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Original Research Paper

Knowledge, Attitude and Practice of Dental Professionals towards Evidence-based Dentistry; A Cross-sectional Study in Saudi Arabia.

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Introduction: EBD is a process that reorganizes the way in which we perceive clinical challenges. It is a method of clinical troubleshooting that has developed from a self-directed and problem-based style to learning rather than the conventional didactic method. Materials and methods: This is a cross-sectional study conducted among dental professionals and interns of Saudi Arabia using an online survey. Online questionnaire was constructed consisting of questions related to personal, professional, and demographic data followed by questions including knowledge, attitude, and practice towards evidence-based practice. A pilot study was conducted by sending the survey to 20 participants and the data were inserted in SPSS version 22 to determine the reliability by using Chronbach's coefficient alpha (value: 0.880). Results: Findings revealed that 'own judgment' was never used by 15.7% of study participants, 'dental journals' were used most of the time by 27.6% of dentists, 16.3% had no idea what relative risk was and were not willing to know about it. Conclusion: There is a need of educating our dental professionals regarding scientific learning and evidence-based practice.

Keywords: Evidence-based dentistry, Dental professionals, Knowledge, Practice.

INTRODUCTION

Evidence-based dentistry (EBD) is a process for swiftly collecting, refining, and executing the best evidence in clinical practice. The American Dental Association (ADA) describes the term Evidence-based dentistry as a method of oral health care that needs the careful incorporation of systematic assessments of clinically relevant scientific evidence, concerning the patient's oral and medical condition and history, with the dentist's clinical proficiency and the patient's treatment needs and preferences (Vashisht et al., 2011; Pourabbas, 2012).

It is usually assumed that the more experience a dentist acquires, the better the standard of health care delivery. Nonetheless, recent investigations had indicated that there is an inverse relationship between the number of years of practice and the quality of care offered. EBD is a process that reorganizes the way in which we perceive clinical challenges. It is a method of clinical troubleshooting that has developed from a self-directed and problem-based style to learning rather than the conventional didactic method (Dimova et al., 2013; Rathod, Wanikar & Raj, 2016).

A multi-regional study conducted in the eastern European countries determined their dentists' attitude towards EBD. It was reassuring to note that when dentists were interrogated about EBD, most subjects revealed familiarity and positive opinions. Moreover, 89.1% believed that 'EBD is beneficial'. Nevertheless, the percentage of dentists applying EBD (32.1%) was somewhat low among all respondents (Yamalik et al., 2015). Another study from India revealed that although dentists were mostly aware of the notion of EBD, very little use of this idea in clinical practice was pursued, citing lack of access as a hurdle. Yet, the reflected mindsets toward EBD were good with most of the subjects expressing an interest in having additional information and learning about this concept (Rajagopalachari, Puranik & Rajput, 2017).

A Riyadh-based study reported that EBD is relatively a new model in dentistry and hence may not be a renowned concept to the majority of dentists. Overall knowledge and exposure of Riyadh-based dentists was low. Increasing awareness about EBD is essential to be emphasized in the undergraduate curriculum to ensure cultural changes. Informing the patient

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could also be a promising approach to endorsing an EBP cultural environment (Almalki et al., 2019).

A study conducted in Pakistan reported that only 23% of the subjects always applied Evidence-based dentistry. Lack of training on EBD was deemed as an obstacle to EBD and the second most common reason reported was lack of access to resources. Majority of the dentists (69%) were not educated or trained previously to perform EBD. Interestingly, 87% of them showed their eagerness to be trained in Evidence-Based Dentistry (Ali Shah et al., 2015). A similar study among dental professionals in Brazil revealed that most dentists (77.5%) reported altering their clinical procedures based on evidence gathered from journal articles. The kinds of investigations that led them to change their clinical practices were mainly clinical research articles and case reports. Working in the public sector was also linked with a lower prevalence of a habit of reading scientific journals and practicing EBD (Goncalves et al., 2018).

AIMS OF THE STUDY

- To determine the knowledge, attitude, and practice of dental practitioners towards evidence-based practice in dentistry.
- To determine the association of knowledge, attitude, and practice with qualifications and work sector of dental practitioners.

