

A Contribution to the Phonological Pathology of Speech Structure in Children with Impaired Hearing

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1. Procedure

Examinations were carried out in 12 pupils (4 girls, 8 boys) in the 5th form of the school for children with impaired hearing in Wrocław; their age ranged between 12 and 13 years, except for 2 persons aged 14 and 15 years. In phoniatric and neurologic examinations the children exhibited a moderate to high degree of hearing impairment, a mixed type being present in 4 and a nervous one in 8 of them (see collective audiogram, Fig. 1). The utterances of the children were arranged so as to include naming a number of objects, events etc. and telling picture stories connected with everyday situations known to each child. The taperecorded linguistic material was analysed phonologically; the essential phenomena concerning vowel phonemes alone are given below:

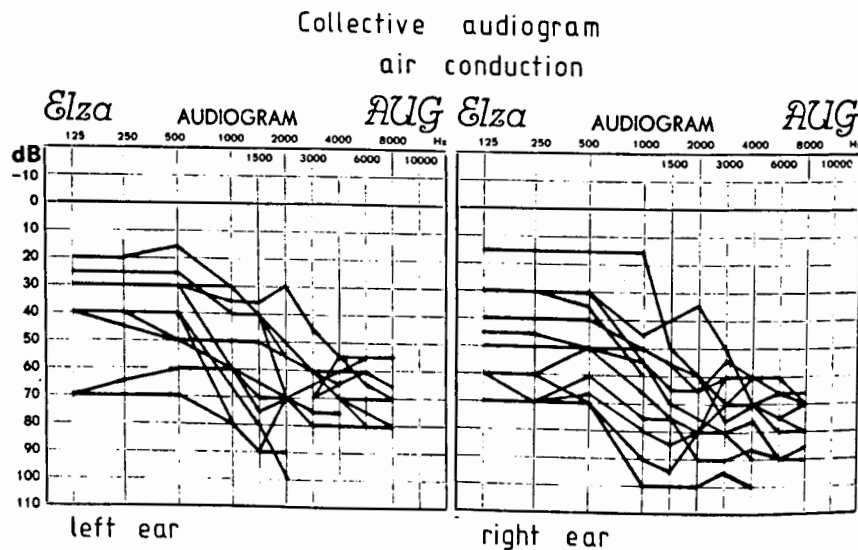


Fig. 1. A contribution to the phonologic pathology of speech structure in children with impaired hearing.

2. Analysis

2.1. Substitutions

Substitution of phoneme /y/ for phoneme /i/ after alveolar consonants from group *ś** which are replaced in each position by those of group *ś***, exceptionally of group *ś**** (e.g./tajeze/ – instead of /tajeze/: in Engl. plates; /uštečka/ – instead of /xustečka/: in Engl. a handkerchief; /seb'ei/ – instead of /gžeb'en/: in Engl. a comb; /zabafk'i/ – instead of /zabafk'i/: in Engl. toys; /deš pada/ – instead of /dešč pada/: in Engl. it is raining):

- /šima želaško/ – instead of /tšyma želasko/: in Engl. she holds an iron;
- /čeb'eń na wyoši/ – instead of /gžeb'eń na wyosy/: in Engl. a haircomb;
- /kotek pšišya/ – instead of /kotek pšyšet/: in Engl. a cat has come;
- /xwości puka wodny/ – instead of /xwočyk puače gwodny/: in Engl. a little hungry boy has cried.

2.2. Coexistence of forms such as:

- /žefčynka/ or /žefcynka/ or /žefčinka/ – instead of /žefčynka/: in Engl. a little girl;
- /pacy/ or /pači/ – instead of /patšy/: in Engl. she watches;
- /zobacy/ or /zobači/ – instead of /zobačy/: in Engl. she will see.

2.3 Neutralizations

Absence of /i/ by /y/ substitution; no example was recorded. In the Polish literature on speech disorders in all types of deficient hearing, the pronunciation of 'i' instead of 'y' is given as the most frequent deformation of vowels. It is suggested that these vowels are readily mistaken, as they differ but slightly in their articulation and the position of the tongue is not visible because of the mandibular-maxillary approachment. The regularities given under 1-3 seem, however, to deny such a mechanism. They would rather prove that these abnormalities result from a scheme that finds its justification in the phonological system of the language.

Phonological oppositions are subject to neutralizations. One of them is the neutralization of the opposition /i:/y/ after prepalatal consonants (group *ś* among others), since they can only be followed by 'i' and also by the alveolars (among others by the *s* group) invariably followed by 'y'. In the children with various degrees of deficient hearing that have failed to pronounce consonants from group *s* and replace them permanently by those from group *ś*, according to the linguistic rules, 'i' occurs instead of 'y'. If the group *ś* is mistaken for group *s* only sporadically, the language of children with impaired hearing invariably shows the vowel 'y' after the latter.

3. Conclusions

1. In children with various degrees of deficient hearing phonological abnormalities of the vowel system are likely to manifest themselves only as an apparent disorder of the phoneme sequence admissible in Polish language.
2. Verification of the above hypothesis on strictly selected material can be of importance from a pragmatic point of view and for modification of rehabilitation procedures.
3. A separate problem to be dealt with is that of phoniatic and neurologic studies which, in addition to socio-environmental factors, would elucidate the anatomo-physiological conditionings of speech disorders in the children under examination.

* consonants from group š: š, č, ž, ʃ

** consonants from groups ś: ś, ć, ź, ź

*** consonants from group s: s, c, z, ʒ