

Research Article

**Studying Obstacles and Problems Related to Implementation
of Evidence-Based Medicine from Views of General Practitioners
in 2016: A Qualitative Study**

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ABSTRACT

Background: Evidence-Based Medicine tries to impose on the research evidence and make the best decision based on scientific findings. But according to many researchers, the lack of evidence-based medicine doctors of general medical problems raised. However, a lot of research on barriers to implementing evidence-based medicine is not available in the province. This study aimed to investigate the barriers to implementing evidence-based medicine from the perspective of general practitioners in Khuzestan province has been Omidiyeh city.

Methods: The present study used a qualitative method on 21 patients of general practitioners in the city Omidiyeh Khuzestan province. Purposeful sampling to collect data, semi-structured interviews and observation has been opened. Data collection continued until data saturation was achieved. Data analysis was performed using analysis framework.

Results: Two main categories of data that has been extracted is: (1) the barriers to evidence-based medicine (2) ways to overcome these barriers in the workplace defined. Barriers to implementing evidence-based medicine in 9 sub-branches include: 1 - educational practices 2 - 3 financial problems - cultural barriers 4 - Plant and equipment 5 broadband 6 - was not enough time to study drug 7. 8. Lack of insurance problems 9. problems of law and protection.

Conclusion: Although most physicians tend to make use of evidence-based medicine. However, due to the high volume of work and busy, not having enough time to study, lack of familiarity with reputable sites and medical reference, there was a good atmosphere and the Internet in the workplace, cultural issues, problems and drug insurance, legal barriers and support, poor education, financial problems, which are often compelled to act based on experience. Therefore, it is necessary to hold workshops throughout the city due to lack of time and busy physicians and financial problems for doctors, strengthen surveillance systems, legal support at different levels of society, and insurance coverage and supply of drugs in pharmacies of the city, the obstacles to be removed. And provided the opportunity for general practitioners in the city.

Keywords: evidence-based medicine, obstacles, qualitative study, general practitioners.

Problem statement

Medicine is one of holly professions and its presence is essential in every society. For this

reason, medical education and training of an efficient human source have been paid attention

by educational planners. During past centuries, several changes have occurred in medical education but our medical education has not changed. The aim of medical education is to acquire knowledge, skill and attitude towards taking care of patients. In addition, it is an opportunity for education of professional individuals in order to get necessary qualification for care (Amir Esmaili et al, 2012). Human source is the base of health system and if educational programs and plans of human source are not proportional to health requirements and social condition in the countries (Ghavam, Ghavam, & Ghavam, 2016), they will not be able to reach the health level of the society to the point that people can have socio-economically generative life. This is obtained by combining the best research evidences with clinical experiences and priorities of patients and patient's care quality will be increased (Salehi 2011). Patient's care will improve considerably via evidence-based medicine and decision making will be shared among doctors and satisfaction and trust of patients to doctors will increase (Salehi 2011). Elaheh Omati and Amireza Asnafi studied evidence-based medicine papers based on Scopus database and the community under study was all scientific productions related to evidence-based medicine in Scopus database during 1939-2014. They showed that scientific productions about evidence-based medicine have had a descending trend in recent years in the world. The USA (38952), England (18835), Canada (8350), Germany (8011) and Australia had the highest productions about evidence-based medicine among 160 countries. The place of Iran with 258 productions about evidence-based medicine is 37 among 160 countries. This production is very low compared to competitive countries (Omati & Asnafi, 2014). The fact that evidence-based approach with positive attitudes, skills and knowledge is less used by specialists of health and treatment showed that there are obstacles and problems (Catherin et al, 2014). Among problems

that have caused doctors not to act according to evidence-based medicine are the requirement for learning new skills (Rangraz Jadi et al 2013), insufficient motivation and investment for realization of this approach (Rangraz Jadi et al, 2012), issues related to strategies of educational system of general medicine, structural and systemic problems, lack of comprehensive courses, educational system, physical and human sources (Amir Esmaili et al (2012), lack of skill, sources and problems related to implementation of evidences in practice (Catherin et al, 2014), inaccessibility to medical information, lack of skill in searching papers and informational sources, clinical follow up of patients' requirements, insufficient time for studying, lack of personal innovations and creativity, lack of dynamic team work, lack of organizational culture and work priorities (Green et al, 2005) and lack of understanding of evidence-based medicine and insufficient time (Allister Cool et al, 1998). Therefore, few studies conducted in Iran have investigated the problems related to implementation of evidence-based medicine. It is necessary that many studies are done about problems related to evidence-based medicine from views of general practitioners. This research aims to study problems related to implementation of evidence-based care from views of general practitioners via interview in order to take steps in this direction by results obtained from the research and to increase service qualities, reduce medical mistakes, attract patients' satisfaction and trust in doctors' decisions by identifying and solving such problems.

