

Application of evidence in teaching and clinical protocols: Do we still nurture the “ostrich mindset”?



When an ostrich is afraid or perceives an impending danger, it buries its head in the ground assuming that because it cannot see, it cannot be seen. A rather interesting way to avoid problems! Some of us as professionals too, behave like the ostrich. We run away, change the topic or avoid certain people. The “ostrich mentality” is when a person refuses to confront or deal with issues that are facing him/her, whatever they may be.

As orthodontists, we carry information transmitted to us by a process of formal education and reading literature. We are taught to imbibe, but very often, not to analyze. We carry opinions, mindsets, protocols and clinical techniques that have very often never been validated by a scientific process and spend a lifetime assuming they are the “gospel truth.” There are large sections of the orthodontic populace, clinicians and academicians who are skeptical of their beliefs and procedures being questioned. This stems from a unique combination of misplaced confidence and diffidence and most importantly, a resistance to change.

During a discussion with a professional colleague, as to what the direction of future research should be, specifically, literature search for a post graduate orthodontic student project, I thought a search on “Clinical trials in Orthodontics” would be a meaningful exercise which would help the student corroborate research with day-to-day clinical questions. Initiating a student into reading about research designs and an in-depth analysis of Evidence Based Protocols (EBPs) is the best way to create the “thinking and analyzing

orthodontist of tomorrow,” was my point of view. My colleague’s answer to this suggestion left me dumbfounded and actually inspired this editorial. The answer was “Evidence and Trials’ stuff is good for reading, not writing about. It doesn’t give the student any information that they can apply clinically.” Though the colleague did agree EBO was good and the need of the hour, integrating it into a teaching programme where a well rounded basic orthodontic overview is taught, is indeed a challenge for Educators.

In the year 2014, should the orthodontic clinician and the academician still be a doubting Thomas to the reality of EBPs? Are we not at the risk of providing our patients care and our students information that cannot be substantiated by a scientific process? From a health care delivery perspective, is a patient safe in the hands of such a clinician? Is a teacher who doesn’t stimulate orthodontic analysis beyond clinical steps really doing justice to the tomorrow of orthodontics? The answers to these questions may well have a bearing on the future of our speciality!

The medical profession has designated Evidence Based Practice as a key feature of high quality medicine. The Dental profession is also making strides in the field. The goal ultimately is to improve “patient care based on new research developments.” In orthodontics, evidence based care is still in its infancy.

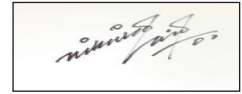
Studies in Medicine comprehensively indicate that most doctors welcome Evidence Based Practices and actually believe it improves patient care. Barriers to the same are cited as lack of time, overwhelming amount of literature and difficulties incorporating evidence into practice. In dentistry, when Swedish^[1] and Malaysian^[2] dentists were asked to express barriers, the additional reasons mentioned were lack of knowledge about evidence based practices and financial constraints. In a survey of orthodontists,^[3] it was found that awareness of the Cochrane database was low and understanding of evidence based terminology was also poor. Most of the orthodontists, even today, rely on eloquence based experts or a colleague’s advice, when faced with a clinical uncertainty, rather than follow an EBP to change their practice philosophy. Orthodontic

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literature being conflicting and ambiguous is another barrier, often cited by the ones who want to, but don't use EBP. This can be addressed by initiating programs and continuing education that will help with skill sets to have an in-depth understanding of the knowledge base available to us.

Less than a third of orthodontists today understand or can explain the meaning of a systemic review, a meta-analysis, prospective trials, cohorts, odds ratio, sample power, confidence intervals, specificity, null hypothesis, to name a few. Probably less than 10% can explain what PICO means. In light of this reality, when we can't analyze what we are reading or teaching, would not reading, analyzing and writing about EBP, Research Protocols or Clinical Trials augment a better future for a well-trained and molded orthodontist of the 21st century? To a question that often surfaces when asked about whether a research or a literature search project should even be a part of a Masters' program that is training students for being clinicians and practitioners, my answer is simple. Research Methodology, Basic Biostatistics and EBPs are to a clinical science what “grammar is to a language.” You might not surface it every day, but you still unknowingly need to understand and apply it well, if you need to use the language! For the academician who is training orthodontists, incorporating Evidence and Research Protocols is non-negotiable if we are to train young minds that never need to hide themselves in the sand or face

conceptual ignorance, but soar and conquer horizons that are still unseen by our science!



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