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SPEECH ARTICULATION DISORDERS
AMONG
MILITARY DEPENDENT SCHOOL CHILDREN

Speech Articulation Survey - Ayer Public School System, 1969-70

Speech Articulation Disorders Among Military Dependent Children by
Major Don E. Gordon, 1970, 12 p. This report presents the results
of a survey pertaining to speech articulation disorders among military
dependent children attending the Ayer, Massachusetts, public school
system in grades 1-6. Report indicates a higher speech articulation
disorder rate among dependent children of military personnel assigned
to Fort Devens and develops correlations between disorders and role
of military - father.

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The purpose of this report is to present the results of a survey pertaining to speech articulation disorders among military dependent children attending the Ayer, Massachusetts, public school system and to determine if they have a higher than average articulation disorder incidence rate.⁽¹⁾ The Ayer school system serves the adjacent army post of Fort Devens and, in my opinion, provides an excellent sampling for a survey of this nature due to the following factors:

(1) The number of civilian and military dependents in attendance at the schools is divided equally.

(2) Fort Devens is comprised of a well defined and varied troop complement, thus allowing further study of the effects of the father's job upon his child's emotional adjustment.

(3) Fort Devens provides an excellent environment. It is in a rural setting, has adequate housing, is well maintained, and is located within 35 miles of Boston.

A certified speech pathologist with three years' experience in the Ayer public school system conducted the survey during October 1969, in her normal screening of the entire student body; included were 1,846 elementary students in grades one through six, of which 962 were military dependent children.⁽²⁾⁽³⁾ A typical elementary student group of this size would normally have an articulation disorder incident rate of about five per cent. Half of the affected students could be expected to have severe disorders, with the remaining half having moderate disorders but still requiring speech correction.⁽⁴⁾⁽⁵⁾ However, in the Ayer

schools the speech pathologist identified nine per cent, 162 students, as falling equally divided into these two categories. This over-all percentage rate is almost twice as high as the national average.⁽⁶⁾ Further evaluation reveals that only three per cent of the 886 civilian students are affected, accounting for just 23 cases of articulation disorders.⁽⁷⁾ However, about fourteen per cent of the 962 military dependent children have articulation disorders, accounting for 139 cases proportionately dispersed through all six grades. This incidence rate is 3.5 times greater than the national average and five times greater than that for the civilian dependent children attending the same school system. Since speech articulation disorders frequently indicate emotional problems and affect the child's adjustment in school, the consequences are of importance to every military parent and teacher.

The age of sound mastery is a maturational process which varies and is not always perfected upon entering school. However, the normal child develops clear, intelligible speech between the time he enters first grade and age eight. Girls generally speak more fluently than boys during the younger ages and the entire socioeconomic environment has considerable influence. Usually, articulation is steadily perfected through age eight. Children who have articulation difficulties do not produce all of the speech sounds in the usual and accepted manner. They either omit certain sounds or syllables or substitute sounds such as, "Watch me wan home." They also may distort sounds, of which the

consonant "s" is the most common.⁽⁸⁾

Articulation disorders are responsible for about three of every four school speech problems.⁽⁹⁾⁽¹⁰⁾ The causes of articulation disorders are divided into three broad categories: (1) constitutional factors such as dental abnormalities, poor hearing, mental retardation, and inability to discriminate between sounds; (2) faulty learning caused by poor speech models, lack of stimulation, and lack of motivation; (3) emotional maladjustment. Affected children are generally classified as severe, less severe, and slight. The latter type frequently appears in all children at one time or another and is usually corrected by the child without special help. This survey includes only those children having disorders determined by the speech pathologist to be caused by faulty learning, emotional maladjustment, or unknown causes. It does not include those children afflicted with constitutional disorders or mental retardation.

Naturally, the question arises: Why do these military dependent children have an articulation disorder rate 3.5 times greater than the national average? I do not think it is a peculiarity common only to the Ayer public school system, but rather one that is reflected in all schools serving military families. I think it reflects the military family environment. Articulation disorders frequently display emotional disturbances, and many educators at the teacher, principal, and superintendent levels contend that this is the primary causal factor of military dependent children's school problems. This is admittedly a

generalization. A correlated question also arises: Are articulation disorders more prevalent among children whose fathers are assigned to military units that are characterized as being exceptionally aggressive, hostile, and trained for combatives than among children whose fathers are assigned to the Finance Corps, as an example? In order to answer these questions, the 139 affected children were identified with their soldier-fathers. In addition, a separate group of 139 unaffected military dependent children was selected at random from grades one through six and they, too, were identified with their fathers. The military personnel records of the fathers in both groups were studied in considerable detail and all items collocated in an effort to determine a correlation between significant aspects of the fathers' military service and the incidence rate of articulation disorders among their children. Every father had over four years service and most had in excess of seven years. Each father was assigned to one of six well defined categories on the military post based on the nature of his unit's mission, his skill, and the typical behavior required to perform his duty.⁽¹¹⁾

(1) United States Army Security Agency Training Center and School. Approximately 47% of post military population. Characterized as a technical-intelligence function.