MATERIALS AND METHODS

Study Design

This is a cross-sectional study conducted among the dental professionals of Saudi Arabia using an online survey.

Study Sample

503 dentists including general practitioners as well as specialists/consultants were used in this study and were contacted using social media.

Study Instrument

Online questionnaire was constructed consisting of questions related to personal, professional, and demographic data followed by questions including knowledge, attitude, and practice towards evidence-based practice.

Instrument Validity and Reliability

A pilot study was conducted by sending the survey to 20 participants and the data were inserted in SPSS version 22 to determine the reliability by using Chronbach's coefficient alpha (value: 0.880). Validity of the questionnaire was tested by sending it to experienced researchers in REU and changes were made according to their feedback and comments.

Statistical Analysis

Collected data was analyzed using SPSS version 22, where descriptive as well as inferential statistics were conducted. Comparisons between groups were made with the value of significance kept under 0.05 using the Chi-square test.

RESULTS

Table 1 shows the demographics of study participants with 51.1% males and 48.9% females. Based on their qualification, 56.1% were general dentists and 43.9% were specialists/consultants. Regarding their work experience, 60.4% had less than 10 years, and 39.6% had more than 10 years. Whereas 37.2% worked as dentists as well as academicians, 62.8% worked as clinicians only.

Table 2 shows the overall responses to the survey questions, which revealed that 'own judgment' was never used by 15.7% of study participants, 'dental journals' were used most of the time by 27.6% of dentists, 16.3% had no idea what relative risk was and were not willing to know about it, 29% had no idea what meta-analysis was but they were willing to know about it. 18.1% had a good understanding of publication bias, and 36% had a vague idea about what confidence limits were.

Table 3 exhibits the comparison of survey questions and their responses on the basis of qualification, which shows that the overall difference between qualifications when inquired about frequencies of self-reported preferences of the sources that guide primary care was not statistically significant. However, statistically significant differences were seen when inquired about the terms 'P' (p-value: .002), 'relative risk' (p-value: .000), sensitivity (p-value: .044), and remaining terminologies.

Table 4 discloses the comparison of responses on the basis of job profile of study participants, which shows that the overall difference when inquired about frequencies of self-reported preferences of the sources that guide primary care was statistically significant (p-value < 0.05). Moreover, significant differences were achieved when inquired about terms such as relative risk (p-value: .044), sensitivity (p-value: .000), meta-analysis (p-value: .001) and O.R. (p-value: .001).

DISCUSSION

This study aimed to assess the level of knowledge and practice of dental practitioners regarding evidence-based practice. A similar study conducted in Jodhpur; India revealed that 24.6% of academicians and 25% of clinicians had a good understanding of the term 'relative risk'. When inquired about 'meta-analysis', 13.04% of academicians and 17.4% of clinicians reported good understanding. Moreover, 18.84% of academicians and 10.71% of clinicians reported good understanding when asked what publication bias was. All these differences were statistically significant (Rawatet., 2018). When these findings were compared with our study, it was revealed that 20% of academicians and 23% of clinicians had a good understanding of relative risk, which is slightly lower than the Indian study. When inquired about meta-analysis, 21% of academicians and 27% of clinicians showed good understanding, which is higher compared to an Indian study. These differences were both statistically significant. However, no statistically significant differences were achieved when inquired about publication bias.

It has also been noted from our findings that when inquired about certain terminologies, 20-30% of participants showed interest in learning about them in case they were not aware of it. When this information was compared with an Iranian study, it was noticed that more than 40% of dental practitioners working in both academic as well as clinics were interested in learning about these terminologies as they are an important part of evidence-based practice (Vahabi et al., 2020).

