

A study of knowledge and attitudes towards the use of evidence-based medicine among Primary Health Care Physicians in Bahrain

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ABSTRACT

Objective: A study of perceptions and attitudes towards the use of evidence-based medicine (EBM) among family physicians in Bahrain.

Methods: A systematically developed, anonymous, self administered 13 item questionnaire was mailed to 124 Bahraini family physicians in the Ministry of Health, Bahrain between January and April 2004. The response rate was 65%. Data were analyzed using the Statistical Package for Social Sciences (Windows version 11.00).

Results: The respondents (n=81) were mainly female (65.4%) with a mean age of 40 (SD 7.7) years, with 12.7 (SD 8.3) years since graduation. Forty-two percent had attended EBM workshops and 61% claimed to use EBM in their practice. Those who had attended a workshop were more likely to assert that they were practicing EBM (82%

versus 47%; $p=0.001$). Less than 10% selected 'patient's choice' as a component of EBM. The 81.5% of respondents agreed their patients were willing to participate in decision making but 50% felt that only 10-25% of their patients were capable. "No time" (53.1%) and "no ready access to resources" (73.5%) were the most cited barriers, 32% of respondents agreed that EBM is not applicable to their culture.

Conclusions: Most family physicians in Bahrain claimed to use EBM in their practice, particularly if they had attended an EBM workshop. However, most of them did not consider patients' values as a component of EBM. A substantial minority considered that EBM is inapplicable to their culture.

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Evidence-based medicine (EBM) is the conscientious, explicit and judicious use of current best evidence in making decisions regarding the care of individual patients.¹ The latest definitions also include the integration of best research evidence with clinical experience and patient values.² The evidence-based approach to medical care has been recognized as a key competency issue for doctors.^{3,4} The practice of EBM is geared towards the reduction of clinical practice variation and the promotion of

improved patient care. However, major barriers to the implementation and use of EBM include a perception that EBM is more academic than practical, and clinicians cite their own lack of EBM skills as a contributing factor.⁵ The aforementioned factors suggest that an important first step in the widespread adoption of EBM is the assessment of knowledge and attitudes towards the use of EBM among physicians.

To date, the majority of studies concerning the knowledge and awareness of EBM have been carried

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out in the developed world. Moreover, the existence of such studies in the Arabian Peninsula is rare.^{6,7} In this sense, the present study represents one of the first attempts to assess the attitudes of Bahraini doctors towards EBM.

Methods. The study was a cross-sectional survey of all the primary health care physicians working in the Ministry of Health in Bahrain between January and April 2004. The questionnaire (***Appendix 1**) was a systematically developed, anonymous, self administered 13-item scale that has also been used in a similar study of Saudi dentists.⁶ The questionnaire assessed the following: 1) Physicians attendance at EBM courses. 2) Physicians beliefs as to whether they were practicing EBM. 3) Awareness of the 3 components of EBM. 4) Awareness for what types of studies and research would provide the best evidence to support EBM. 5) Beliefs regarding patients' willingness to be involved in decision making, and 6) Beliefs regarding patients capability to be involved in decision making.

The questionnaire was distributed to 124 primary health care physicians working in the Ministry of Health. The response rate was 65%. Data analysis was largely descriptive, with frequencies of responses to each item recorded. In addition, responses to each question were cross tabulated by key characteristics of participants. Data were analyzed using Statistical Package for Social Sciences (Windows version 11.00).

Results. The respondents (n=81) were mainly females (65.4%) with a mean age of 40 (SD 7.7) years, with 12.7 (SD 8.3) years since graduation. Forty-two percent had attended EBM workshops and 61% reported using EBM in their practice. Those who had attended a workshop were more likely to assert they were practicing EBM (82% versus 47%; $p=0.001$). The results of the survey indicated a sufficient awareness of the 'hierarchy of evidence' in EBM, with 60% of doctors choosing the systematic review as being capable of providing the strongest evidence, whereas 28% chose a cohort study and 4% chose a longitudinal study. The awareness of the 3 components of 'hierarchy of evidence' in EBM indicated that less than 10% selected 'patient's choice' as a component of EBM. Results with regard to shared decision making indicate that 81.5% of the respondents agreed to their patients were willing to participate in decision making but 50% felt that only 10-25% of their patients were capable. Analysis of the barriers to the use of EBM showed that factors

such as "no time" (53.1%) and "no ready access to resources" (73.5%) were the most cited barriers, and 32% of respondents agreed that EBM is not applicable to their culture.

Discussion. The importance of an EBM approach is that it engages doctors in articulating clinical questions, searching for information, appraising the evidence, and applying the evidence in the actual clinical scenarios.⁸ Consequently, an important and necessary first step involves the assessment of both knowledge and attitudes to EBM.