METHOD

45 general practitioners who are working in Omidieh, Khuseztan were studied by framework analysis. Target sampling and open semi structural interviews have been used to gather data. In present study, data collection was continued until data saturation. Data was analyzed by comparative analysis. Sampling was completed after 20

interviews. Data saturation was completed when the researcher got no new data by continuous sampling. Data was analyzed via framework analysis and simultaneously with data collection. Therefore, the researcher identified key concepts and subjects and formulated a subject framework. Then, he/she revised all personal interviews based on subject framework. The proper subject was arranged based on some sources and concepts, opinions, experiences and researches were compared and the models and relations were described based on findings. No software is used for such things and all stages have been done manually. In the present research, the main question is: what is the opinion of general practitioners about scientific evidence-based care and its problems? And it is extended to several minor questions. During the research, professors (who were skillful in this field) of Jondishpour medical science university were asked to help the research for validity and reliability of the research

during formulation of research questions, data collection, data analysis and findings coding. The present research that was done on general practitioners in Omidieh city of Khuseztan was based on interview such that the researcher should reach scientific saturation. Interviews were taped and written word by word. Then transcription was coded and organized.

Findings

In present study, 400 primary codes were extracted and placed in two main categories. The first category was problems related to implementation of evidence-based medicine and it was divided into 9 subcategories. Totally, variables that are obstacles related to implementation of evidence-based care were studied and the second category was divided into factors that are effective for solving such problems.

Table 1: demographic-occupational experiences and information of participants in the research

Work place	Number	Gender		Work experience X±SD
		Man	Woman	
Social security clinic	5	4	1	12
Health	12	7	5	9
Medical office	1	1	-	18
Hospital	2	1	1	10
Total	20	13	7	10

1- Problems and obstacles related to evidence-based medicine

When doctors were asked about obstacles related to implementation of evidence-based medicine, most of them referred to the status quo and stated that they had to act based on their experiences due to condition governing on medicine and available problems although they were interested in evidence-based medicine. For example there are reference books that have been confirmed by medical system but they have to act based on them although some of medicinal orders are obsolete. There is no comprehensive evaluation system in order to update medical new information. If a doctor wants to act in accordance with evidence-based medicine, there will be some legal obstacles that prevent the doctor from evidence-based medicine. Generally, the data related to the obstacles of evidence based medicine are included in 9 categories in following table.

Table 2: obstacles for implementation of evidence based medicine from views of general practitioners who are working in Omidieh city

obstacles related to implementation of evidence based medicine from views of general practitioners who are working in Omidieh city	
1- educational problems and obstacles	1- lack of holding seminars and educational classrooms about evidence based medicine

	<ul style="list-style-type: none"> 2- lack of sensitivity of educational managers to education of evidence based medicine 3- insufficient time for participating in in retraining classrooms 4- inefficiency of retraining classrooms 5- inaccessibility to up to date orders 6- lack of familiarity with reference websites and how to search papers 7- treatment educations in academic years
2- supportive and legal problems and obstacles	<ul style="list-style-type: none"> 1- negative feeling of doctors for lack of legal support from authorities of medical system 2- lack of media supports
3- lack of access to library and internet in work place	<ul style="list-style-type: none"> 1- lack of sufficient space for studying in work place 2- low speed of internet or inaccessibility to internet
4- work pressure of doctors, their busy time	<ul style="list-style-type: none"> 1- many shifts and extreme fatigues 2- insufficient time for participating in retraining classrooms 3- far away educational places
5- time shortage and lack of time for studying	<ul style="list-style-type: none"> 1- lack of cooperation of the organization for participation in educational periods and classes 2- busy time of doctors
6- cultural problems and obstacles	<ul style="list-style-type: none"> 1- the doctor was threatened by people for prescribing medication 2- recommendation of authorities to doctors in this direction 3- many medical margins 4- lack of media supports
7- financial problems of doctors	<ul style="list-style-type: none"> 1- doctors will suffer from losing their shifts due to participation in educational periods 2- lack of financial support of the organization from education of doctors and their participation in educational classes
8- medicinal shortages and problems	<ul style="list-style-type: none"> 1- old medicinal booklets in health 2- antibiotic orientation of health and treatment 3- lack of medications in drugstores of social security 4- cultural problems for accepting prescriptions of public
9- obstacles and problems related to insurance	<ul style="list-style-type: none"> 1- lack of insurance coverage for some medications that are expensive and up to date

