Perspectives of Dental Students and Faculty about Evidence-Based Dental Practice

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Abstract

Objective: The study aimed at evaluating attitudes and perceptions of dental students and faculty toward evidence-based practice, integration of technology and social media, general practitioners' and specialists' scope of practice, and dental practice rewards and disadvantages.

Methods: A survey instrument was designed with 10 statements rated on a five-point Likert scale (strongly agree to strongly disagree) and an optional comment section. The survey instrument was delivered through SurveyMonkey, whereby 401 students and 182 faculty members from ten U.S. dental schools participated (16% estimated response rate). Null hypotheses regarding the equality between the responses of the two groups were statistically tested using Mann–Whitney U test. Statistical significance was set at .05.

Results: Evidence-based practice is positively perceived by both groups, but with significantly higher support by faculty than students ($P = 0.002$). Both groups agreed that technological advancements are advantageous ($P = 0.95$), but do not constitute good dentistry and cannot mask poor clinical skills. Students showed higher support for social media than faculty ($P = 0.000$). Both groups perceived group practices positively. Faculty members showed higher agreement than students toward limitation of dental specialists' practices to their specialties ($P = 0.000$). Both groups are aware of practice disadvantages, such as increased litigation, health risks, and detriment to the dentist's posture. However, they both perceive dental practice positively despite all these challenges.

Conclusions: Students and faculty share generally comparable perspectives toward dental practice. They are both in agreement with evidence-based practice and adoption of technology. They both acknowledge practice limitations.

Keywords: Evidence-based practice, Dental practice, Practice, Technology, Student attitudes, Faculty attitudes, Survey.

INTRODUCTION

Dental practice is rapidly evolving. The dental profession has consistently benefited from advancements in technology, industry, machinery, and education. These rapid advancements will continue to benefit the dental field in the future. Consequently, as the dental field is changing,

attitudes and perceptions of dental students and faculty toward these changes may change as well.

There has been a significant interest in evidence-based dentistry (EBD). EBD requires the integration of the best evidence with patients' values and clinical situations in order to achieve the most appropriate clinical decision making. A dentist should individualize treatment based on integration of the strongest available evidence with patient's particular risk factors.[1] Like all other practitioners in health care, dentists should be competent in seeking evidence-based approaches to guide their decisions for patient care. Also, dentists should scrutinize the evidence in order to provide the best evidence to be followed and follow a practice in which treatment effects, patients' values, and cost-effectiveness of therapy are all balanced.[2]

In a study evaluating knowledge and perceptions of private practice dentists with respect to EBD, the majority of clinicians reported awareness, understanding, and adoption of an evidence-based approach to their practice of dentistry.[3] In another study exploring perceptions of faculty members, students, and alumni toward EBD, the perceptions were also positive.[4]

However, numerous barriers to implementing EBD have been reported. Some clinicians face difficulty in changing current practice models, resistance and criticism from colleagues, and lack of trust in evidence.[4] Lack of necessary time to identify and review the evidence was identified as another barrier.[5] Additionally, the literature in several instances is inconsistent, inconclusive, or even contradictory.[6] Despite all these challenges, EBD remains an important contemporary practice strategy, and consequently, faculty members should incorporate its principles in their curricula in order to prepare their students for be successful in providing EBD.[7] Faculty members should also reinforce the development of searching skills and use of different databases in order for students to seek out the evidence when needed for clinical decision making.[8]

Another contemporary practice strategy is risk management. In a litigious world, dentists strive to avoid litigations in their practices, which could affect their treatment decisions or performance in positive or negative ways. The Ethics Handbook for Dentists published by the American College of Dentists states that "Good risk management is not necessarily good ethics. Risk management decision processes often differ from decision processes based on ethical principles." Also, it is argued that risk management processes and decisions that do not include the perspective of the patient may be unethical.[9] It would be valuable to assess the attitudes and perceptions of students and faculty toward risk management and whether the dentist could compromise patients' welfare for the sake of risk management or not.

Further, technological advancements are becoming ubiquitous in dental practice. However, adoption of technology in dental practice has variable degrees. For example, some reports confirmed variable motivation between practitioners toward digital technology.[10] Another study found that several practitioners are hesitant to adopt digital imaging technology.[11] As these technological advancements continue to develop at a rapid pace, it would be valuable to evaluate whether dental students and faculty are interested in adopting the latest technological advancements or not. This entails continuous evaluation of student and faculty perceptions toward emerging changes in dentistry. Occasionally, students and faculty may not be enthusiastic toward technology. For example, one survey found that both groups view technology integration only a supplement to conventional instruction and they have mixed opinions about electronic textbooks.[12]

Social media is another growing trend in dental practice, including Facebook, Twitter, blogs, Flickr, and LinkedIn, and several other platforms. Social media include websites for people to interact, post views, read advertisements and many other activities that compromise a significant portion on one's time. Therefore, perhaps they could be integrated into the dental field. Some authors argue that dental schools and their students and faculty/staff can join the social media trend and open many horizons by enhancing communication with many users, including patients and other colleagues.[13] Even the YouTube website has been proposed as a potential website for dental education. Dentists recognize the importance of YouTube and other social media websites in relation to the formation of the public opinion about dentistry.[14] Social media has several documented advantages. It provides the chance for dentists to become friendlier with their patients, to keep them informed, and to enhance relationships with patients.[15] However, social media has raised several concerns in current practice environment, including ethical dilemmas, such as patient's privacy.[16] Also, it is difficult to determine what appropriate content for social media in dental practices is.[17] The attitudes and perceptions of students and faculty toward integration of technology and social media in dental practice are still unknown.

Furthermore, general practitioners' and specialists' scope of practice is another controversial topic. Several jurisdictions allow general practitioners to practice all dental procedures, but do not allow specialists to practice general dentistry, even though they are licensed dentists. Therefore, it would be valuable to assess the attitudes of students and faculty toward this topic.

Lastly, disadvantages of dental practice itself, such as stress and health risks, have been reported in the literature.[18,19] It would be valuable to seek the opinions of students and faculty regarding dental practice rewards and disadvantages, and whether they perceive dental practice to be detrimental to dentist's health or not. Also, it would be valuable to investigate whether they perceive dental practice to be fulfilling and rewarding or not.