Research Article

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Tongue Thrust: Attitudes and Practices of Speech Pathologists and Orthodontists

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A questionnaire was mailed to a sample of speech pathologists and orthodontists throughout the United States to determine their views on tongue thrust, to discover the sources of those views, and describe the influence they are having on professional practices. The majority of speech pathologists and orthodontists sampled favored treatment or referral for some cases of tongue thrust and that speech pathologists and myofunctional therapists would be the most likely professionals for treating tongue thrust. The source of these views was most often accredited to professional practice. The majority of professionals sampled reported treating or referring cases of tongue thrust despite the fact that they acknowledged the lack of research evidence to provide them with clear direction for their professional practice.

The controversy surrounding the treatment of tongue thrust was brought to focus in the 1975 article *Position Statement on Tongue Thrust* (Joint Committee on Dentistry and Speech Pathology — Audiology, 1975). This statement by the American Speech Language and Hearing Association (ASHA) provided speech pathologists with guidelines to consider in estab-

lishing individual professional positions concerning this topic. Basically the committee reported that insufficient evidence existed to support the “. . . validity of the diagnostic label tongue thrust nor the contention that myofunctional therapy produces significant consistent changes in oral form or function . . .” (p. 331). The committee further stated that it could not “. . . recommend that speech pathologists engage in clinical management procedures with the intent of altering functional patterns of deglutition” (p. 331). Since the publication of this position statement numerous articles on this controversial issue have appeared in the professional literature (Barber & Bonus, 1975; Christensen & Hanson, 1981; Cottingham, 1976; Hanson 1976, 1981; Proffit, 1978).

The purpose of the present study was to determine the views on tongue thrust currently held by speech pathologists and orthodontists, to discover the sources of those views, and describe the influence they are having on professional practices.

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A four-page questionnaire was developed and mailed to a sample of speech pathologists and orthodontists throughout the United States. Three hundred seventy-four orthodontists were identified from the *Orthodontic Directory of the World* (31st Ed. - 1982) by selecting every 20th name. A sample of 578 speech pathologists was selected from the *American Speech-Language-Hearing Association 1983-84 Directory* (Spahr, 1983) in a similar manner, by selecting every 50th name. These procedures resulted in an initial sample size of approximately 5% of the orthodontic population and approximately 2% of the speech pathologist

population (see Table 1). Two hundred five questionnaires were returned from the orthodontists, a 55% return rate; 180 questionnaires were returned from the speech pathologists, a 31% return rate. The distribution of returns across geographic areas of the United States is very similar to the distribution of the total population from which they were drawn.

The mean number of years in practice was 10.40 for speech pathologists and 15.45 years for orthodontists (see Table 2). The majority of speech pathologists (73.7%) reported having encountered between zero and five cases involving tongue thrusting in the preceding year.

TABLE 1
Sample Summary

	Total Population	Total Sample	Returns
Speech Pathologists	36,686 ^a	578	180 (31%)
Orthodontists	7,151 ^b	374	205 (55%)

^a Based on listings in *American Speech-Language-Hearing Association Directory* F.T. Spahr, (ed.) (1983).

^b Based on listings in *Orthodontic Directory of the World*, (31st Ed. 1982) W.H. Oliver, (Ed.).

TABLE 2
Number of Years in Practice

	Range	Median	Mean	SD
Speech Pathologists	1 - 40	9.20	10.40	6.55
Orthodontists	1 - 45	14.17	15.45	8.84

TABLE 3
Tongue Thrust Cases Encountered During Past Year

Number of Cases	0 - 5	6 - 10	11 - 20	More than 20
Speech Pathologists	73.7	14.9	5.7	5.6
Orthodontists	10.6	27.8	26.8	34.8

Note: The values represent percentages.

TABLE 4
Community Resources

	Dentists	Speech Pathologists	Myofunctional Therapists	Other
Speech Pathologists	46.8	90.2	43.9	17.4
Orthodontists	37.1	80.2	45.0	9.9

Note: The values represent percentages. Since more than one item could be marked percentages will not total 100.

Approximately 35% of the orthodontists reported seeing more than 20 cases of tongue thrust for the same period (see Table 3). The professional resources available for treating tongue thrust are reported in Table 4. Both speech pathologists and orthodontists identified "speech pathologists" most frequently, followed by "myofunctional therapists" and "dentists" as available resources in their communities.

