## Letters to the editor\*

## Is there evidence against evidencebased dentistry?

I read with interest the letter by Mark Antosz<sup>1</sup> in a recent issue of the Journal entitled "The evidence against evidencebased dentistry" and the accompanying response by the evidence-based dentistry (EBD) editor of the Journal.<sup>2</sup> I believe that Dr Antosz should become better acquainted with what EBD is and is not. Evidence-based medical or dental practice is defined as "the conscientious, explicit and judicious use of current best evidence about care of individual patients integrated with clinical expertise and patient values to optimize outcomes and quality of life."<sup>3</sup> EBD involves tracking down the available evidence, assessing its validity and relevance, and then using the "best" evidence to inform decisions regarding care.<sup>4</sup> The primary aim, and the most valuable application of the evidence-based approach to the practice of dentistry, is "to encourage the ordinary practitioner to look for and make sense of the evidence available in order to apply it to everyday clinical problems."5

EBD involves the integration of the best research evidence with clinical expertise and patient values. These 3 important components are the key to evidence-based practice; each is essential and indispensable.<sup>6</sup>

I agree that the foundation of EBD is the scientific method. I also agree that the scientific method is a process to help us understand life, the universe, and everything. According to the author,<sup>1</sup> because the scientific method is implemented by human beings, it is not invulnerable to being tainted by the same flawed humans; this I also agree with. In addition, "make sure you view published research with a critical eye and don't accept everything you read as gospel" is also a vital point. Therefore, I want to inform Dr Antosz that critical appraisal is an important component of EBD.<sup>7</sup> When potential evidence has been found, it is necessary to determine whether it is credible and useful in one's practice by using the technique of critical appraisal.<sup>7</sup>

Once research findings have been published, especially in respected peer-reviewed journals, they achieve a certain level of respectability and credibility. However, methodologic research has shown that acceptance of the findings of many published studies is not always deserved.<sup>8,9</sup> Hence, the need for critical appraisal of published evidence. The concept and the tool of critical appraisal of published research works were developed by the evidence-based medicine group at McMaster University, Hamilton, Ontario, Canada,<sup>7,10,11</sup> and these also apply to EBD. Critical appraisal of the literature assists the reader in assessing the validity (closeness to the truth) and

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the relevance (applicability and usefulness in everyday practice) of the research findings. There are different techniques to evaluate and critically appraise research studies based on whether they are related to questions of therapy or preventive interventions, diagnosis, etiology, or prognosis.<sup>7,12</sup> Only after these rigorous scientific methods have been applied can scientific evidence be accepted. I therefore refer Dr Antosz to the excellent articles on EBD by Sutherland.<sup>4,7,12</sup>

The foundation of EBD is a rigorous scientific method based on well-established guidelines. The fear of the so-called "unsound EBD becoming a standard of care"<sup>1</sup> should not be entertained. EBD has come to stay. In the opinion of Greg Huang,<sup>2</sup> EBD is not perfect, and we must be critical in our assessment of all literature to make it work.

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