Table 1 Demographics of study participants

Demographics	Frequencies (%)
Gender	Males: 51.1% Females: 48.9%
Qualification	General dentist: 56.1% Specialist/Consultant: 43.9%
Work experience	Less than 10 years: 60.4% More than 10 years: 39.6%
Job profile	Academician: 37.2% Clinician: 62.8%

Table 2 Survey questions and their responses in percentages

Survey Questions	Responses (%)
Frequencies of self-reported preferences of the sources that guide primary care practice:	
Own judgment	Never: 15.7% Rarely: 32% Sometimes: 37.8% Most of the time: 14.5%
Consulting colleagues	Never: 14.7% Rarely: 33.4% Sometimes: 39.8% Most of the time: 12.1%
Medical representatives/pharmaceutical representatives	Never: 18.1% Rarely: 26% Sometimes: 38.6% Most of the time: 17.3%
Textbooks	Never: 14.9% Rarely: 19.1% Sometimes: 32.2% Most of the time: 33.8%
Dental journals	Never: 15.3% Rarely: 21.7% Sometimes: 35.4% Most of the time: 27.6%
Scientific electronic databases (Pubmed, Google scholar etc)	Never: 14.7% Rarely: 26.2% Sometimes: 36.8% Most of the time: 22.3%
Frequencies of self-reported understanding of terms related to evidence-based dentistry	
'P'	No idea and not willing to know: 20.1% No idea and but willing to know: 25.8% Have a vague idea: 30.8% Good understanding: 23.3%
Relative risk	No idea and not willing to know: 16.3% No idea and but willing to know: 26.2% Have a vague idea: 35.4% Good understanding: 22.1%
Sensitivity	No idea and not willing to know: 17.9% No idea and but willing to know: 21.5% Have a vague idea: 36.2% Good understanding: 24.5%
Meta-analysis	No idea and not willing to know: 14.7% No idea and but willing to know: 29% Have a vague idea: 30.6% Good understanding: 25.6%
O.R.	No idea and not willing to know: 18.3% No idea and but willing to know: 30.8% Have a vague idea: 31.4% Good understanding: 19.5%
Publication bias	No idea and not willing to know:17.1% No idea and but willing to know: 31.8% Have a vague idea: 33% Good understanding: 18.1%
Confidence limits	No idea and not willing to know: 15.1% No idea and but willing to know: 26.4% Have a vague idea: 36% Good understanding: 22.5%

Table 3 Survey questions with their comparisons on the basis of qualification

Survey Questions	General Dentist	Specialist/consultant	p-value
Frequencies of self-reported preferences of the sources that guide primary care practice:			
Own judgment	Never: 20% Rarely: 37% Sometimes: 33% Most of the time: 10%	Never: 10% Rarely: 26% Sometimes: 43% Most of the time: 20%	.000
Consulting colleagues	No Statistically significant association		.155
Medical representatives/pharmaceutical representatives	No Statistically significant association		.606
Textbooks	No Statistically significant association		.879
Dental journals	No Statistically significant association		.086
Scientific electronic data bases (Pubmed, Google scholar etc)	Never: 17% Rarely: 31% Sometimes: 37% Most of the time: 15%	Never: 11% Rarely: 20% Sometimes: 37% Most of the time: 31%	.000
Frequencies of self-reported understanding of terms related to evidence-based dentistry			
'P'	No idea and not willing to know: 21% No idea and but willing to know: 31% Have a vague idea: 29% Good understanding: 18%	No idea and not willing to know: 19% No idea and but willing to know: 19% Have a vague idea: 33% Good understanding: 30%	.002
Relative risk	No idea and not willing to know: 20% No idea and but willing to know: 31% Have a vague idea: 32% Good understanding: 17%	No idea and not willing to know: 11% No idea and but willing to know: 20% Have a vague idea: 40% Good understanding: 29%	.000
Sensitivity	No idea and not willing to know: 21% No idea and but willing to know: 24% Have a vague idea: 34% Good understanding: 21%	No idea and not willing to know: 14% No idea and but willing to know: 18% Have a vague idea: 39% Good understanding: 29%	.044
Meta-analysis	No idea and not willing to know: 17% No idea and but willing to know: 37% Have a vague idea: 26% Good understanding: 20%	No idea and not willing to know: 11% No idea and but willing to know: 19% Have a vague idea: 36% Good understanding: 33%	.000
O.R.	No idea and not willing to know: 22% No idea and but willing to know: 36% Have a vague idea: 26% Good understanding: 16%	No idea and not willing to know: 14% No idea and but willing to know: 24% Have a vague idea: 38% Good understanding: 24%	.000
Publication bias	No Statistically significant association		.097
Confidence limits	No idea and not willing to know: 16% No idea and but willing to know: 30% Have a vague idea: 37% Good understanding: 17%	No idea and not willing to know: 14% No idea and but willing to know: 22% Have a vague idea: 35% Good understanding: 29%	.014