CURRENT VIEWS ON TONGUE THRUST

Respondents were asked to mark one or more of the following statements that best represented their current thinking concerning the effects of tongue thrusting on developing dentition:

1. It has little or no detrimental effect in most cases.
2. The effects, when they do occur, are easily corrected and therapeutic intervention to prevent them

- is rarely warranted.
3. Therapeutic intervention is desirable in some cases to prevent severe occlusion problems.
 4. Tongue thrusting should be treated whenever it persists beyond the loss of primary dentition.
 5. Tongue thrusting should receive appropriate therapy as soon as the patient is old enough to follow therapeutic procedures reliably regardless of the age or state of dentition.
- The distribution of responses can be found in Table 5.

Both the speech pathologists (65.3%) and orthodontists (54%) marked item number three most often, agreeing that intervention is desirable in some cases to prevent severe occlusion problems.

The majority of both groups indicated that sufficient research had not been done concerning the effects of tongue thrusting to provide clear direction for their professional practice (see Table 6). The speech pathologists (54.4%) agreed that in general children presenting dental occlusion problems who also exhibit tongue thrusting

TABLE 5
Effects of Tongue Thrusting on Developing Dentition

	No effect	Therapy rarely warranted	Therapy for some cases	Therapy after loss of primary teeth	Therapy when patient can follow instructions
Speech Pathologists	7.4	4.0	65.3	26.7	29.5
Orthodontists	12.4	8.4	54.0	23.3	29.7

Note: The values represent percentages. Since more than one item could be marked percentages will not total 100.

TABLE 6
Sufficient Research to Guide Practice?

	Yes	No	Don't Know
Speech Pathologists	12.3	65.9	21.8
Orthodontists	20.6	59.8	19.6

Note: Values represent percentages.

TABLE 7
Therapy Prior to Orthodontic Treatment

	Yes	No	Uncertain
Speech Pathologists	54.5	12.4	33.4
Orthodontists	31.0	52.8	16.2

Note: The values represent percentages.

should be treated for tongue thrusting prior to receiving orthodontic treatment. The majority of orthodontists (52.8%) however, felt that therapy prior to orthodontic treatment was not warranted while 31 percent felt therapy prior to orthodontic treatment was necessary (see Table 7).

SOURCES OF CURRENT BELIEFS

In identifying the source or sources that had the

greatest influence on their current beliefs concerning tongue thrusting both groups credited professional practice the greatest number of times followed by professional training (see Table 8). Information from the professional literature was also significant to both groups. The only marked difference noted was that the speech pathologists reported exchanging information with their colleagues more often than did the orthodontists.

TABLE 8
Greatest Influence on Current Beliefs

	Training	Literature	Practice	Colleagues	Continuing Ed.
Speech Pathologists	43.8	41.0	50.6	41.6	18.5
Orthodontists	39.5	33.0	75.5	19.5	5.5

Note: Values represent percentages. Since more than one item could be marked percentages will not total 100.

TABLE 9
Response to Need for Therapy

	Self-help	Provide therapy	Dentist	Myofunctional therapist	Speech Pathologist	Other
Speech Pathologists	37.6	50.6	25.3	28.7	56.2	6.1
Orthodontists	28.4	24.7	1.0	24.2	46.4	3.6

Note: Values represent percentages. Since more than one item could be marked percentages will not total 100.

TABLE 10
Factors Influencing Treatment or Referral for Therapy

	Age	Severity	Available resources	Other
Speech Pathologists	68.2	85.0	42.2	26.6
Orthodontists	36.4	67.4	49.7	18.2

Note: Values represent percentages. Since more than one item could be marked percentages will not total 100.

INFLUENCE ON PROFESSIONAL PRACTICE

To ascertain what influence current beliefs had on their professional practice, questions were included sampling their current practices in tongue thrust therapy, factors influencing treatment decisions, and referral practices. Table 9 contains responses to the following question:

If therapeutic intervention for tongue thrusting were indicated which of the following would you be likely to do?

1. Provide the patient with self-help suggestions.
2. Provide myofunctional therapy yourself.
3. Make a referral to a dentist with training in this area.
4. Make a referral to a myofunctional therapist.
5. Make a referral to a speech pathologist with training in this area.
6. Other professional resources.

Both the speech pathologists and orthodontists marked item 5 most often indicating that they would most likely refer tongue thrust cases to a speech

pathologist. A large number of speech pathologists (50.6%) indicated that they would provide myofunctional therapy themselves as compared to the orthodontists where 24.7 percent of their responses fell in this category. Providing self-help (item 1) was the next most often marked category for both groups followed closely by item 4 in which they would refer to a myofunctional therapist.

The respondents were asked to mark one or more of the following criteria that would influence their decision to treat or refer an individual exhibiting tongue thrusting behaviors: age of person, severity of condition, availability of competent assistance, and other. (See Table 10). The item marked most often by both groups was "severity of condition." The two groups disagreed on the importance of the next criterion. The speech pathologists selected "age of person" as the next most

frequent choice followed by "available resources." The orthodontists selected the same choices but reversed the order of importance selecting "availability of competent resources" more often than "age of person."

