

A PRELIMINARY STUDY OF BILINGUALISM AND STUTTERING IN
FOUR JOHANNESBURG SCHOOLS.

(Summary of the original article.)

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1. INTRODUCTION.

The question as to the relationship between bilingualism and stuttering is still largely a matter of conjecture among Logopedical authorities.

Both McAllister (4) and Smiley Blanton (1) quote cases of stuttering in which language conflict seems to be the chief etiological factor. From the statement by Fröschels and Jellinek (2) of "the conflicts which arise within us" during the process of learning a foreign language, it is justifiable to infer that stuttering may result from such language conflicts. Burford Johnson (3) advises "unilingual development in early years" to eliminate the confusion that necessarily results from the acquisition of two languages simultaneously. The above authorities offer no statistical data to substantiate their beliefs.

The only study offering statistical data bearing on the problem, that has come to the attention of the investigator, is that of Travis, Johnson and Shover (5). This investigation was conducted in East Chicago, Indiana, U.S.A. on 4,827 school children. Significantly more stuttering was found among bilingual than among unilingual children, the respective percentages being 2.80 and 1.80.

It is the aim of this small, preliminary investigation to ascertain whether or not this tendency is observable in a bilingual country such as South Africa which has as its two official languages Afrikaans and English.

II. SUBJECTS.

This investigation was carried out in four Johannesburg schools, (two Afrikaans and two English medium,) with a total population of 1,861 children, ranging in age from six to sixteen years. The standards in the four schools ranged from Grade 1 to Std. VII, inclusive, plus special classes for mentally retarded children. Each school contained approximately the same number of boys and girls.

III. PROCEDURE.

Each school child received a bilingual copy of the ^{*}questionnaire which was filled in by his/her parents. Both children and parents were kept in ignorance of the real purpose of the questionnaire, viz. to ascertain whether

* Copy of questionnaire can be found at the conclusion of article.

there is any relation between bilingualism and stuttering.

As time did not permit an individual speech examination of every child, only those children considered by their class teachers to be stutterers were interviewed. In a few cases the investigator's diagnosis did not agree with that of the teacher. The children designated as stutterers in this study then, are those considered to be stutterers both by their class teacher and by the investigator. The interview was standardised and was conducted in the language corresponding to the medium of the school.

The stuttering children were classified according to an arbitrary five-point severity scale ranging from S1 (representing a child with only the primary symptoms of stuttering) to S5 (representing so bad a stutterer that for all practical purposes he is unable to communicate with society).

Each questionnaire was then examined and classed under one of the following classifications:

- A Unilingual, Afrikaans speaking only before the age of six years.
- E Unilingual, English speaking only before the age of six years.
- AE Bilingual, used both Afrikaans and English equally before the age of six years.
- Ae Bilingual, but used a great deal more Afrikaans than English before the age of six years.
- Ea Bilingual, but used a great deal more English than Afrikaans before the age of six years.
- EO Bilingual, used both English and another language e.g. French, Syrian or Jewish equally before the age of six years.

IV. RESULTS.

For the sake of convenience, the two Afrikaans medium schools are designated as Ax and Ay respectively, and the two English medium schools as Ex and Ey. These four schools had a total population of 1,861 children, but the questionnaire was answered by only 1,035 children. However, there was good reason to assume that the number of questionnaires submitted from each school constituted a fair sampling of that school and the figures that follow are based on that assumption.

The following table shows the number and percentage of stutterers in comparison with the general school population in each language group in each of the four schools.

TABLE 1.

Number and Percentage of Stutterers in Comparison with the General School.

Population in each Language Group in each of the four Schools.

School	Language Classification	Number of Pupils.	Per cent Pupils	Number of Stutterers	Per cent Stutterers
Ax	A	372	82.0	2	0.54
	E	6	1.3	0	0
	Ae	75	16.7	2	2.65
Ay	A	424	87.8	13	3.07
	E	6	1.3	0	0
	AE	20	4.2	0	0
	Ae	22	4.5	1	4.6
	Ea	11	2.2	0	0
Ex	A	32	6.6	0	0
	E	273	57.0	2	0.72
	AE	72	14.7	0	0
	Ae	23	4.8	0	0
	Ea	69	14.2	4	5.79
	EO	13	2.7	1	7.63
Ey	A	6	1.2	0	0
	E	340	77.6	7	2.06
	AE	24	5.4	0	0
	Ae	18	4.2	0	0
	Ea	46	10.5	1	2.16
	EO	4	1.1	0	0
TOTAL		1861		33	1.77

The material of Table 1 is presented in summary form in the following table, the children being merely classified as either unilingual or bilingual before the age of six years.