Table 4 Survey questions with their comparisons on the basis of job profile

Survey Questions	Academician	Clinician	p-value
Frequencies of self-reported preferences of the sources that guide primary care practice:			
Own judgment	Never: 25% Rarely: 33% Sometimes: 34% Most of the time: 9%	Never: 10% Rarely: 31% Sometimes: 40% Most of the time: 18%	.000
Consulting colleagues	Never: 20% Rarely: 35% Sometimes: 37% Most of the time: 7%	Never: 11% Rarely: 32% Sometimes: 41% Most of the time: 15%	.003
Medical representatives/pharmaceutical representatives	No Statistically significant association		.709
Textbooks	Never: 20% Rarely: 21% Sometimes: 26% Most of the time: 33%	Never: 12% Rarely: 18% Sometimes: 36% Most of the time: 34%	.013
Dental journals	Never: 23% Rarely: 22% Sometimes: 32% Most of the time: 22%	Never: 11% Rarely: 21% Sometimes: 37% Most of the time: 31%	.002
Scientific electronic data bases (Pubmed, Google scholar etc)	Never: 20% Rarely: 26% Sometimes: 36% Most of the time: 18%	Never: 12% Rarely: 26% Sometimes: 37% Most of the time: 25%	.044
Frequencies of self-reported understanding of terms related to evidence-based dentistry			
'P'	No Statistically significant association		.146
Relative risk	No idea and not willing to know: 22% No idea and but willing to know: 22% Have a vague idea: 36% Good understanding: 20%	No idea and not willing to know: 13% No idea and but willing to know: 28% Have a vague idea:35% Good understanding: 23%	.044
Sensitivity	No idea and not willing to know: 22% No idea and but willing to know: 22% Have a vague idea: 36% Good understanding: 20%	No idea and not willing to know: 13% No idea and but willing to know: 28% Have a vague idea: 35% Good understanding: 23%	.000
Meta-analysis	No idea and not willing to know: 27% No idea and but willing to know: 20% Have a vague idea: 32% Good understanding: 21%	No idea and not willing to know: 12% No idea and but willing to know: 22% Have a vague idea: 39% Good understanding 27%	.001
O.R.	No idea and not willing to know: 23% No idea and but willing to know: 37% Have a vague idea: 21% Good understanding: 18%	No idea and not willing to know: 16% No idea and but willing to know: 27% Have a vague idea: 37% Good understanding: 20%	.001
Publication bias	No Statistically significant association		.346
Confidence limits	No Statistically significant association		.060

Another study in Pune, India described the level of knowledge among dental practitioners regarding scientific terminologies required for evidence-based practice. 'P' was reported to be known by 41.3% of dental academicians and 17.3% of dental practitioners. O.R. was identified correctly by 40% of dental academicians and 12% of dental practitioners with differences being statistically significant (Bhoret a., 2019). Comparing these findings with our results, it was noted that no statistically significant difference was found between academicians and clinicians when inquired about 'P'. 18% of academicians and 20% of clinicians were aware of O.R., which is lower than the compared study.

The requirement for every dental procedure or guidance to be built on sound scientific facts has provided growth to evidence-based healthcare to improve rapidly. EBD offers a dentist with an extra armamentarium to shape a judgment based on sound ideas and scientific support. It therefore facilitates exercise only an effective role in decision making, not an autocratic one. It plays the part of a bridge, linking real world dental practice to clinical research. Used appropriately, it is the one tool that can assist a dental practitioner to develop his practice and flourish professionally without any fear or questions. Clinical decisions undertaken in a clinic are affected based on a number of aspects ranging from economic viability, patient predilection, patient health, time limitation, accessible infrastructure, and

also the quality of the product in question. Evidence-based dentistry is one extra factor that if combined with the above factors, supports making the best choice with scientific support (Apparaju et al., 2016).

