



**7th SPEECH LANGUAGE THERAPISTS' CONGRESS OF THE
BALTIC STATES: FLUENCY IN SPEECH AND READING**

BOOK OF ABSTRACTS

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March 6 – 7, 2020, Riga, Latvia

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The accuracy of the abstracts is responsibility of the authors.

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Dear friends and colleagues,



Over the past 25 years, our association has represented speech and language therapy professionals in Latvia. The efforts of the association and each member of it are devoted to improving the SLT profession. We have a clear vision about the future of speech and language therapy in Latvia. Excellent education, according to European standards, qualitative service for everyone with communication disorders despite age and diagnosis, and supportive working environment are included in the concept of the new Speech and Language Therapy.

The theme of the 7th Speech-Language Therapists' Congress of the Baltic States is "Fluency in speech and reading." About 1% of the world's population stutters, through about 5% of children go through a period of stuttering. The prevalence of reading disorders is much higher. The data vary from study to study but we can argue quite strongly that approximately 40% of children are reading below grade level. The loss of fluency is a common feature to those who stutter and those who have reading disorders. Read like a stutter! The congress shares an insight into the recent research of fluency disorders in the world as well as in our neighbor countries. I hope that every congress attendee will find something useful for their professional development, and new knowledge will be implemented in practice.

On behalf of the Congress Scientific Committee, I wish you a successful conference!

Associate Professor Baiba Trinite, PhD

President of Speech Therapists' Association of Latvia

Chair of the Congress Scientific Committee



7th SLT Congress of the Baltic States

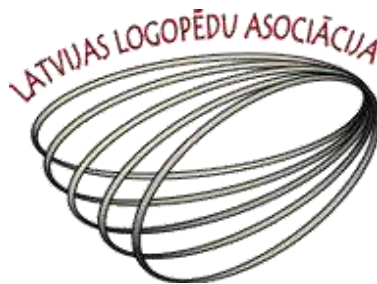
March 6 – 7, 2020, Riga, Latvia

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7



7th SPEECH LANGUAGE THERAPISTS' CONGRESS OF THE BALTIC STATES: FLUENCY IN SPEECH AND READING

March 6-7, 2020, Riga (Latvia)

Academic Center of Natural Sciences of the University of Latvia, 1 Jelgavas street, Riga

SCIENTIFIC PROGRAMME

Friday, March 6

9.00-10.00	Registration
10.00-10.30	Congress opening
Morning session Magnum Moderators: Baiba Trinite (Latvia), Siiri Kliss (Estonia)	
10.30-13.00	Current research in stuttering treatment in adults and children Janis & Rodger Ingham (United States of America) Language: English
13.00-14.00	Lunch, exhibition, posters viewing with presenters
Afternoon session Magnum Moderators: Sarmite Tubele (Latvia), Simona Daniutė (Lithuania)	
14.00-15.30	Cluttering identified Yvonne van Zaalen (The Netherlands) Language: English
15.30-16.30	Comprehensive Stuttering Programme for school age children who stutter Vilma Makauskiene (Lithuania) Language: English
16.30-17.00	Stuttering treatment guidelines Andzela Steinberga (Latvia) Language: Latvian (simultaneous translation to English)

