

HUMAN COMMUNICATION AND CHILDREN HEALTH PROMOTION – REFLECT ON THE ACTIONS OF HEALTH PROMOTION IN CHILDHOOD AND PREVENTION OF COMMUNICATION DISORDERS

Comunicação humana e saúde da criança – reflexão sobre promoção da saúde na infância e prevenção de distúrbios fonoaudiológicos

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ABSTRACT

Purpose: to present considerations on the possibilities of speech-language intervention for the promotion and maintenance of child health, as well as parameters for early identification of language disorders, voice, speech and hearing in childhood. **Method:** a cross-sectional study with 65 children enrolled in public schools in the metropolitan region of Porto Alegre (RS, Brazil), no history of evaluation or therapy and indicated the nucleus of tutoring school for suspected speech disorder, together with data from literature related to speech, oral language, writing and speech in promoting child health. **Results:** of the 53 children actually interviewed, 39 (73.6%) were male. The mean age was 8.8 years (sd = 2.1). No association was found between gender and occurrence of oral habits (PR = 1.13, CI 95% 0.36-3.59), nor between having siblings and present oral habits (p = 0.18). When asked about their hearing acuity, 4 (4.7%) reported hearing difficulties without prior evaluation or diagnosis. All children were referred for evaluation by the school speech-language history of learning difficulties of reading and writing and oral communication disorders perceived by teachers, those difficulties were confirmed in 100% of cases. **Conclusion:** it is necessary that we have an exchange of experience between teachers and speech therapists, in order to promote child development and integrate it more effectively in the school environment, whether in relation to reading and writing or improving oral communication, highly demanded in contemporary society.

KEYWORDS: Language Development; Epidemiology; Speech-Language and Hearing Sciences; Child Health; Speech; Learning

■ INTRODUCTION

Human communication consists of verbal and non-verbal components that develop over time. Interpersonal communication skills allow individuals to interact with their own environment and the

development of these skills usually occurs early in life, around the first decade.

Joint efforts have been made to bring together the school community and child health promotion and maintenance strategies as part of the agenda for health promotion during childhood. At school educators should be able to detect the first signs of communication disorders.

Many studies have pointed to a close relationship between healthy language development and reading and writing learning, as well as the impact of speech disorders on learning abilities and school performance.¹⁻⁷

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Conflict of interest: non-existent

It is thus essential that all professionals involved in the child's life – educators, health providers or carers – have access to strategic knowledge for concentrating their efforts to maintain and ensure a healthy development of the child's communication skills.

The present study aims to present speech and language considerations for child health promotion and maintenance and describe aspects related to healthy development and early detection of language, speech, voice and hearing disorders during childhood based on data obtained from a survey with a group of schoolchildren referred for speech and language evaluation.

METHOD

Preliminary cross-sectional study including 65 children attending public elementary schools in the metropolitan area of the city of Porto Alegre, southern Brazil. These children did not undergo any prior speech and language evaluation or treatment and they were referred for evaluation as their teachers or other school staff suspected them of having speech and language impairments.

All children were eligible to participate in the study; only those who did not attend school activities were excluded.

Individual interviews were carried out with each eligible child. Information on age, number of siblings, history of school failure, history of nose breathing difficulties, sleep disorders, and harmful oral habits was collected from school records. In addition, speech and language impairments were assessed through a brief voice evaluation including perceptual-hearing analysis and measurement of the phonation time for the vowel /a/ and s/z ratio; a speech disorders screening test (TERDAF),⁷ and an oral and written language screening test based on

spoken narratives elicited by figures. They were all performed by speech therapists with at least 7 years of clinical experience.

The data are discussed based on the literature, especially regarding aspects related to speech, oral and written language, and speech and language therapy for health promotion among schoolchildren.

This study was reviewed and approved by the Research Ethics Committee (protocol number 4.06.03.07.776) in accordance with the Brazilian National Health Council Resolution 196/96. All parents or guardians signed a consent form agreeing to participate in this study.

There were assessed the frequency distribution of the variables in the sample and measures of association (prevalence ratios through the chi-square or Fisher's exact test as appropriate) and related 95% confidence intervals (95% CI).

RESULTS

Of 60 eligible children, 53 were interviewed. Of these, 39 (73.6%) were male and mean age was 8.8 years (SD: \pm 2.1). Thirty-seven (71.1%) were in the first and second grades, 13 (25.0%) were in the third and fourth grades and two (3.8%) were in the fifth and sixth grades. This information was missing for one (1.9%) child.

