medical journals	1.75 \pm 0.96	
Articles published in nursing journals	1.71 \pm 1.07	

	Articles published in research journals	1.63 ±0.99
	Information in textbooks	2.07 ±1.00
	Information I get from the internet	2.14 ±1.02
	Information I get from the media	1.79 ±1.00
	I do not know how to find appropriate research reports	1.93 ±1.15
	I do not know how to find organizational information (guidelines, protocols, etc.)	1.90 ±1.03
	I do not have sufficient time to find research reports	2.36 ±1.22
	I do not have sufficient time to find organizational information (guidelines/protocols, etc.)	2.12 ±1.23
Barriers to finding and reviewing evidence	Research reports are not easy to find	1.84 ±1.17
	Organizational information (protocols, guidelines, etc.) is not easy to find	1.91 ±1.06
	I find it difficult to understand research reports	1.70 ±1.12
	I do not feel confident in judging the quality of research reports	1.59 ±1.03
	I find it difficult to identify the implications of research findings for my own practice	1.79 ±1.06
	I find it difficult to identify the implications of organizational information for my own practice	1.72 ±1.08

Table 3:Frequency of nurses' response to items of DEBP questionnaire in nurses.

DEBP Questionnaire	Item	Mean score
Barriers to changing practice on the basis of evidence	I do not feel confident about beginning to change my practice	1.55 ±1.09
	The culture of my team is not receptive to changing practice	2.38 ±1.14
	I lack the authority in the workplace to change practice	1.75 ±1.03
	There are insufficient resources (e.g. equipment) to change practice	2.15 ±1.06
	There is insufficient time at work to implement changes in practice	2.10 ±1.13
Facilitation and support in changing practice	Nursing colleagues are supportive of my changing practice	1.63 ±1.02
	Nurse managers are supportive of my changing in practice	1.52 ±0.95
	Doctors with whom I work are supportive of my changing practice	1.33 ±0.96
	Practice managers are supportive of my changing practice	1.53 ±1.04
Skills in finding and reviewing evidence	Finding research evidence	1.63 ±0.94
	Finding organizational information	1.66 ±0.98
	Using the library to locate information	1.59 ±1.01
	Using the internet to search for information	2.09 ±1.05
	Reviewing research evidence	1.66 ±0.98
	Reviewing organizational information	1.62 ±1.00
	Using research evidence to change practice	1.74 ±0.89
Using organizational information to change practice	1.72 ±0.94	

Table 3. Mean scores of barriers and facilities relative to the application of research results in the practice area.

Domains	Mean (SD)
Bases of practice knowledge	41.54 ± 10.85
Barriers to finding and reviewing evidence	18.86 ± 7.19
Barriers to changing practice on the basis of evidence	9.93 ± 3.23
Facilitation and support in changing practice	6.02 ± 2.56
Skills in finding and reviewing evidence	13.70 ± 4.56

DISCUSSION

Nurses are the largest key group in the health care group and play a key role in maintaining care and promoting health and well-being with a scientific and practical ability based on day-to-day knowledge at different levels in order to perform all preventive care [22].

Continuous scientific progresses along with the changing status of patients encounter nurses with numerous challenges, including patient problems and so on,that is facing the healthcare system, which the use of relevant technical skills and

professional knowledge based on scientific evidences is required to meet these challenges, Based on scientific evidence [23].

The findings of this study showed that there was a significant relationship between sex and English language proficiency with the dimension of knowledge principles as well as dimension of barriers to change in practice based on scientific evidences (p<0.05). There was also a significant relationship between working hours and fluency in English and history with dimension of obstacles to access and review scientific evidences of nursing. It seems increasing work experience is as

a potential barrier to use evidence-based practice because this practice requires commitment and willingness of individuals to update scientific evidences. The results of the Browne and colleagues study also about the shortage of work time and the length of the working hours for scientific evidences research are consistent with the results of the present study [24]. It seems that the allocation of hours apart from patient care time, for nurses to attend courses of retraining is needed to educate new research findings and education to increase awareness. In this study, nurses believed that the lack of acceptance changing the practice in our culture, the lack of enough time to find research reports and lack of sufficient resources to change practice were the most important barriers to evidence-based practice.

