Factors Affecting Self-reported Implementation of Evidence-based Practice Among a Group of Dentists

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Abstract

Objective: The study aimed at assessing the factors affecting the implementation of evidence-based practice (EBP) among a group of dentists in Saudi Arabia.

Methods: A cross sectional study design was used where a link to an electronic questionnaire was posted on the websites of the Saudi Dental Society and a social networking site for dentists. The questionnaire was available for three months after which responses were downloaded and analyzed. Descriptive statistics were calculated for various variables and logistic regression analysis was used to identify factors with significant effect on the implementation of EBP.

Results: Implementation of EBP was reported by 69.3% of respondents. Most respondents reported knowing and using MEDLINE and being able to search for evidence. The most frequently reported barriers were lack of time and availability of evidence. Factors that significantly affected the implementation of EBP were 1) having some knowledge of terms related to EBP, 2) reporting lack of EBP skills as a barrier, and 3) reporting resistance to change as a barrier.

Conclusions: Background knowledge related to EBP and training in its skills are needed for the implementation of EBP whereas the presence of resistance to change does not necessarily prevent its implementation.

Keywords: Evidence-based practice, Saudi Arabia, Barriers, Literature appraisal, Searching for evidence.

INTRODUCTION

Evidence-based practice (EBP) has been introduced to Medicine in the 1990s[1] with dentistry following afterwards with the ultimate objective of improving health care outcomes. It is defined as the "integration of the best available evidence with clinical experience and patient preferences in making clinical decisions,"[1] the stress being on the integration of the different aspects rather than relying on one approach to clinical decision making. In dentistry, the implementation of EBP is reported to be progressing at a slower pace compared to medicine.[2]

Several studies were conducted to assess knowledge and awareness as well as attitude and perception of dentists toward EBP.[2–5] Other studies assessed barriers perceived by dentists to prevent the implementation of EBP.[6,7] Studies were also conducted to assess certain aspects of EBP such as how dentists seek and understand new knowledge,[8,9] how they acquire and utilize scientific information,[10] the extent of research utilization among dental hygienists[11] and the frequency and type of information seeking behaviors used by dental hygiene practitioners and dental hygiene educators.[12]

A limited number of studies assessed the implementation of EBP as a comprehensive process.[13,14] Given the

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time since the inception of EBP, there is a noticeable scarcity of studies assessing the factors affecting the implementation of EBP. Such studies would help in the assessment of the promoters of this implementation against the barriers that can potentially prevent it. Results from studies conducted in countries where EBP has been introduced for almost two decades cannot be generalized to settings where EBP and, to some extent, health care systems have more recent histories. The present study proposes to fill this gap by identifying the factors affecting self-reported implementation of EBP among a group of dentists in Saudi Arabia.

MATERIALS AND METHODS

A cross sectional study design was used. Approval for the study was obtained from the Research Committee of the College of Dentistry, University of Dammam. The target population was dentists practicing in Saudi Arabia, nationals and expatriates.

A self-administered, anonymous questionnaire was developed based on previous studies.[13,15] The questionnaire started with a brief introduction to the study purpose, stressing data confidentiality and indicating the estimated time needed to complete it. It consisted of five parts. The first part collected personal and practice information data including nationality, gender, age, time since graduation, type of practice (private or governmental), specialization (general dentist or specialist/consultant) and having access to a dental library and the internet at practice. The second part assessed EBP-related knowledge including whether the respondent had previously heard about EBP, when and how, how well he/she rates his/her understanding of EBP and self-reported understanding of 13 terms commonly used in EBP. The third part of the questionnaire assessed the implementation of EBP and use of EBP-related resources. It included questions about whether the respondent implemented EBP in practice, self-rated ability to perform some skills required for EBP such as formulating a PICO question, searching for evidence and critical appraisal of literature, whether the respondent used books or peer reviewed journals as sources of evidence and if the respondent was aware of and/or used a number of EBP resources. The fourth part of the questionnaire assessed the barriers the respondents considered to prevent the implementation of EBP. The fifth and last part of the questionnaire asked the respondent about his/her attitude and his/her level of agreement with whether he/she considered that EBP has the potential to improve health care outcomes, whether he/she was willing to attend training sessions related to EBP and whether he/she was willing to support the implementation of EBP. The questionnaire was offered in English and all questions were close ended.

The questionnaire was pilot tested on 9 teaching staff members at the College of Dentistry, University of Dammam to assess clarity of questions, face and content validity as well as ease of using the electronic format of the questionnaire. Minor modifications in questions phrasing were performed accordingly. The modified questionnaire was uploaded to online survey website (www.fluidsurveys.com/; Bridgewater, New Jersey, United States) and a link to the survey was posted on the Saudi Dental Society website (www.sds.org.sa/) and a social networking site for dentists (www.saudident.com/). A reminder to respond to the survey was posted on each website three times over a period of three months. The latest estimate of the number of members of the Saudi Dental Society stands at 3000, although it is not known how many of them access the website regularly enough to notice the survey. In other polls posted on www.saudident.com/, the number of dentists responding to surveys ranged from 45 to 180. Hypothetically, a degree of overlap could have existed between the users of both sites since each website targeted dentists practicing in Saudi Arabia although the degree of overlap in the number of users cannot be known. It is unlikely that any user/dentist would have answered the questionnaire twice given its length.

An Excel file of the responses to the questionnaire was downloaded at the end of three months. The file was cleaned of personal identifiers to maintain confidentiality and imported to SPSS version 17.0 (SPSS Inc., Chicago, IL, USA) for statistical analysis. Descriptive statistics were calculated as frequencies and percents of responses to questions. A knowledge score of EBP terms was calculated by summing responses indicating understanding and ability to explain each of the 13 terms. Cronbach alpha of this knowledge score was calculated to assess its internal consistency. The EBP terms knowledge score was dichotomized into 0, no knowledge of any of the terms and >0, some knowledge of terms. The relation between applying EBP and various factors was assessed using chi-square (or Fisher exact test as indicated). Variables with statistically significant association at the 5% level were entered into logistic regression analysis to identify factors that affected the implementation of EBP and odds ratios calculated to assess strength of association. Bar charts were used for graphical presentation.

RESULTS

Responses were received from 201 dentists. Half of the responding dentists were Saudi, in the age group 24–35 and graduated in the last 10 years (54.5%, 52% and 48.7% respectively). Most respondents were male, working in governmental positions and general dentists (61.7%, 72.7% and 58.5% respectively). Most of them had access to a dental library and internet in their practices (59.2% and 79.6% respectively).