cplol 10th EUROPEAN CONGRESS OF SPEECH AND LANGUAGE THERAPY
Effectiveness | Speech and Language Therapy | Science | Practice
10 - 12 MAY 2018 Estoril Congress Center Cascais | Portugal

LANGUAGE AND SPEECH DISORDERS IN KINDERGARTEN CHILDREN
STUDY OF PREVALENCE AND ASSOCIATED FACTORS

Ana Coutinho [1] Ana Castro [2 3] Dina Caetano Alves [1 4] Ana Pinelas [5]

[1] MR - Terapias, Formação e Consultoria, [2] Escola Superior de Saúde do Instituto Politécnico de Setúbal, [3] Centro de Linguística da Universidade Nova de Lisboa (CLUNL), [4] Centro de Linguística da Universidade de Lisboa (CLUL), [5] Hospital Beatriz Ângelo – Centro de Neurodesenvolvimento

Background

Most children acquire language with minor effort, but some of them may face difficulties in understanding and/or expressing language. During the process of language development, organic and functional factors, working isolated or in conjunction, contribute to a(n) (un)successful development. Language and/or speech impairment (LSI) may be associated with an impact in psychosocial, behavioural and learning outcomes that can last throughout life (Bishop & Leonard, 2000; Law et al., 2000; Beitchman, 2006; Johnson, 2007).

The CPLOL Prevention Committee guidelines (2000) refer to epidemiological studies as one of its primary objectives, because of their importance in diagnosis and the identification of risk factors.

Although there are several international studies about the prevalence of language and/or speech disorders, in Portugal little is known about this epidemiological data. Portuguese studies (SNRIPD, 1996; Silva & Peixoto, 2008; Costa, 2011; Coutinho, 2012), with different methodological designs, present very different results among themselves.

Aim of the study

To characterize the **prevalence** of LSI in the ages of 3 to 5 year-olds integrated in a kindergarten and their **associated factors**

Method

Prevalence study, descriptive and correlational

Sample

Sample of convenience (n = 61) 3 to 5 years old European Portuguese speaking preeschollers

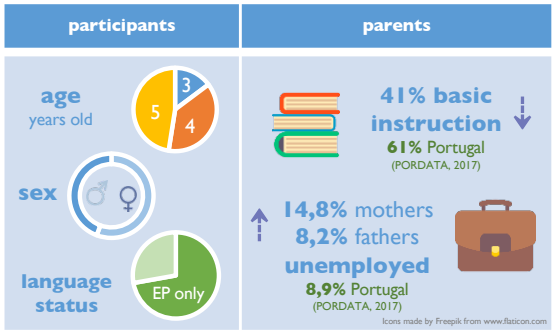

Table 1 – Characterization of participants (age, sex, exposure to another language) and parents (school qualifications and profession)

Instruments

- Sociodemographic and clinical characterization questionnaire
- *Teste de Avaliação da Linguagem na Criança* (Sua-kay & Tavares, 2011)
- *Teste Fonético Fonológico – Avaliação da Linguagem Pré-Escolar*, 2ª ed. (Mendes *et al.*, 2009)

Analysis

- Prevalence ratio
- Casuistic analysis
- Factorial Analysis (FA) of children's performance in specific language tests [RePP (Ribeiro, 2011), LITMUS (Almeida & Santos, 2016), CONFIRA (Castro et al., *in prep.*)]
- Qui-Squared and *Fisher* test in order to verify relations between language and/or speech disorders and related factors.

Results

GLOBAL PREVALENCE

HIGH

60,7% language and speech disorders (psychometric

Prevalence		
3 YO 22,2% (n=2)	4 YO 68,2% (n=15)	5 YO 61,0% (n=20)

LSI Criteria (C)	F	%
No Criteria	23	37,70%
C 1: ≤ -2 SD on TALC's comprehension	4	6,60%
C 2: ≤ -2 SD on TALC's expression	1	1,60%
C 3: % occurrence of phonological processes that should have disappeared at the child's age is ≥ 40%	6	9,80%
C 4: ≤ -2 SD on TTF-ALPE (Phonetic Subtest)	13	21,30%
C 1 + C 2	2	3,30%
C 1 + C 4	2	3,30%
C 2 + C 4	2	3,30%
C 3 + C 4	3	4,90%
C 1 + C 2 + C 3	3	4,90%
C 1 + C 2 + C 4	1	1,60%
4 Cs	1	1,60%
Total (n)	61	100

