

What would the martian say?? Where we are with evidence based dentistry today?



Prof. Anmol S Kalha osre

BSc BDS MDS Cert Lingual Ortho (Germany)
Col (Retd) AD Corps

Director - PG studies, Senior Professor and Consultant, Orthodontics, I.T.S. Dental College, Greater NOIDA

Prof Kevin O'Brien from the University of Manchester writes a popular blog and uses this curious incident of the Martian to under scribe some very important points in clinical, research and evidence based outcome domain. This the way it goes, a little green man from planet Mars lands on earth and wanders into a convention of dentists. The dentists are surprised and they ask him who is he? And what is the purpose of his visit? He replies that he is from planet Mars and he visits earth as a part of their mission to discover the universe. In return he asks them who are you? The Dentist spokesperson says, "We are dentists". The Martian asks, "what do you do? ", The dentists say, "we fix teeth, make people smile, look good, improve their health and several other good things". The Martian says: Prove it. While the profession has spoken about this long enough, it is obvious that the only answers to the Martian would come from evidence and filtering information for knowledge. For a long time the profession has been unaccountable, relying on the existing image of the healing profession that we do good and patients need to accept it. This notion is being challenged as awareness grows, patients being entitled to more information, healthcare policy planners need structured information to look at funding services and facilities. Evidence is what is needed both in clinical practice and research.

Clinical research aims at establishing cause, relating cause and effect, and looking at therapeutic outcomes. Clinical research still broadly falls into Randomized and non Randomized studies. Non

Randomized studies fall into observational studies. Randomized clinical trials are the gold standard for assessing the efficiency and safety of interventions. The controversy that arises today is that all studies in Dentistry may not be randomized. It is not possible to have a control group being denied treatment ethically just to study the effect of an intervention. So there is a role for non randomized observational studies to be interpreted and used for clinical decision making and research. Herein lies the difference between evidence based dentistry and evidence based medicine. In medicine 2 different interventions or even a placebo may be in the larger good of the patient. Dental issues are more definitive, they need a precise intervention. A conceptual approach to assessing validity of a trial needs to be learnt and taught. Is the study population different from the population to which we wish to apply the findings? Are the target population characteristics likely to influence the results? Are the results generalizable to the target population not meeting all eligibility criteria?

The debate surrounding the randomized and non randomized studies has been furthered by flaws in both designs published in literature. Is there an agreement between nonrandomized and randomized trials? No publication answers this. But yet to answer the questions raised by the Martian, we need to teach critical appraisal skills so that both studies, randomized and nonrandomized can be used in research and decision making without competing with each other.