The application of findings from clinical researches creates a significant opportunity to change professional performance and makes care more effective. But it should be noted that the success and effectiveness of this program depends on proper planning and establishment of sufficient facilities for its implementation [25, 26]. But in the division of dimensions, the dimension of obstacles to access and review scientific evidences were the most important barrier to evidence-based practice in the clinic. In the present study, lack of enough time to find research reports on dimension of barriers to access and review scientific evidences is the most important barrier to evidence-based practice in the clinic. In numerous studies, nurses know lack time because of numerous shifts and high workload, a high number of patients as the biggest barrier of evidence-based practice in the clinical setting, which is consistent with the results of our study [27-30].

The results of another study reported a lack of sufficient time in the lower ranks, which is not consistent with our study results [31]. The difference between the results can be attributed to differences in environmental and organizational conditions. Since lack of sufficient time has been reported as one of the most important barriers in the present study, it is therefore necessary to pay close attention to provide practical solutions for the organization to solve this problem. In this regard, it is possible to increase the number of new workforces in order to divide the work and reduce the workload of mental health nurses with patients with complex care needs, encourage

employees to use evidence-based care, provide the necessary hardware and software to facilitate access to evidences in short time, establishing software equipment outside the workplace and at home, and on the other hand, by changing the culture, creating the spirit and culture of research among nurses, creating the ideal environment in order to conduct research, evidence-based care placed in the right conditions.

The most important facilitators in applying research results, obtained personal experience of people about care of patients over time, information obtained during education, as well as information obtained from the Internet from the perspective of nurses participating in the study. But in dimensional division, the dimension of principles of knowledge is as the most important practical facilitator in the clinic. Nursing practices performing based on scientific evidence will increase the quality of care and will be effective in reducing patient and organization costs. Assigning time away from your care responsibilities on the patient's is necessary and essential to attend in ascheduled educational programs to train nurses at work.

Results showed that the doctors' support for change has allocated the lowest rate in the dimension of facilitators and support for change in practice. In the study of Funk and Retsas, they reported the weaknesses and the problem of support of doctors in changing the practice in high priority, which is consistent with the results of the present study [32, 33]. It can be deduced from this result that, in addition to policy-making based on the greater participation of nurses and doctors, it is necessary to provide a suitable context for more motivated collaboration and communication in the care team between nurses and doctors so that doctors to be effective both in education and in the implementation of effective educational cases and provide a good basis for the use of evidence-based care. Using a library to place information has allocated less important in the dimension of facilities of self-assessment skills. There has had better outcome in places where access to the library has existed since evidence-based practice requires increased recognition. It has been shown in the findings of Eizenberg and Hommelstad that access to the library and the Internet is effective in the implementation of evidence-based care and facilitating the transmission of findings to the

clinic, which is consistent with the findings of the present study [34, 35].

CONCLUSION

One of the limitations of this study is the limited statistical population in the northwest of the country which limits the generalizability of the results of this study. The findings of this research can be used to create a team working culture to change practice based on scientific evidences. Resources and required time can be created by planning to promote this culture. It is suggested that the facility be created in research findings, such as holding workshops and critical evaluation classes for evidences and equipping the library in the hospital. Managers can also focus on clinical evidence-based practices by proper planning and policy-making and creating a suitable context for nurses in the field of caring works and try to improve it.

Conflicting Interest

No conflict of interest has been confirmed by the authors. This study was funded by the Tabriz University of Medical Sciences. "I had full access to all of the data in this study and I take complete responsibility for the integrity of the data and the accuracy of the data analysis."

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