Table 2 – LSI Criteria presented by children: Absolute (F) and Relative Frequencies (%)

REANALYSIS

- These children do not have any risk factors that cause the presence of alteration or purely verbal articulation characteristics (analysed with SODA);
-FA (KMO=0,7) shows all performances are related, except for the phonetic subtest.

GLOBAL PREVALENCE: 40% have LI and/or SI
(psychometric and clinical criteria)

ASSOCIATED FACTORS

The gender of the child, parents' age and schooling, perinatal factors, family size, family history of language / speech disorders, age of first words/frases and oral habits are **not associated** with LSI.

Discussion

• The prevalence is higher because the studied sample comes from a socioeconomically disadvantaged environment (where language development tends to be slower and language models poorer), there are children exposed to a language other than PE and the instruments used are not prepared for these populations.

• The fact that there is no association between the factors and the presence of LSI may be related to the low internal variability of the variables, suggesting that studies in which the various categories were represented in the same way.

Conclusion

• Prevalence varies according to the defined criteria, and it is essential to take into account the linguistic characteristics of the studied population, the psychometric and clinical criteria that allow a real identification of LSI rather than an overidentification of cases.

• Determination of LSI risk factors should take into account the constitution of the sample.

References

Almeida, L., & dos Santos, C. (2016). *LITMUS-NWR-EP: nonword repetition for european portuguese. François Rabelais University*, Tours, France; Beitchman, J. (2006). Language development and its impact on children's psychosocial and emotional development. *Encyclopedia of Language and Literacy Development* (pp. 1-7). London, UK: Canadian Language and Literacy Research Network; Bishop, D., & Leonard, L. (2001). *Speech and language impairments in children: causes, characteristics, intervention and outcome*. Oxford, UK: Psychology Press; Castro, A., Alves, D., Correia, S. & Soares, S. (*in prep.*) (2ª Ed.). *ConFIRA - Consciência Fonologia: Instrumento de Rastreio e de Avaliação*; Costa, R. (2011). *Rastreio de perturbações e comunicação num agrupamento de escolas* (Master Dissertation). UA, Secção Autónoma de Ciências da Saúde, Aveiro, Portugal; Coutinho (2012). As perturbações da aquisição e do desenvolvimento da linguagem: estudo de prevalência, fatores associados e necessidades de encaminhamento para Terapia da Fala (Master Dissertation). UNL-ENSP, Lisboa, Portugal; Law, J., Boyle, J., Harris, F., Harkness, A., & Nye, C. (2000). Prevalence and natural history of primary speech and language delay: findings from a systematic review of the literature. *International Journal of Language & Communication Disorders, 35*(2), 165–188; Johnson, C. J. (2007). Prevalence of speech and language disorders in children. *Encyclopedia of Language and Literacy Development* (pp. 1-10). London, UK: *Canadian Language and Literacy Research Network*; Secretariado Nacional de Reabilitação (1996). Inquérito nacional às incapacidades, deficiências e desvantagens. Resultados globais. Cadernos SNR nº 9. Lisboa; Silva, C, & Peixoto, V. (2008). *Rastreio e prevalência das Perturbações da Comunicação num Agrupamento de Escolas* [report non published]; Tavares, D., & Sua-Kay, E. (2011). TALC – Teste de Avaliação da Linguagem na Criança. Lisboa, Portugal: Oficina Didáctica; Mendes, A., Afonso, E., Lousada, M., & Andrade, F. (2009). TFF-ALPE – Teste Fonético-Fonológico-Avaliação da Linguagem Pré-Escolar. Aveiro, Edubox; Ribeiro, V. I. da C. (2011). *Instrumento de avaliação de repetição de pseudopalavras* (Master Dissertation). ESS-IPS & FCSH-UNL, Lisbon, Portugal.