TABLE 11.

PERCENTAGES OF UNILINGUAL AND BILINGUAL STUTTERERS.

Language Classification	Number of Pupils	Number of Stutterers	Per Cent Stutterers
Unilingual	1444	24	1.66
Bilingual	417	9	2.16

Table 111 shows the sex ratio among the stutterers in the two language groups, (unilingual and bilingual,) and their severity ratings. No stutterers were considered to belong to the S5 category; stutterers classified as belonging to S1 and S2 groups have been combined and regarded as "mild" stutterers, while those stutterers from groups S3 and S4 have been combined to form a group of "severe" stutterers.

TABLE 111.

SEX RATIO AND SEVERITY RATINGS OF THE STUTTERERS IN
THE UNILINGUAL AND BILINGUAL GROUPS.

Language Classification	Severity Rating	Number of Male Stutterers	Number of Female Stutterers	Total Number of Stutterers	Per Cent Stutterers
Unilingual	S1 & S2	17	3	20	83.33
	S3 & S4	1	3	4	16.67
Bilingual	S1 & S2	3	1	4	44.44
	S3 & S4	5	0	5	55.56
Total		26	7	33	

V. DISCUSSION OF RESULTS AND CONCLUSIONS.

This study contains some obvious weaknesses which must be borne in mind with respect to any discussion of the results or conclusions presented by the investigator.

- (1) The sample is very small and tendencies noted may quite well be due to the operation of chance factors.
- (2) Account had to be made for a number of questionnaires which were not answered.
- (3) The questionnaire forms only supply information as to the language classification of the children before the age of six years while the examination of the children for stuttering refers to the time the survey was done.

Of 1,861 school children, 1,444 were classified as being unilingual before the age of six years, (speaking either Afrikaans or English only,) while 417 children were classed as being fully or partially bilingual before the age of six years. The languages spoken by the bilingual children included Afrikaans and English in varying degrees, French, Jewish and Syrian. The results seem to indicate that there are more stutterers among bilingual children before the age of six years than among unilingual children, the respective percentages being 2.16 and 1.66. (Table 11.)

Not only does there appear to be a slightly greater percentage of stuttering among bilingual children, but from Table 111 it would appear that there is a considerably greater proportion of severe stutterers among bilingual than among the unilingual stutterers. In the unilingual group of twenty-four stutterers, only four or 16.67 per cent were considered to be severe stutterers; in the bilingual group of nine, on the other hand, five were classed as severe stutterers, giving a percentage of 55.56.

Table 111 also shows the fact that of the thirty-three stutterers examined, twenty-six were boys and seven girls, giving a sex ratio of approximately 4:1 in favour of the boys. The greater incidence of stuttering among boys than among girls is in agreement with all other investigations into the incidence of stuttering.

In this survey of four elementary schools in Johannesburg, 1.77 per cent of the children were found to be stutterers (Table 1.) This figure is in close agreement with previous investigations into the incidence of stuttering among children attending schools in the Transvaal. Prof. P. de V. Pienaar, University of the Witwatersrand, in 1936 conducted an investigation in the schools in the Witwatersrand area. He found 2 per cent of Rand school children to be stutterers. According to the report of the Transvaal Commission on Education (1939) 1.5 per cent of school children in the Transvaal stutter.

The results of this investigation, viz. the slightly greater number of stutterers found among bilingual than among unilingual children, are in accordance with the results obtained in a similar survey in the U.S.A. by Travis, Johnson and Shover (5) reported earlier in this study.

VI. SUMMARY.

A preliminary survey was conducted in four Johannesburg schools to ascertain the relation between bilingualism and stuttering, if any. Out of a total school population of 1,861, 1.77 per cent of the children were found to be stutterers. The findings of this study appear to indicate:

1. More stuttering is found among bilingual than among unilingual children, the respective percentages being 2.16 and 1.66.
2. It would seem that there is a considerably greater proportion of severe stutterers among bilingual than among unilingual stutterers.

The results of this study can by no means be taken as conclusive on account of the weaknesses inherent in a preliminary survey of this nature.

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1. Blanton, Smiley, A Survey of Speech Defect. Journal of Educational Psychology, Vol. 7, 1916, page 581.
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3. Johnson, Burford, Child Psychology, page 223. Charles C. Thomas, Springfield, Ill., and Baltimore, Maryland, 1932.
4. McAllister, Anne, Clinical Studies in Speech Therapy, page 309. London, University Press, 1937.
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APPENDIX 1.UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG.Investigation into the Incidence of Stuttering.

To the Parents of Schoolchildren:-

Ladies and Gentlemen,

For the purpose of this investigation, we wish to find out whether your child learnt one language first, and a second after beginning, or learnt two languages together, before going to school.