Of the 53 children evaluated, 46 (87%) had siblings, and only 33 (62.3%) lived in the same household with their parents and siblings.

Regarding their parents' or guardians' occupation, 16 (30.2%) children reported that both parents had an occupation and 20 (37.7%) that only their fathers did.

Table 1 presents data on the children's habits and symptoms (nose breathing difficulties, harmful oral habits and other symptoms associated with abnormal oral sensory-motor functions).

Table 1 – Harmful oral habits and symptoms associated with abnormal oral sensory-motor functions

Type of harmful oral habit	Children with observable or self-reported harmful oral habits	
	N	%
Finger sucking and/or biting hard objects (pencil, pen, etc.)	8	15.1
Supporting the chin with the hands while at rest	1	1.9
Lip sucking	1	1.9
Two or more harmful oral habits associated	3	5.7
No harmful habits or symptoms associated	38	71.6
Unknown*	2	3.8
Total	53	100.0

* Missing information or no response from the respondents are counted as "unknown."

No association was found either between gender and harmful oral habits in the sample studied (PR = 1.13, 95% CI 0.36–3.59) or having siblings and harmful oral habits in the chi-square test ($p = 0.18$).

With regard to auditory acuity, 48 (92.3%) children reported good hearing and four (4.7%) reported hearing difficulties but they did not undergo any specialized diagnostic evaluation.

Of the 53 children, 49 (92.3%) were right-handed and four (7.7%) left-handed. When they were asked about their interest in reading, 43 (82.7%) said they enjoyed reading.

All children were referred for speech-language evaluation due to difficulties with reading and writing as well as a history of oral communication disorders as perceived by their teachers. Learning difficulties were verified in 100% of the children evaluated.

Most children were also found to have speech disorders that were affecting their writing ability (i.e., they wrote the sounds the way they pronounce it) coupled with either reading or writing difficulties.

After children were diagnosed with speech and language disorders, they were divided into four groups to develop group activities based on twice a week 90-minute sessions for about four months. These activities were designed to build phonological awareness and thus improve the children's oral and written communication skills. These sessions were conducted by two students in speech and language pathology and education and supervised by a speech therapist and an educator.

Since the sample studied did not have any voice disorders, only vocal strain prevention activities were developed aiming at understanding and recognizing the role of the vocal tract and preventing potentially harmful vocal habits.

■ DISCUSSION

Speech and language specialists play an important role in directly promoting child health not only by identifying abnormal oral and written language development, but also by providing students opportunities to optimize their development and creating favorable conditions for effectively exploring their abilities to the fullest whether at school, at home or while engaging in other community activities.

The role of speech and language specialists in the school setting is pivotal^{8,9} since the interrelationship between educators and speech therapists may eventually benefit not only an individual child but an entire school community. Many authors have highlighted that the school environment provides a setting conducive to creating opportunities for health promotion and maintenance as children

spend a good number of hours exposed to a diverse wealth of knowledge and experience.⁹⁻¹⁵ It should be stressed that interdisciplinary learning does not mean the juxtaposition of knowledge canceling out the specificities of each field of knowledge but rather an opportunity for collaborative work of multiple professionals seeing that health professionals develop their work in response to the society's demands to address individual and community issues.^{9,10,16} Schools have a key role in the language development as they provide fundamental conditions for the development of communication skills and both oral and written language.^{2,9,17} Teachers often play a vital role in detecting language problems because the family may eventually get used to the child's particular communication skills even though when they have routine contact with other children.

Similar to any other aspect of human development, language development exhibits intersubject variability. To acquire good oral or written language skills relates not only to one's ability to understand language rules but also to use the language to properly produce a desired meaning effect in a given situation.¹⁸ Orality and literacy are complementary interactive activities within a context of social and cultural practices.¹⁸ Another important point is making a conceptual distinction between reading and writing learning and literacy.¹⁹ Reading and writing learning means acquiring the ability to read and write whereas literacy means appropriation and social use of reading and writing.¹⁹

Speech is acquired during informal day-to-day interactions, social relations and two-way exchanges that are initiated the moment a mother smiles at her baby for the first time.¹⁸ More than the effect of genetic determination, the act of learning and naturally using a language is a form of cultural integration and socialization.¹⁸

Early in the process of learning to read and write children with oral language disorders may have difficulty relating to or integrating into their social group. When they cannot be understood by their peers, these may be bullied or excluded with a potential impact on their overall academic performance. In some cases, children with speech disorders (**omissions, distortions, substitutions**) will have their spontaneous writing affected.