1-1 educational obstacles and problems

I have been working for ten years. This subject was not taught when I was student and I am not aware from evidence based medicine. Doctor No.1: the main problem was insensitivity of educational system of the university, Doctor No.2: although the professors are respectful, they transfer their old information and experiences to students without updating their information and

students do not have enough time for research and study because they are very busy. Doctor No.3: doctors were not familiar with valid websites and journals. Doctor No.4: weaknesses of relational and team work among doctors about scientific exchanges and various prescriptions of doctors are the most important factors. Doctor No.6: no educational workshop and seminar are held in this area. Doctor No.7: doctors should pay

for the educational periods that have retraining score and they often only pay money and take retraining score. Doctor No.12: retraining classes are theoretical and lack of their operationalization causes that doctors forget them. Doctor No.9: in spite of the motivation and interest for participating in retraining classes, I often cannot participate in such classes because I am busy. Doctor No.5: concerning that retraining classes last some days, I cannot participate in such classes due to financial problems because I will lose my money. Doctor No.13: If the organization or system provides for doctors opportunity for organizational study and missions, they can participate in classes with more freedom and motivation and they have no financial problems. Doctor No. 16: educational classes should be held for doctors instead of retraining classes that often include old materials.

1-2- insufficient time

Work pressure and extreme fatigue do not allow the doctor to study new information. Doctor No.13: I cannot participate at classes because they are held in centers of the provinces and they are not held at weekends or the place of workshop is far from me. Doctor No.2: I cannot participate at classes because they incur me some financial losses. Doctor No 13: I do not have sufficient time for attending in retraining classes because I am very busy and tired.

1-3- problems and obstacles related to internet and library

I like to act based on evidences but I cannot act based on evidences because I do not access to internet and library (doctor No.3). There should be a library beside doctors in order that they refer to it in case of forgetting medicinal dosage or a rapid treatment measure (doctor No.7). I do not have sufficient time for research works because there is no native and local agenda from health ministry and also work pressure of doctors and the related organization does not give us such opportunity in order to reach sources such as participating in book festivals that are held

annually (doctor No.16). We do not access to the internet which is the simplest technology (doctors Nos. 18 & 19).

1-4 cultural problems and obstacles

Although I like to act based on evidences, people will not accept new medications and they used to take antibiotics even those patients who do not need antibiotics. For example, I know the side effects of penicillin for children younger than 6 years old but the client put the booklet on the desk and threaten me to write it down on the booklet: why are you sitting here! If you do not want to write it down in my booklet, come on, write it down (Doctor No.5). Most of our problems associate with the culture of patient. Most of patients are not real ones because social security and Oil hospitals are free. But this type of medicine is not compatible with culture of public (Doctor No.13). If we resist against the patients, the patient will cause some problems for us due to easy access to drug stores and supplying medications from them (doctor No.11).

1-5 financial problems

If the doctor do not attract the satisfaction of the patient, it will be possible that the patient does not refer to that doctor anymore. Therefore, they mostly are affected by patients (doctor No.14). Doctors frequently act based on income rather than evidences. The business of doctors in relation to patient is prioritized compared to medical profession. Therefore, doctors spend most of their times with patients and gathering money and they are not interested in evidence-based medicine (doctor No.5). Doctors think about income rather than research works because expectation of patients from doctors is high (doctor No.2).

1-6 facilities and equipment

The science should match with our equipment otherwise it is not useful (doctor No.7). If laboratory equipment is up to date, the doctor can decide more easily (doctor No.9). The doctor of health center states: equipment is better especially after health system evolution but there

is not human source to work with such devices (doctor No.10).