(2) Special Forces Group. Approximately 11% of post military population. Characterized as aggressive training, strict discipline, and combat oriented training.

(3) Hospital and all other medical service units.

Approximately 15% of post military population. Excludes doctors and nurses carried under officer category.

(4) Support Group. Approximately 15% of post military population. Includes engineer units, army garrison, and all administrative units.

(5) Officers, regardless of unit of assignment. approximately 11% of post military population.

(6) Officer and enlisted personnel not included above but on duty in Vietnam and having dependents living in the general geographic area and whose children attend the Ayer public school system.

There was a definite correlation in the following areas. First, of the 139 children having articulation disorders, every father had experienced exceptional separation from his children due to military duty. On an average, 70% of their military service was spent overseas, about 48% spent separated from their families for periods in excess of three months. It was not unusual to find service records reflecting 9 of 11 years overseas, 7 of 10 years, 8 of 10 years, and so on. The fathers of the 139 unaffected children spent an average of only 57% of their service overseas and only 20% of their service separated from their families. Only one of these children had an emotional problem carried over into school.

Second, among the most important points brought out by this survey was that 65% of all children surveyed in grades one through six whose fathers are currently serving in Vietnam have articulation

disorders - serious disorders.

Third, when two languages are spoken in the home, one by the mother and another by the father, it may produce articulation difficulty as it did in 28 of the 139 cases. When another 28 bilingual children from the group of unaffected children were examined to determine how articulation difficulty was prevented, one constant practice was predominant. The English language was always the "official" family language used in the home at meal time, for correction, and in discussing school. This practice appeared effective in bicultural marriages even when the mother lacked basic English skills.⁽¹²⁾ It was my impression that none of the affected bilingual children really understood which was his language. This produces an unanswered question: Can a child have only one language as opposed to being able to speak and think in several languages? This correlation contradicts another authoritative premise that the increased articulation disorder incidence rate among military families is attributed to a higher proportion of foreign born wives since the mother has long been considered the most important speech model. This survey discovered that school children can speak excellently, even if their mothers do not. This is attributed to the importance of the peer group (after age five) as the most influential speech model and, also, the widespread indoctrination by television. However, this is dependent upon the child's recognizing his language.

In addition to the military father's extended separation from his family, we must consider the impact of other time spent

away from the home due to assignment to rapid response troop units, riot control duty, work weeks in excess of 40 hours (and not infrequently 60 hours or more), and the time awaiting assignment of quarters, which may exceed six months in some areas. At many military posts, as opposed to Fort Devens, the child himself is frequently assigned to overcrowded schools. It is not uncommon for the child to live in a house on the economy, move into military quarters perhaps three months later, and then have to move again because the military is rearranging the post. Many fathers reported living in twelve houses during a period of six or seven years.

Another incidental factor suggested by this survey, but not substantiated, is the influence of the grandparent. It is impossible to determine precisely how frequently each child has had an opportunity to be with his grandparents. It is assumed, however, that because of the transient nature of military families most do not see their grandparents frequently. Parents of the children within the articulation disorder group where the father has had considerable service overseas and also parents of children whose fathers had recently returned from Vietnam but who had avoided the articulation disorders were interviewed on this aspect. In the latter group the families had usually stayed with relatives or lived in close proximity to them. Those children having articulation disorders more often than not lived separated from relatives. Perhaps the grandparent is intended to absorb much of the impact of the missing father. Do we miss

the compassionate voice of the doting grandparent who is willing to exchange nonsense talk, join in games, and is no longer subject to the pressures of raising children to face today's world? Experimenting with sounds is critical to proper articulation, and one only has to observe children playing with their grandparents to appreciate the impact they have on the child's speech development and thus answer the previous question in the affirmative. This may also suggest the reason as to why very large families in this survey had almost no articulation disorders. In the military family, when the father is overseas, it is frequently only mother, and then she has more than her share of correcting the children. Upon father's return from Vietnam, he is treated like the family idol and doesn't dare break the spell. Mother, confronted with this situation, is also compelled to give up discipline for a while; then it must all begin again - very suddenly.

There is no valid generalization as to the military father. Most are like Americans in all walks of life and deeply love their children. Both civilian and military dependent children that have articulation disorders need parental help, understanding and, most of all, love. They need to unwind. They do not need corrective pressure from within the family. Children do not simply grow out of most of these problems. They need the professional help of a speech pathologist.

This survey indicated there was no correlation between the child's articulation disorder and the father's or mother's age,

father's geographic area of influence, father's rank, father's or mother's education, father's GT score, father's unit of assignment, father's skill or MOS, father's or mother's religion, father's or mother's race, place of the child in the order of children in the family, or any combination of the above.