Although most children learn to read and write within specified time frames it does not mean that this is not a complex process. In parallel with orality, writing is used in many different social contexts such as at work, at school, during daily, family, and administrative activities as well as in many academic and training activities.^{2,6,9,18}

As for oral communication, it is part of the speech and language therapy practice to support teachers and educators for oral language development in different situations in the school environment by creating and offering opportunities for communication that will help children develop their oral language skills and acquire patterns of pronunciation, think about their language use and develop metalinguistic and narrative skills through story and account telling and retelling.

The school experience can lead to different developmental paths with a major impact on the children's future experiences.²⁰ Successful educational achievement from the age of 6 to 12 is determinant as educated individuals are more socially valued.²⁰ In contrast, academic failure may lead to a sense of fulfilled psychosocial development. There are many potential challenges during the schooling process. Some of these challenges are age-related while others arise when one or more skills were not properly acquired and may affect written language learning. The common areas of difficulties include among others: attention; perception / discrimination; memory (auditory or visual); logical reasoning; speech (abnormal articulation of syllables); oral language (difficulty expressing their thoughts, ideas etc.); reading / writing; temporal and spatial organization; and bodily conditions such as visual, hearing or motor impairments as extensively reported in the literature.^{2-4,6,21-23}

The collaboration between teachers/educators, parents and speech and language specialists with knowledge and experience sharing can make valuable contributions to more effective teaching and learning, especially in the early grades when language, cognitive and oral and written communication skills are vital for a healthy child development.

■ CONCLUSIONS

While this paper addresses oral and written communication development based on data from schoolchildren, it is extremely important to stress that the first years of life and children's communication development are critical for reading and writing learning and requires special attention. Good neuro-psychomotor and oral communication development significantly favors successful reading and writing learning.

Educators and speech therapists are expected to exchange ideas and experiences for promoting child development, effectively integrating children into the school environment, facilitating their reading and writing learning and improving oral communication effectiveness, which is in high demand in the modern world.

In addition, voice, speech, and reading and writing disorders are closely associated with social, cultural and demographic factors and these factors should be taken into consideration in the assessment of child health and diagnosis of children.

RESUMO

Objetivo: apresentar considerações sobre as possibilidades de atuação fonoaudiológica para a promoção e manutenção da saúde da criança, bem como parâmetros para a identificação precoce de distúrbios de linguagem, voz, fala e audição na infância. **Método:** estudo transversal com 65 crianças matriculadas no ensino fundamental em escolas públicas, sem histórico de avaliação ou tratamento fonoaudiológico e indicadas pelo núcleo de orientação pedagógica da escola por suspeita de distúrbio fonoaudiológico; juntamente com dados de literatura relacionados à fala, linguagem oral, escrita e fonoaudiologia na promoção da saúde da criança. **Resultados:** das 53 crianças efetivamente entrevistadas, 39 (73,6%) eram do sexo masculino. A média de idade foi de 8,8 anos (dp=2,1). Não foi encontrada associação entre gênero e ocorrência de hábitos orais nocivos (RP=1,13; IC 95% 0,36-3,59), tampouco entre ter irmãos e apresentar hábitos orais nocivos (p=0,18). Quando perguntadas sobre sua acuidade auditiva, quatro (4,7%) referiram dificuldades auditivas sem avaliação ou diagnóstico prévio. Todas as crianças foram encaminhadas pela escola para avaliação fonoaudiológica por histórico de dificuldades de aprendizagem de leitura e/ou escrita, bem como distúrbios da comunicação oral percebidos pelos professores; as referidas dificuldades foram confirmadas em 100% dos casos. **Conclusões:** é necessário que ocorra troca de experiências entre educadores e fonoaudiólogos, principalmente objetivando a promoção do desenvolvimento saudável da criança, visando integrá-la melhor ao ambiente escolar, seja em relação à aprendizagem da leitura e escrita, seja para maior efetividade da comunicação oral, altamente demandada na sociedade contemporânea.

DESCRIPTORIOS: Desenvolvimento da Linguagem; Epidemiologia; Fonoaudiologia; Saúde da Criança; Fala; Aprendizagem

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RECEIVED IN: 12/09/2010

ACCEPTED IN: 04/07/2011

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