Referral practices of both groups are presented in Table 11. The greatest number of speech pathologists (49.7%) reported having never made a referral. Those speech pathologists who did make referrals selected other speech pathologists most often (35.8%) followed by "Dentist" (16.2%) and "Myofunctional therapist" (12.1%). The majority of orthodontists indicated that they referred to speech pathologists (63.5%) followed by "Myofunctional therapist" (26.6%), "Never made a referral" (24.8%) and less than one percent made referrals to dentists. For both groups it appears that when referrals are indicated, speech pathologists and myofunctional therapists are most frequently utilized.

TABLE 11
Referrals for Tongue Thrust Therapy

	Dentist	Myofunctional therapist	Speech Pathologist	Other	Never made referral
Speech Pathologists	16.2	12.1	35.8	5.8	49.7
Orthodontists	.5	26.6	63.5	4.4	24.8

Note: Values represent percentages. Since more than one item could be marked percentages will not total 100.

DISCUSSION

While both groups identified speech pathologists most frequently as one of the available resources for treating tongue thrust in their community, the number of times myofunctional therapists were identified is noteworthy due to the relative infancy of this professional association and in terms of the acceptance of this group as a viable referral source.

Professional judgements are being made regarding the treatment of tongue thrust in spite of the fact that

both the speech pathologists and orthodontists in the study agreed that sufficient research had not been done concerning the effects of tongue thrust to provide clear direction for their professional practice. It would appear that a substantial number of individuals in both professions have at least some general criteria in mind when they agree that therapeutic intervention is desirable in some cases to prevent severe occlusion problems. Although most of the orthodontists indicated that tongue

thrust therapy prior to orthodontic treatment was unnecessary, a substantial percentage (31%) supported the notion that tongue thrust therapy should be carried out prior to orthodontic treatment. A greater percentage of speech pathologists advocated tongue thrust therapy prior to orthodontic treatment but 33 percent of them were uncertain, whereas only 16 percent of the orthodontists were uncertain. It's interesting that more of the responses didn't fall in the "uncertain" category considering that both groups were in general agreement that sufficient evidence was not available to provide clear direction for their professional practice.

Considering the number of tongue thrust cases encountered annually by orthodontists as compared to the number of cases seen by speech pathologists it is not surprising to see that a greater number of orthodontists credit their current beliefs about tongue thrust to professional practice. Professional practice was also accredited most often by the speech pathologists as influencing their current beliefs about tongue thrust despite the fact that nearly 75 percent of them reported seeing only between zero and five cases annually. The next source of influence most often checked by both groups was "Training". Unfortunately the respondents were not requested to identify the nature of their training so we do not have any data to indicate how many received course work on tongue thrust in their professional training programs or how many have been certified or trained through the International Association of Orofacial Myology.

Referral to speech pathologists was most often mentioned by both groups in response to what they would do if tongue thrust therapy were indicated and in terms of actual referral practices. When a referral was made most speech pathologists reported that they had referred to a speech pathologist but approximately 50 percent of the responses indicated they had never made a referral. This could be a reflection of the relatively few cases of tongue thrust seen by the speech pathologists as com-

pared to the orthodontists. One hundred-twenty-nine or 73.7 percent of the speech pathologists indicated seeing between zero and five cases in the preceding year. Conceivably a large number of these speech pathologists may not have encountered any tongue thrust cases. This then, would account for the large number of speech pathologists reporting having never made a referral. Another explanation, in part, may be due to the fact that some of the speech pathologists may have treated the tongue thrust cases themselves. Finally, it may be interpreted as reflecting a belief that such a diagnostic entity does not exist or that evidence does not support that therapy is beneficial for altering the behavior. This explanation seems unlikely to account for very many of the responses since only thirteen speech pathologists reported that tongue thrusting had little or no detrimental effect on developing dentition.

The fact that both groups most often selected "severity" of tongue thrusting behaviors as the criterion for treatment or referral indicates that not only is tongue thrust recognized as a diagnostic entity by a significant number of professionals but that these individuals also have isolated patterns of behavior allowing them to make judgements on degree of severity.

In summary, the views of the speech pathologists and orthodontists sampled seem to favor referral or treatment of tongue thrust for some cases and that speech pathologists and myofunctional therapists are the professionals most likely to provide this service. The source of these views was most often attributed to professional practice but training, literature, and colleagues played a significant role as well. In terms of the influence their views are having on professional practice the majority of professionals sampled are treating or referring cases of tongue thrust despite the fact that they acknowledged the lack of research evidence to provide them with clear direction for their professional practice.

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