The results of the present study revealed that the majority of doctors (60%) had an appropriate knowledge regarding the use of systematic reviews as providing the strongest evidence within EBM. However, this positive result should be contrasted with the small percentage (<10%) of doctors who identified patient choice as a component of EBM. Furthermore, the issue of the patient involvement in EBM indicated interesting differences, with over 80% of doctors identifying their patients as willing to participate in decision making, but only 50% reported that 10-25% of their patients were capable. These results would seem to indicate that these physicians severely underestimate their patients' ability and need to be involved in decision making. Such a finding is worthy of further study, as a shared approach and open communication between the doctor and the patient contribute positively to issues such as adherence to medication⁹ and patient satisfaction.¹⁰ Indeed, the increasing prevalence of chronic illness in the world means that patients are often required to manage their own illness on a long-term basis, taking responsibility for monitoring symptoms and adjusting their treatments, accordingly. Thus, greater involvement from the patient's side should be seen as a strategic resource for health care professionals. The recognition of shared decision making is the future of medical care, with the rights of patients to be involved in making informed choices regarding their own health care already a reality in countries such as the United Kingdom.¹⁰

The results of this study with regard to barriers to the use of EBM indicated that "no time" (53.1%) and "no ready access to resources" (73.5%) were the most cited barriers. The picture of the overworked physician with little time and scarce resources is a consistent one within the medical literature. However, the present study should be contrasted with a similar study in the Gulf region among Saudi dentists,⁶ which found that time constraints (26%) and lack of resources (46%) were rated as important barriers but not to the

*The full text including Appendix 1 is available in PDF format on SMJ website (www.smj.org.sa)

same degree as the Bahraini doctors. Indeed, a study of the barriers to EBM among Saudi primary health care physicians⁷ also indicated that time (21.5%) and limited resources (14.4%) were important factors. However, again not to the same degree as observed in Bahrain. This may reflect either differences in resource availability among doctors and dentists, or the medical cultural differences of both. However, both our sample and the Saudi dentists did report similar levels when asked whether EBM was applicable to their culture; 32% in our study and 28% in Saudi Arabia. There is good evidence that undergraduates may be inhibited from adopting the EBM approach not only because they lack the cognitive and technical skills, but also due to other equally important factors such as lack of recognition, support and use of EBM methods by clinical teachers^{12,13} and time pressures. These large percentages are noteworthy and warrant further investigation. The EBM is an accepted and important component of good medical practice, and such large percentages potentially present an important impediment to the adoption of EBM to the Gulf region as a whole.

The present study presents an important profile regarding the knowledge and attitudes concerning EBM in Bahrain. Changes to attitudes, perceptions and knowledge are important precursors to changes in behavior. The importance of integrating EBM into both medical teaching and postgraduate medical training is highlighted by studies that show only minimal EBM interventions can have a positive impact on the cognitive and technical skills of medical residents.¹⁴

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Appendix 1 - A study of knowledge and attitudes in the use of evidence based medicine by primary health care physicians.

Please circle or underline where appropriate

1. Your year of birth 19____
2. Sex M F
3. Years since graduation _____ years
4. Have you attended a course or workshop on evidence-based medicine? YES NO
5. Which are the main journals you read regularly?
 - a) _____
 - b) _____
 - c) _____
6. Have you ever used the evidence-based medicine approach in ordering tests or treatment?

YES NO
7. Clinical expertise is one of the 3 components of evidence-based medicine.

Underline 2 others

 - a) Famous text book
 - b) Senior consultants opinion
 - c) Evidence based medicine resource
 - d) WHO report
 - e) Your patient's choice
8. In the 'Hierarchy of Evidence' what provides the strongest 'evidence' in the evidence-based medicine concept?

Underline one

 - a) Cross sectional study
 - b) Systematic review
 - c) Cohort study
 - d) Longitudinal study
9. What do you consider the most important barriers to your using evidence-based medicine in your clinical practice?

Underline two

 - a) No ready access to evidence-based medicine resources
 - b) Threat to clinical freedom/judgment
 - c) It is research and not applicable
 - d) Don't believe that Evidence is universally applicable
 - e) It is difficult to understand
 - f) I have no time
10. If you discover that recent evidence contradicts your clinical judgment what would you do?

Underline one

 - a) Discard the evidence
 - b) Follow the evidence
 - c) Evaluate the evidence
11. The concept of evidence-based medicine is not applicable to my culture.

Underline one

Strongly agree Partially agree Disagree Strongly disagree
12. Patients are willing to participate in clinical decision making.

Underline one

Strongly agree Partially agree Disagree Strongly disagree
13. What percentage of your patients do you believe would be capable of participating in clinical decision making?

Circle one

10% 25 % 50% 75% 100%