It is of the utmost importance that the following questions be answered accurately. Even if you have more than one child at the same school, please fill out a separate questionnaire for each child.

To ensure that the information shall be strictly confidential, it is not necessary for your name to be signed to this questionnaire.

Age of child years months
 School Sex: Male
 Std. Female

List the ages of all the
 child's brothers:-

.....

List the ages of all the
 child's sisters:-

.....

1. Place a cross next to the language(s) spoken at home by your child before the age of six years.
 English Afrikaans Other Lang. (specify)
2. Place a cross next to the language most frequently spoken at home by your child before the age of six years.
 English Afrikaans Other Lang. (specify)
3. State the age at which your child began speaking the following languages:-
 English years months.
 Afrikaans years months.
 Other Lang. (specify) years months.
4. Place a cross next to the language(s) spoken by your child with his/her playmates before the age of six years:-
 English Afrikaans Other Lang. (specify)

5. Place a cross next to the language spoken most frequently by your child with his/her playmates before the age of six years.
English Afrikaans Other Lang. (specify)
6. TO BE FILLED IN BY THE FATHER.
Place a cross against the language(s) spoken by you at home before your child reached the age of six years.
English Afrikaans Other Lang. (specify)
7. Place a cross against the language you spoke most frequently at home before the child reached the age of six years.
English Afrikaans Other Lang. (specify)
8. TO BE FILLED IN BY THE MOTHER.
Place a cross against the language(s) spoken by you at home before your child reached the age of six years.
English Afrikaans Other Lang. (specify)
9. Place a cross against the language you spoke most frequently at home before your child reached the age of six years.
English Afrikaans Other Lang. (specify)
10. Does your child stutter (stammer?)

UNIVERSITEIT VAN DIE WITWATERSRAND, JOHANNESBURG.

Ondersoek Insake Stotter.

Aan ouers van Skoolkinders:-

Geagte Meneer/Mevrou,

Wat ons met die ondersoek beoog is om vas te stel of u kind een taal magtig was, en 'n tweede aangeleer het na hy/sy skool vir die eerste keer besoek het, of hy/sy reeds vertrouwd was met beide tale voor hy/sy skool begin besoek het.

Ons sal dit waardeer as u die volgende vrae baie noukeurig beantwoord. As u meer as een kind op dieselfde skool het, vul dan asseblief vir elke kind 'n aparte vorm in.

Daar die inligting wat ons deur hierdie vraelyste inwin streng vertroulik behandel sal word, ag ons dit nie nodig dat u u naam op die vorm teken nie.

Ouderdom van kind jare maande.
Skool Geslag: Manlik
Std. Vroulik

Ouderdomme van kind se broers.

.....
.....

Ouderdomme van kind se susters.

.....
.....

1. Dui met 'n kruisie aan die taal/tale wat deur u kind by die huis gebruik was voor die ouderdom van ses jaar.
Afrikaans Engels Ander tale (meld)
2. Dui met 'n kruisie aan die taal wat u kind tuis die meeste gebruik het voor die ouderdom van ses jaar.
Afrikaans Engels Ander tale (meld)
3. Meld die ouderdomme wanneer u kind hom begin bedien het met die volgende tale:
Afrikaans jare maande
Engels jare maande
Ander tale (meld) jare maande
4. Dui met 'n kruisie aan die taal/tale deur u kind en sy/haar maats gebruik voor die ouderdom van ses jaar.
Afrikaans Engels Ander tale (meld)
5. Dui met 'n kruisie aan die taal wat u kind meeste met sy/haar maats gebruik het voor die ouderdom van ses jaar.
Afrikaans Engels Ander tale (meld)
6. OM DEUR DIE VADER INGEVUL TE WORD:
Dui met 'n kruisie aan die taal/tale wat u in die huis gebruik het voordat u kind die ouderdom van ses jaar bereik het.
Afrikaans Engels Ander tale (meld)
7. Dui met 'n kruisie aan die taal/tale waarmee u u die meeste tuis bedien het voordat u kind die ouderdom van ses jaar bereik het.
Afrikaans Engels Ander tale (meld)
8. OM DEUR DIE MOEDER INGEVUL TE WORD.
Dui met 'n kruisie aan die taal/tale deur u gebruik in die huis voordat u kind die ouderdom van ses jaar bereik het.
Afrikaans Engels Ander tale (meld)
9. Dui met 'n kruisie aan die taal/tale waarmee u u die meeste bedien het voordat u kind die ouderdom van ses jaar bereik het.
Afrikaans Engels Ander tale (meld)
10. Hakkal (stotter) u kind?