

## EDITORIAL

# The research component in orthodontic education: sniffing out rats (SnOR)

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‘Are we nearly there yet?’—the question everyone hates being asked when in the car/boat/train/plane, etc., with children. The: ‘Why do I have to do an MSc/MDent Sci/other similar qualification/this research project? I hate research’ is another question that has some similarities, but is probably easier to answer than ‘Daddy? Where did I come from?’

So, why do we bother with doing a Masters or similar qualification? A simple answer might be that it is what it states we must do in training guidelines, but there is a bit more to it than that. At this point it is probably worth highlighting that, sometimes, the question is phrased ‘Can’t we just learn how to critically appraise a paper?’

Well, let’s come to that in a moment, but it would be helpful to provide some perspective and give some examples first. Some classics spring to mind such as (in medicine): ileal-lymphoid-nodular hyperplasia, non-specific colitis and pervasive developmental disorder in children, Wakefield *et al.*<sup>1</sup>—the paper that did it for the MMR vaccine and put Andrew Wakefield on the map; in dentistry and orthodontics we could consider studies that have influenced our assumptions about positions of tooth stability; whether functional appliances grow mandibles and studies which have influenced our knowledge, understanding and management of TMD to name but a few topics. Is all this work, which has fundamentally affected what we do to patients, served us (or them) in good stead? I would suggest mostly not; there are some big rats in there, unnoticed by many clinicians for years and maybe we just do what we do and hope for the best and nothing too bad seems to happen. Perhaps that is just because we are lucky that we are dealing with orthodontics, and not something like cancer, or some other more life-threatening or incapacitating condition.

However, there are fundamental problems associated with much of the research that has been published in all these areas and many more besides, and it is certain that this will not stop overnight or even ever. However, should one accept the *status quo*? Is it right? It is certainly easiest and probably cheapest not to worry about research

training (and by that I mean ‘proper’ research training). For some, indeed perhaps many, that is probably enough—best not to scratch the surface. On the other hand, perhaps the questions should be ‘What would you like your own treatment (for anything) to be based on?’ And would you prefer it if the clinician doing the treatment has at least had the training to judge whether what they are offering is sensible having assessed the evidence?

Orthodontics is carried out mostly on children and, over the years, patient expectations have vastly increased. Whilst orthodontics is not a life and death matter in the way that cancer often is, the orofacial region is, nevertheless, ‘right in the shop window’ of facial aesthetics and may influence self-esteem. Orthodontists have not paid that much attention so far as to what exactly the patient gets from treatment (preferring to concentrate on plaster on the table, indices of outcome, etc.), but this no doubt will come. O’Brien *et al.*<sup>2</sup> have shown that orthodontics does affect how children feel about themselves and, whilst such areas are awkward to quantify, doubtless this is an area that will be much more investigated in the future. We should certainly not be complacent.

To do something well, we usually need to practice at it, and some things take a lot of practice and effort. It can mean some people won’t make the grade. Developing clinical skills takes practice, and research (being a part of clinical practice), is no different: doing research ‘practises’ the understanding of research work and findings. Millions of papers have been published in Medicine and Dentistry and millions by people who have not undertaken much (if any) research training. How good is that? Formal research training at least provides the tools to do the job even if the actual manipulation and use those tools are put to once acquired have then to be left to the individual.

Now we are in the twenty-first century, what is happening? Many areas of Medicine and Dentistry are acutely short of skilled specialists, trainers/teachers/researchers, both in the UK, the USA<sup>3,4</sup> and elsewhere. Indeed, a report published in 2002<sup>5</sup> (with input from individuals from Norway, Denmark, Slovenia,

Hungary, USA, UK, Republic of Ireland and Lithuania) highlighted the need for researchers to be recruited into Dentistry and to provide research and research training in order to ensure that clinical practice is evidence based. So, is the problem being addressed? I'm not sure it is. In the UK, orthodontics has a training pathway that involves formal research training and which other specialties would like to follow<sup>6</sup> yet, just when we should strive to improve the quality of what we can offer our patients, such pathways appear to be threatened. Well, so, what about my question: why can't we just read about how to do research or how to do it better? Errr ... I think I smell some rats coming.

## References

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