19.00 Congress dinner at Muzeja restorans, Jaņa Rozentāla laukums 1*

* Preregistration is requested until March 1

Saturday, March 7

Morning session	
Magnum Moderators: Gundega Tomele (Latvia), Daiva Kairiene (Lithuania)	Room 107 Moderator: Baiba Trinite (Latvia)
9.00-10.00 Reading assessment instruments in Estonian Piret Soodla (Estonia) Language: English	9.00-9.45 Therapy of speech disorders with Novofon Margrit Auner, speech therapist (Germany) Language: English with translation
10.00-11.00 The development of reading in Polish, dyslexia, and early intervention Marta Łockiewicz (Poland) Language: English	9.45-10.00 Swallowing problems in patient with Parkinson's disease Evita Bugaja, Ilga Kikule, Olga Minibajeva (Latvia) Language: Latvian (without translation)
11.00-11.30 A set of criteria for teachers to recognise reading difficulties in primary school Sarmite Tubele (Latvia) Language: Latvian (simultaneous translation to English)	10.00-11.00 Rehalingest new device for pharyngeal swallowing behaviour evaluation, monitoring and rehabilitation Daina Visockiene, Medlinkas UAB (Lithuania) Language: English (without translation)
11.30-12.00 Mobile application for dyslexia intervention for young adults Sarmite Tubele, Ilze Ivanova, Kristine Serova (Latvia); Language: Latvian (simultaneous translation to English)	11.00-12.00 Nutrition therapy for swallowing disorders Diana Fridrihsone, Evita Grobina, Nutricia (Latvia) Language: Latvian (without translation)
12.00-13.00	Lunch, exhibition, posters viewing with presenters
Afternoon session Magnum Moderators: Gunta Ozolina (Latvia), Helje Moller (Estonia)	
13.00-13.30	The analysis of reading acquisition components in first grade students Gundega Tomele (Latvia) Language: Latvian (simultaneous translation to English)
13.30-14.00	Classroom acoustics, teachers' voice and learning success Baiba Trinite (Latvia) Language: Latvian (simultaneous translation to English)
14.00-16.00	Cluttering in the spectrum of fluency disorders: diagnosis and treatment Yvonne van Zaalen (The Netherlands) Language: English
16.00-16.15	Closing ceremony

Poster presentations

Friday – Saturday, March 6 – 7	
Speech therapy for children with cleft palate: intervention study using the example of three children Ege Sprenk, Lagle Lehes (Estonia)	
Functional behaviour assessment of children with autism spectrum disorder based on family & speech language therapist collaboration Stefanija Ališauskienė, Julija Grigėnaitė (Lithuania)	

Inter-professional support to a stuttering child and one's family: experiences of parents Rita Kantanavičiūtė (Lithuania)
Overcoming stuttering and cluttering in adolescence by applying the elements of theater and music therapy Saule Grigaliunaite (Lithuania)
The assessment of dysarthria and speech characteristics of grown-up patients: video-based learning material Kirsi Sepp, Merit Hallap, Merje Viigand (Estonia)
Differential characteristics of dysarthria, childhood apraxia of speech, articulation and phonological disorders Simona Daniutė (Lithuania)
Psychotherapeutic approach in therapy of adults with speech fluency disorder Karel Neubauer, Lenka Neubauerová (Czech Republic)
Basic principles for intervention to diminish insufficient development of phonological awareness Ilze Vilka (Latvia)
The Smileys Challenge: a new approach to encouraging children and parents in speech therapy Marta Jakušina, Elīna Lasmane (Latvia)
The influence of speech disorders of pre-school children on the acquisition of written language in the 1st grade Anita Palapa, Donata Stankute, GundegaTomele (Latvia)
Bilingual Students with Special Educational Needs – a Challenge for the Teachers Anneli Paulus, Marika Padrik (Estonia)

MPI-2 workshop* Janis & Rodger Ingham (USA) Caelum		
Saturday, March 7	9.00-12.00	Training session
	12.00-13.00	Lunch
	13.00-16.00	Training session
Sunday, March 8	9.00-13.00	Training session

* Preregistration is requested

A BRIEF REVIEW AND UPDATE ON BEHAVIORAL TREATMENT FOR CHILDREN AND ADULTS WHO STUTTER

Janis Costello Ingham, Ph.D.

Roger J. Ingham, Ph.D.

University of California, Santa Barbara, U.S.A.

This presentation will provide a description of behavioral treatments aimed at helping people who stutter achieve habitual, natural sounding, stutter-free speech. Part 1 will overview behavioral principles as they are applied in contemporary treatments for children and adults who stutter. Included will be concepts of speech sampling and measurement of stuttering as well as aspects of treatment program structure based on principles of programmed instruction. This will include selection of speaking tasks, implementation of graduated difficulty, and the important role of positive and negative feedback. Part 2 will focus on a review of two major behavioral stuttering treatment programs reported in the research literature for children (primarily ages 3 – 9): the Lidcombe Program and Extended Length of Utterance (ELU). The Lidcombe Program emphasizes treatment delivered in the home environment by parents who are trained to administer the program, while the ELU is typically administered by trained professional clinicians, supplemented by parent participation. Part 3 will describe two evidence-based treatment programs for adults (ages 16 – 60): Prolonged Speech and Modifying Phonation Intervals (MPI-2). Both of these treatments begin with teaching clients a new way of speaking that does not contain stuttering and then providing extensive practice in situations that gradually approximate natural speaking situations. Prolonged speech programs are the current best practice “gold standard,” although they are sometimes criticized for teaching clients a manner of speaking that is not completely spontaneous and natural sounding. The MPI-2 is a new treatment that helps clients establish natural sounding stutter-free speech at the outset by teaching the client to reduce very short intervals of phonation (e.g., < 150 ms). The treatment program is administered by a trained clinician working with a client who uses an application (app) downloaded onto an iOS device (e.g., iPhone or iPad). The MPI-2 app provides real-time feedback to the client regarding the occurrence of correctly and incorrectly produced utterances. The program includes an Establishment phase in which the new speech pattern is acquired and then practiced across a variety of speaking tasks, a Transfer phase in which the client learns to use the new speech pattern in individually

