

From the Editor

Editorial: Recommended Research in Oral Myology

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Recommended Research in Oral Myology

Over the years, much information concerning tongue-thrusting habits and oral myofunctional therapy has been gained through research. However, there remains a great need for future research in many profitable areas, and continuation of research is vital, not only for the survival of this journal, but also for the viability of the newly emerging profession of oral myology. The professionals who read this journal are highly informed students of deglutition and are uniquely equipped for research studies. All will certainly stand to gain from additional information to be gleaned from well-controlled investigations. The readers of *IJOM* are strongly urged, therefore, to undertake various research projects and to report their findings to the one journal totally devoted to furthering the cause of oral myology.

Picard (1975) defined our area of interest:

The term "Gnathology" is defined from gnathos, meaning jawed, and from stomato—stomat, meaning mouth. Therefore, it means to define the jawed mouth complex. It includes jaws, teeth, their investing tissues, and all of the neuromuscular system of the head and neck. It is this interconnected region of the human body in which we are interested (p. 78).

Following is a partial list of research recommendations which have been made in previous issues of *IJOM* and which, when accomplished, may yield fruitful additions to the body of knowledge which is being built up concerning our area of interest:

(1) Fish (1975, p. 18) stated,

Oral form discrimination ability in tongue-thrust swallowers is sufficiently different from that in normal swallowers to warrant further study.

(2) Hanson and Hanson (1975, p. 28) advocated the need for information concerning the "... relative effects of tongue and lip resting pressures on occlusion" and also research which would yield "... differentiating characteristics of the transitional and 'permanent'

tongue thruster." They further advised,

Longitudinal studies are needed to examine in depth patients who experience orthodontic relapse. Perhaps our attention to tongue thrust is obscuring other more important contributors to relapse. Well-controlled research comparing matched groups on the basis of time required to achieve corrected occlusion and permanence of corrected occlusion would help determine the validity or efficacy of oral myotherapy in preventing such relapse (1975, p. 28).

(3) Hanson (1975) described three possible approaches to the treatment of tongue thrusting which is associated with speech-articulation problems: (a) Treat the speech without attention to the tongue thrust; (b) Treat the tongue thrust and then observe concerning possible spontaneous correction of the articulation problem; (c) Attend to all aspects of the thrusting problem (speech, swallowing, rest position of the tongue, etc.). He called for research to determine which approach is best for which children and stated,

Furthermore, correction of the more noticeable /s/ defect may not have any effect on the more subtle dentalizations of other lingo-alveolar sounds, which may well be a part of a more recalcitrant total tongue thrust pattern (1975, p. 140).

(4) Picard (1975) suggested certain studies to shed new light on tongue thrust:

... take a number of thrusters presenting typical dentition, remove dental interference on one group and not in the control group. Will the thrust disappear? Further, give myofunctional therapy to a portion of the treated group, and to a number of the control group. What are the findings? (p. 82).

(5) According to Day (1975),

It will be the responsibility of the dental and oral myology groups to provide evidence that interference with these (tongue-thrust and tongue-resting) habits does in fact alter tooth

position, or aid in the altering of same. This obviously must be done with sound research programs and irrefutable clinical results (p. 9).

(6) Hanson (1975) recommended

An expanded study similar to that of Lear and Moorrees, wherein total pressure patterns, including rest postures of the lips and tongue, pressures during the dentalization of alveolar consonants, and pressures during swallows of various media (saliva, liquids, food) are evaluated relative to their effectiveness in moving teeth (p. 147).

(7) Penzer (1975) discussed an association between breathing/swallowing difficulties and sudden infant death syndrome. He said,

Steinschneider monitored in his laboratory cardiac and respiratory function of bottle-fed babies and he measured prolonged apneic episodes of susceptible children and related them to the different phases of physiological sleep. Pierce utilized sound waves to monitor deglutition of infants. A simultaneous monitoring of respiration and deglutition will certainly reveal such temporal relationships between these two all important functions as there exist. A significant breakthrough is quite possible (p. 116).

(8) Hanson (1975) discussed the possibility of relative reciprocal effects of dental environment and muscle function:

The only way to effectively demonstrate the relative effects of form and function upon each other would be to conduct longitudinal research with at least three groups of subjects. Group I would have normal occlusion and no tongue thrust, and would receive no treatment of any kind. Group II would have a malocclusion, preferably Class II, Division I, along with a tongue thrust, and would receive orthodontic treatment but no therapy for tongue thrust. Group III would also have a Class II, Division I, and would also receive therapy for tongue thrust. The groups would be followed from the age of eight through fifteen, to allow for all orthodontic treatment to be accomplished,

and a retention period to occur.

Ideally, even more groups would be included, representing other types of malocclusions, and therapy involving dental cribs. The difficulties of conducting such research are apparent, but unless a carefully controlled study is done, the literature will abound with inferences and suppositions (p. 138).

- (9) Barnwell (1977) expressed the need for investigation of lingual musculature. She stated that . . . the fibers of the extrinsic muscles must be traced systematically from their origins to insertions so that once the morphological boundaries are established, a frame of reference will exist for the study of the intrinsic muscles (p. 8).

In her own study of the morphology of musculus stylo-

glossus, Barnwell (1977) noted that the posterior fibers

. . . appear to form a transverse sling with fibers of the m. transversus linguae in the base of the tongue. The functional significance of that sling is worthy of investigation (p. 18).

Finally, she encouraged well defined, empirical description of all of the muscles of the tongue:

Although, anatomically, the muscles are described individually, it should be remembered that it is only through their combined actions that the organ is able to participate in complex functions, such as the articulation of speech. Therefore, the morphological and physiological muscular interrelationships, as well as lingual innervation for gross versus fine movements and proprioception are important areas which remain to be investigated (Barnwell, 1977, p. 18).

- (10) Hanson (1979) encouraged oral myologists to prove their work valuable by continually improving

. . . the quality of their therapy by always looking for a better way (p. 11).

The members of the International Association of Oral Myology and other readers of *IJOM* certainly have the knowledge and the necessary background to undertake such research activities as these. We who participate in oral myology and related fields may count ourselves among those who will profit from the fruits of such research, along with all the individuals in the world who suffer from oral-myofunctional disorders.

— Elnita Stanley

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