CONCLUSIONS

- Overall knowledge of dentists regarding evidence-based dentistry is low.
- Their attitude towards implementing evidence-based dentistry is neither positive nor negative, therefore it needs more motivation.
- Practice of evidence-based dentistry among dentists in this study is low.
- There is a need of educating our dental professionals regarding scientific learning and evidence-based practice.

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ETHICS STATEMENT

Data from the participants will be kept confidential.

CONFLICT OF INTEREST

There is no conflict of interest among the authors.

REFERENCES

ALmalki, W.D., Ingle, N., Assery, M. and Alsanea, J., 2019. Dentists' knowledge, attitude, and practice regarding evidence-based dentistry practice in Riyadh, Saudi Arabia. Journal of pharmacy &bioallied sciences, 11(Suppl 3), p.S507.

Ali Shah, S.M., Saquib, K.M., Omer, S.A., Mirza, D. And Ali, A., 2015. Awareness, Knowledge & Practice Of Evidence-Based Dentistry Amongst Dentists In Karachi. Pakistan Oral & Dental Journal, 35(2).

Apparaju, V., Kale, S., Srivastava, N., Goswami, R.D., Kondaveei, R. and Panthagada, V.S., 2016. Role of evidence based dentistry in day to day dental practice-perception of postgraduate dental students and clinical practitioners-KAP study. Journal of Advances in Medicine and Medical Research, pp.1-7.

Bhor, K.B., Shetty, V., Garcha, V., Vinay, V. and Nimbulkar, G.C., 2019. Knowledge, attitude, and perceived barriers toward evidence-based practice among dental and medical academicians and private practitioners in Pune: A comparative cross-sectional study. Journal of Indian Association of Public Health Dentistry, 17(1), p.48.

Dimova, C., Pandilova, M., Kovacevska, I., Evrosimovska, B. and Georgiev, Z., 2013. Evidence based dentistry–between the science and the clinical practice. Balkan Journal of Stomatology, 17(1), pp.5-8.

Gonçalves, A.P.R., Correa, M.B., Nahsan, F.P., Soares, C.J. and Moraes, R.R., 2018. Use of scientific evidence by dentists in Brazil: Room for improving the evidence-based practice. PloS one, 13(9), p.e0203284.

Pourabbas, R., 2012. Evidence-based periodontology: From knowledge and attitude to practice. Journal of Periodontology & Implant Dentistry, 4(1), p. 1.

Rajagopalachari, U.S., Puranik, M.P. and Rajput, S., 2017. Knowledge, attitude, and practices toward evidence-based dentistry among dentists of Bengaluru city. Journal of Indian Association of Public Health Dentistry, 15(3), p.239.

Rathod, S., Wanikar, I. and Raj, A., 2016. Perception of dental professionals towards evidence based dentistry. Journal of Education Technology in Health Sciences, 3(1), pp.8-12.

Rawat, P., Goswami, R.P., Kaur, G., Vyas, T., Sharma, N. and Singh, A., 2018.Knowledge, Attitude, and Behavior toward Evidence-based Dentistry among Dental Professionals in Jodhpur Rajasthan, India. The journal of contemporary dental practice, 19(9), pp.1140-1146.

Vahabi, S., Namdari, M., Vatankhah, M. and Khosravi, K., 2020. Evidence-Based Dentistry Among Iranian General Dentists and Specialists: A Knowledge, Attitude, and Practice Study. Iranian Red Crescent Medical Journal, 22(9).

Vashisth, S., Bansal, M., Gupta, N. and Rao, N.C., 2011.Evidence Based Dentistry an evolving concept. Journal of Indian Association of Public Health Dentistry, 9(18), p.226.

Yamalik, N., Nemli, S.K., Carrilho, E., Dianiskova, S., Melo, P., Lella, A., Trouillet, J. and Margvelashvili, V., 2015. Implementation of evidence-based dentistry into practice: analysis of awareness, perceptions and attitudes of dentists in the W orld D ental F ederation–E uropean R egional O rganization zone. International dental journal, 65(3), pp.127-145.

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