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Reply

We would like to thank the authors for their interest in our review. We appreciate the comments which highlight some of the difficulties in conducting systematic reviews and meta-analyses.

The decision to conduct quantitative synthesis is often somewhat subjective and opaque. It is unrealistic to expect trials from different settings to be identical in all respects; therefore, discretion is invariably required to assess their similarity. In this instance, we felt laceback use in the upper and lower arches to be comparable as they are applied and act in an identical manner. Furthermore, while although different measurement techniques were used in the two studies, both recorded the same outcome: antero-posterior change in incisor position. In view of the overlap of the confidence intervals (CIs), low statistical heterogeneity, allied to what we regarded as low clinical heterogeneity, it was decided that synthesis was reasonable using a random effects model. Furthermore, although only one of the two studies found a significant effect, the direction of the effect in the studies was consistent. Moreover, the range of the confidence intervalsCIs did not include genuinely important clinical effects, particularly in view of the potential measurement errors the authors refer to.

Missing data is are often problematic in clinical trials; however, if the data is are MAR (missing at random), the likely consequence is dilution of the effect, rather than biased inferences (Carpenter and Kenward, 2008). Adjudication of risk of bias necessitates assumptions and inferences, with varying levels of agreement among assessors (Hartling *et al.*, 2011). In both included studies, loss to follow-up was relatively balanced in both groups; reasons for failure to complete the study were also outlined in participant flow diagrams. Furthermore, even if, as the authors suggest, an unclear risk of bias judgment were given, according to Cochrane guidelines, meta-analysis would still be legitimate.

The authors had concerns that differences in baseline canine angulation between the respective groups may have resulted in biased estimates. While Although differences in baseline characteristics can confound the results of a trial, robust randomisation randomization procedures were implemented in both included studies. Consequently, baseline differences are less likely to be a problem, and would arise randomly. In fact, the paper by Usmani *et al.* (2002) reported the following mean canine angulation: 82.6 (9.0) 80.8 (8.0) [right side], 79.8 (10.9) 79.8 (9.3) [left side] for the laceback and the control group, respectively. Given the potential measurement error, such minor differences are likely to be insignificant.

Finally, our conclusions do indicate that: ‘“on the basis of the available evidence, the use of lacebacks has neither a clinically nor a statistically significant effect on the sagittal position of the incisors and molars during initial orthodontic alignment’”. We consider the clinical effect to be of greater importance than statistical significance; our interpretation was made on that basis.

Padhraig S. Fleming
Ama Johal
Barts and The London School of Medicine and Dentistry, Institute of Dentistry, Queen Mary, University of London

Nikolaos Pandis
Private practice, Corfu; University of Bern, Switzerland

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Towards quality in qualitative research

Sir,

I write to comment on the article 'The impact of hypodontia: a qualitative study on the experiences of patients' by (Meaney *et al.,* 2012). I read this article with great interest. Whilst the information presented in this article were of high importance by adopting a qualitative approach to explore patients' experiences in relation to hypodontia, there were some methodological aspects related to the validity of the results that should have been employed while conducting the study or at least addressing them as limitations in the Discussion section.

As in quantitative research, there are methods, different from those used in quantitative research, employed to assess reliability and validity in qualitative research. Unfortunately, the validity of the aforementioned study's findings was missing or not clearly presented. Furthermore, the process of data interpretation lacks clarification, in particular, the identification of the main themes. Was it done by one of the authors? Or data were analysed by all authors? Were data analysed independently and then comparison between emerging themes identified from each investigator was done? Did the authors conduct pilot interviews before commencing the main interviews to ensure standardization during the interviewing process and fair dealing with all participants of the study?

Despite the fact that there are several methods used to assess quality of qualitative studies, there was no mention of any method adopted in the published study. Indeed, there seems to be a disagreement on which method is considered superior when evaluating validity in qualitative research. Nevertheless, addressing the validity of the results is a common practice in qualitative research, in order to demonstrate 'scientific rigour' rather than 'soft' scientific results.

To the best of my knowledge, there are many methods used to assess validity in qualitative research (Mays and Pope, 2000). Respondent validity, which is used in many qualitative research studies, involves returning the data and findings to participants in order to obtain their validation. Reflexivity is another method adopted in evaluating validity. It assesses whether the findings of the study might have been influenced by personal and/or intellectual bias. Triangulation is a method that has been associated with robust qualitative research. Triangulation may include multiple methods of data collection and data analysis (Golafshani, 2003). Other methods include peer review/debriefing and external auditing, which involve having the researcher not involved in the research process evaluate the accuracy of methods, interpretations, and findings (Cohen and Crabtree, 2008).

Qualitative approaches in dentistry have become very popular in the last decade. They allow researchers to answer important research questions that are difficult to address satisfactorily using quantitative methods alone. Therefore, careful planning, understanding, and execution are imperative if we are to revive this approach in the dental literature.

Feras Hasan Abed Al Jawad
Dentistry Department, Orthodontics Section,
Hamad Medical Corporation,
Doha, Qatar
E-mail: ferasjawad@gmail.com

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