

## Question to Dr. Mason about old, outdated studies

"I have heard the claim made that "old" studies should be dismissed because of their age and because "old" and "out of date" technology was used in the studies. This doesn't sound right to me. I would appreciate your opinion. Thank you".

Dr. Mason's Response: Thank you for asking about this rather misguided claim. Those who would make such a claim should respond to the following questions: Would anyone recommend stopping the use of the vaccine for polio developed by Jonas Salk because he did the research that resulted in the vaccine more than 50 years ago? Or, should we stop using antibiotics because they were developed many years ago? Of course not.

A claim of studies being old and outdated presumes that there is a "life-span" for the value of a research publication. What criteria would one use to determine when a study or technology has become too "old" and "out of date"? Is it five years, ten years, 20 years, or more?

What credentials should a person have to qualify as the arbiter of when a study is outdated and when the findings need to be dismissed? I suspect that those who would make such a claim have not read the classic studies that have defined the many characteristics of OMDs and do not adequately understand the technology involved. I also suspect that those who would claim that old studies are outdated have not conducted and published any research of their own and lack experience in performing and interpreting clinical research. The intent here is not to confront individuals who have made such a claim, but instead, to evaluate the truth of any claims made.

What about the variety of "technology" used in orofacial myofunctional therapy today that was developed 40 to 50 years ago? Although the research value of the Payne Black Light technique was questioned and dismissed early-on, many clinicians continue to find value in the Payne technique as an educational and motivational tool in therapy. The "button-pull" exercise and the lip force scale used to measure lip resistance/lip strength are both clinical tools that were also developed during this time period. Consistent with the claim that old studies and technology should be discarded, should these old but still useful clinical technologies be discarded simply because they were developed 50 or so years ago?

The oral pressure-transducer technology developed by world-famous physiologist and orthodontist Dr. William Proffit and colleagues elucidated many of the facts underlying the discipline of orofacial myology. The series of studies that utilized this creative technology were subjected to stringent peer-review in convention presentations, in editorial reviews prior to publication, and by a committee of the National Institute for Dental Research, National Institutes of Health, that provided funding for the research projects. Peer-review provided opportunities for the technology and study findings to be challenged. The studies and technology passed all stringent reviews by dental and speech scientists.

Oral pressure-transducers have more recently been applied to the study of factors controlling dental eruption. Should this application of pressure-transducers also be dismissed because of the time-frame of its original development?

Surface electromyography (EMG) was employed in my doctoral study in speech science in 1964 (before most of you were born!) Brazilian speech pathologists continue to use this technology to study and quantify many applications of orofacial myofunctional therapy. Should we stop reading such research reports because the development of the technology precedes the year of birth for all of you?

Lateral cephalometric x-ray films have been the key tool used to document the growth cycles for tonsils and adenoids, the lips, and the relationships between tongue posture and surrounding morphology in patients with OMDs. Should the findings from such studies be dismissed due to the age of the original technology? What explanation is given when the technology used in classic studies continues to be used today in other applications?

Instead of questioning the procedures and conclusions of studies applicable to OMDs according to the age of publication, the efforts of orofacial myologists would be better spent designing and implementing studies of the many presumed clinical truths that remain undocumented about OMDs and their treatment. The need for clinical research with OMDs is a major deficiency and challenge facing the discipline of orofacial myology in achieving the goal of wider recognition and acceptance.

On this website under the heading of Dr. Bob's Clinical Pearls are two documents that address the dearth of clinical research with OMDs by USA orofacial myologists. One is: "Gathering Clinical Research Data in Orofacial Myology" and the other article is: "Suggested Clinical Research Projects in Orofacial Myology". Also on the website under the heading Myo-Research is an article titled: "Information, Perspectives and Aspirations for New I.A.O.M. Members and Those Seeking Certification". I hope that all orofacial myologists will become conversant regarding the tenets of the field discussed in the article and also detailed in the many publications listed in the reference section.

Those who would rather criticize the research contributed by dental scientists and others according to the age of studies done or technology used rather than replicating the studies or conducting other much-needed research, are not contributing positively to the growth of the field. The original studies that constitute the tenets for the field of orofacial myology deserve our respect, appreciation and full understanding rather than being subjected to ill-conceived criticisms.