1-7 problems related to insurance

Heavy costs of diagnosis and medications prevent the doctor to act based on evidences. For example the cost of MRI and other medications is high. The doctor has to write the prescription regarding the economic status of the patient. Most of the times, it is unlike the science of evidence-based care and medical professional ethics (doctor No.12). Concerning that the cares given to patients under coverage of social security insurance are free; the patients refer unnecessarily to social security clinics. Therefore, it causes doctor's fatigue and incurs extra costs and those patients that require accurate examination will not be given good care and the doctor will not have enough time for real patients. If possible, some measures should be taken (such as paying some costs) in order to avoid unnecessary references (doctor No.13).

1-8 supportive and legal problems

If we want to act based on up to date evidences and articles, there will be no support in case of problem or complaint and the legal reference and source of medical system organization is medical books which materials are not up to date (doctor No.13). In spite of all problems of doctors, recently a mental climate has been created in the society and media. Some medical margins were broadcasted in national media and after the event occurred in Isfahan where the doctor did not suture the child, a heavy climate governed on community of general practitioners and if something is done unlike medical principles, doctors have to act based on patient's desire. Concerning that I have been graduated recently, at the beginning of my work, I wanted to act based on up to date medical principles. My colleagues said that it was impossible to act based on up to date principles but I resisted against them. After some while, I could not continue because after each complaint, the doctor

should be punished without any excuse (doctor No.11).

1-9 medicinal problems

Concerning that the patient refers for free services and she/he has to receive free medication, in most of times, the medication is not available and the patient does not want to go other drugstores in the city and we have to make him/her satisfied with available medications (doctor No.5). The doctor of health ward states: we prescribe medications based on medicinal booklets that are very old and they have been as such for ten years. Although most of medications are antibiotics and we know that they are obsolete or forbidden in modern medical science but concerning evaluation of doctors, they have to use such medicinal manual such as prescription of penicillin for children younger than 6 years old (Doctor No.10).

How to overcome obstacles related to implementation of evidence-based medicine

Legal supports in different levels, insurance supports from up to date equipment in governmental centers and insurance coverage of expensive medications, holding congresses and seminars in the city in different periods for familiarity of doctors with modern achievements in the world in the presence of treatment community, presence of incentive and control system for encouraging doctors towards evidence-based medicine, providing up to date equipment in laboratory and treatment and also the link between drugstores and doctors regarding medicinal lists available in drugstores.

Discussion

This qualitative and applied study was conducted via interview with general practitioners in order to determine obstacles and problems related to implementation of evidence-based medicine in Omidieh city. Results obtained from the research show that general practitioners are relatively aware from evidence-based medicine and they have sufficient information about outcomes

resulted from no implementation of evidence-based medicine and its obstacles. In present study, doctors believe that educational problems are the most important obstacles in direction of implementation of evidence-based medicine. In the study conducted by Dr. Fatemeh Rangraz Jadi et al, the attitude of 245 doctors towards application of evidence-based medicine and problems related to general practitioners, residents and specialists were studied in some regions of the country in 2013. Results showed that 85.3% of doctors had positive attitude towards evidence-based medicine that improves patients' care. 52% of them believed that lack of investment and material incentive for patients were the greatest obstacles and 56.3% stated that learning new skills is the greatest problem (Rangraz Jadi et al, 2013). Above results are in agreement with results obtained in this research. In a qualitative study conducted by Amir Esmaili et al in Tehran medical science university, challenges of education of general practitioner was studied and 23 general practitioners participated via semi structural interview. They have been working for five years and they have been graduated 3 years ago and they were spending their commitment (they have to work obligatorily in hospital for 3 years). Improper regulations are among challenges of medical area and they are in agreement with results of the present research (Amir Esmaili et al, 2012). The third factor (for lack of implementation of evidence-based medicine) was inaccessibility to library and internet at work place. In another research conducted by Sima Kermanshahi and Ali Mohammad Parvinian, obstacles related to implementation of evidence-based care were studied (in sectional and descriptive form) from view of nurses. 70 nurses were chosen from different wards of Tehran pediatric hospital by convenient sampling. Inaccessibility to library and insufficient equipment such as computer, internet and electronic information in the ward were the results of the above research and they