As a matter of interest, the following information is presented:

Average GT Score and Education Per Survey Group of Fathers

<u>Unit</u>	<u>GT Score</u>	<u>Years of Formal Civilian Education</u>
ASA	114.8	12
Special Forces	111.6	13.5
Hospital	100.4	11
Support Group	99.9	10.2
Officers	-----	17.8

Percentage of Children in Grades One through Six
Having Articulation Disorders

(as categorized by father's unit)

ASA - 15.0% of all ASA children in grades 1-6.
 Special Forces - 16.2% of all Special Forces children in grades 1-6.
 Hospital - 13.1% of all Hospital children in grades 1-6.
 Support Group - 14.0% of all Support Group children in grades 1-6.
 Officers - 12.9% of all Officer children in grades 1-6.
 Vietnam - 65.0% of all children whose fathers are in Vietnam.

It is not contended that a survey performed on such a small scale at only one army post provides accurate statistical data or definite conclusions representing the entire armed forces or even the army. It does, however, illustrate and identify a military problem. This survey indicates that military dependent

children at Fort Devens need extra professional help and that, in most cases, they are not receiving it. Most schools do not have full time or even transient speech pathologists. One reason is a professional shortage; another is funds. There is no excuse for the latter applying to any civilian school system specifically subsidized by the federal government for each military dependent child in attendance, or to any military dependent school in the United States or overseas. When this problem exists on the military post and there is neither sufficient equipment nor professional personnel to assist in helping these children (and many other handicapped children, I might add), then I question the entire purpose of charitable contributions. When one considers that military personnel contribute two to three times more to charitable organizations than do their civilian neighbors, with respect to adjusted income and the exclusion of corporate and business donations, any financial excuse becomes ludicrous.⁽¹³⁾ Only a small percentage of the federal campaign fund donations (about 10%) is granted to the military community, and there is no specific channel through which to donate to welfare of this nature.⁽¹⁴⁾⁽¹⁵⁾ There are sufficient funds collected at Fort Devens and at all military posts to subsidize graduate students in speech pathology and to purchase needed equipment and material, if necessary. Above all, this survey illustrates the necessity to conduct a wide-scale comprehensive survey at Department of Defense level to either refute these findings or to direct professional help where it is needed.

FOOTNOTES

1. Military dependent children are defined as sons or daughters of military personnel on active duty with the armed forces.

2. These figures are in accordance with October 1969 attendance reports provided by the Superintendent of Public Schools, Ayer, Massachusetts.

3. All available elementary students were screened for articulation disorders at the beginning of the 1969-70 school year. Afflicted children were not identified as to whether they were military or civilian dependent until completion of the screening process.

4. American Speech and Hearing Association, Committee on the Midcentury White House Conference, "Speech Disorders and Speech Correction," Journal of Speech and Hearing Disorders, 17 (June, 1952), p. 130.

5. Wendell Johnson et al., Speech Handicapped School Children (New York: Harper & Row, 1967), p. 15.

6. As opposed to articulation disorders, the incidence rates of stuttering and voice disorders are normal.

7. The slight disorders, normally corrected by the child without special help, were not brought out in the screening process, thus depicting a lower than average civilian incidence rate.

8. Johnson, op. cit., p. 111.

9. Johnson, op. cit., p. 111.

10. Journal of Speech and Hearing Disorders, Monograph Supplement 8 (Danville, Illinois, 1961), p. 38.

11. This distinction is based on the unit's mission and the typical daily tasks. It is not influenced by the newly assigned personnel, length of one's hair, or the press of the uniform. It is based on attitude of the assigned members having more than four years service. 108th Military Intelligence Group is omitted as an unsuitable base for a survey of this nature; no further explanation is appropriate. In a few instances a soldier-father was transferred from one group to another based on his military skill; as an example, an ASA finance clerk would be carried under the administrative group. Officers were carried as a separate group due to inconsistent unit assignment and since all were college graduates.

12. Fluency is effective communication and not degraded by accent or interspersing native vocabulary, so long as the speaker maintains control of his language.

13. In 1968, Fort Devens collected \$51,536 in the Combined Federal Campaign Fund, which is similar to the United Fund drive, an average of \$5.79 per person from the lowest paid private to the highest ranking officer. Ninety per cent of all personnel contributed.

14. Only \$15,247 was spent by Fort Devens' agencies; the remaining \$36,000 was donated to the National Health Agency, the Red Cross, and the International Service Agency. The \$15,247 used at Fort Devens was arbitrarily assigned by the post commander, and mostly to healthy charity such as scouting or youth activities.

15. For further elaboration refer to: Analysis of the Fort Devens Combined Federal Campaign, Lt. John E. Bonine, USASATC&S, 21 May 1970.