were in agreement with those of the present research (Kermanshahi and Parvinian, 2011). Work pressure of doctors and their busy time are of other obstacles obtained from the results of the research. In a qualitative study conducted by Green et al in 2005, obstacles related to evidence-based medicine were studied in American Collage University. 34 specialists resident in the region were interviewed. Eight main obstacles were inaccessibility to medical information, lack of skill in searching papers and informational sources, clinical follow up of patients' requirements, insufficient time for studying, lack of personal innovations and creativity, lack of dynamic team work, weakness of organizational culture and work priorities (Green et al, 2005) and they were agreed with the results obtained from the present study. Other obstacles are cultural problems, financial problems of general practitioners, medicinal shortages, insurance problems, lack of up to date orders. Many researches have been done in this field such as the study conducted by Amir Esmaili et al in 2012. 23 general practitioners were studied. Weakness in medicinal prescription was one of challenges in medical area. In the study conducted by Rangraz Jadi et al in 2013, some general practitioners, residents and specialists were studied in some regions of the country. Doctors believed that lack of material and spiritual incentives for applying evidence-based medicine was among problems related to evidence-based care and it confirms and agrees with results obtained in present research. According to the present research, it seems that educational assistant of medical science university should take some measures to settle educational obstacles in direction of evidence-based medicine by formulating policy making and correct planning for holding classes, workshops and seminars in different urban and provincial levels. Concerning work pressure and high engagement of doctors, condition should be provided for doctors to participate in classes and

workshops and the educations should be up to date and they should not be theoretical rather they have to be practical. Also, local up to date manuals and orders should be prepared and given to doctors in order that they have enough motivation for using evidence-based medicine in addition to encouraging for participation in educational classes. Also, an evaluation system should be formulated for in-service doctors regarding implementation of evidence-based medicine. Therefore, the doctors have to consider this important issue. In the study conducted by Mc Claski on knowledge and skill of Australian nurses about evidence-based performance, obstacles related to implementation of evidence-based care were divided into five classes including insufficient time, high number of patients, low skill, and inaccessibility to journals and there was no sufficient research evidences about professional interventions (Amir Esmaili et al, 2012). In another study conducted by Sima Kermanshahi and Ali Mohammad Parvinian, nurses of pediatric hospital in Tehran were studied and from the view of nurses, the most important obstacles were lack of sufficient personnel, lack of information of managers about necessity of evidence-based nursing care, lack of educated individuals for applying evidence-based findings, lack of holding educational seminars and workshops related to evidence-based care and performance and they had close similarity with results obtained in present research in which the most important cause for lack of implementation of evidence-based medicine was educational obstacles. Concerning the results of the present research, educational managers of medical science universities should take action for training evidence-based medicine to specialists who should hold some educational periods for general practitioners and provide a ground for settling obstacles of evidence-based medicine. The research done by Omati and Asnafi on evidence-based medicine according to Scopus database in 2014 indicated that among

160 countries, Iran is on the place of 138 for producing 258 papers and documents which are low compared to competitive countries. This research and results obtained from the present research showed that educational system is not sensitive to evidence-based medicine and it has no plan in this regard.

CONCLUSION

Results of the present study suggest that the most important obstacles related to implementation of evidence-based medicine are educational problems, supportive and legal problems and inaccessibility to internet and library, financial problems, work pressure and high engagement of doctors, insufficient time for study and research, lack of motivation and lack of evaluation system for doctors' work, control problems, lack of up to date and local orders, cultural problems, lack of medications and equipment. The researcher suggests that ministry of health and treatment should provide enough equipment to settle financial problems of doctors and reduce their work pressure, prepare up to date educational policies for evidence-based medicine, educate specialized sources regarding education of evidence-based medicine, provide equipment and facilities, meet requirements of doctors, hold regional and urban conferences and seminars in different periods and doctors should be able to participate in such classes and workshops. Also, condition should be provided that medical system organization supports legally doctors who want to act based on evidences with aid of related systems and mass media and the ground for acceptance of evidence-based medicine should be provided in culture. Therefore, doctors are more interested in implementation of evidence-based medicine thus they can make the best decision and provide the best services for clients and the satisfaction and trust between patient and general practitioner is increased and quality of health & treatment services is promoted. The real place and value of doctors should be kept and their

place and role should not be threatened. Concerning that the researcher interviewed with general practitioners, there were some limitations in the study such as determining time for interviews, change of doctors' shifts, crowded work place of doctors. The researcher was responsible to supply financially all stages of the research.

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