selected everyday communication situations, and a Maintenance phase that allows the clinician to continue to check on the durability of the treatment effects in the client's real life. The MPI-2 is easily used for remote (distance) treatment via the Wi-Fi connections between the client and clinician. Part 4 will provide the opportunity for questions and comments from the audience.

Keywords: stuttering treatment, fluency treatment, distance treatment, children, adults

References:

1. Onslow, M., Andrews, C., & Lincoln, M. (1994). A control/experimental trial of an operant treatment for early stuttering. *Journal of Speech and Hearing Research, 37*, 1244-1259.
2. Ingham, J.C. (1999). Behavioral treatment of young children who stutter: An Extended Length of Utterance method. In R. Curlee (Ed.), *Stuttering and related disorders of fluency* (2nd ed) (pp.80-109). New York: Thieme
3. Langevin, M., Kully, D., Teshima, S., Hagler, P., & Narasimha, NGP (2010). Five-year longitudinal treatment outcomes of the ISTAR Comprehensive Stuttering Program. *Journal of Fluency Disorders, 35*, 123-140.
4. Ingham, R.J., Kilgo, M., Ingham, J.C., Moglia, R., Belknap, H., & Sanchez, T. (2001). Evaluation of a stuttering treatment based on reduction of short phonation intervals. *Journal of Speech-Language-Hearing Research, 44*, 1229-1244.

CLUTTERING IDENTIFIED

Yvonne van Zaalen, Prof. Dr.

Cluttering is a disorder of fluency in which a person is not able to adapt the (articulatory) rate to the linguistic or motor demand of the moment. Although the co-existence of cluttering with stuttering is high, they do not share the same etiology. Differential diagnostics is only possible when the speech language pathologist examines speech language production in different levels of language complexity and while the client is aware or unaware of being observed.

This presentation focuses on understanding the mechanisms underlying cluttering and stuttering in both people with and people without mental challenges. Indications for therapy are presented. The presentation will contain multiple videos indicating the difference between cluttering, stuttering and fluency impairment due to learning disabilities.

Recent insights of therapy effective studies will be presented and explained. After this presentation speech language pathologists will be able to differentiate between the three mentioned fluency disorders.

Keywords: cluttering, differential diagnosis, stuttering

13

References:

1. van Zaalen, Y. & Reichel, I. (2015). Cluttering current views on its nature, diagnosis & treatment.
2. van Zaalen, Y. & Reichel, I. (2019). Clinical success using the Audio-Visual feedback training for the cluttering. Perspectives of the ASHA SIG. Vol.4. 1589-1594, December 2019, ASHA.

MULTIDIMENSIONAL APPROACH TO FLUENCY DISORDERS: THE COMPREHENSIVE STUTTERING PROGRAM

Vilma Makauskienė, PhD, Speech – language therapist

Lithuanian Logopedists Association, LLA

The Comprehensive Stuttering Program (CSP) is a programme that addresses stuttering and the attitudinal and emotional consequences of the disorder (Boberg, Kully, 1985; Langevin, Kully, 2012). The CSP integrates speech restructuring, stuttering modification and cognitive behaviour therapy methods. The programme helps people who stutter to reduce stuttering, change disfluency associated feelings and improve self-confidence.

Objectives:

The purpose of this paper is to overview multidimensional model of stuttering (Healey, et. al, 2004) and components of CSP program. View of stuttering as a multifactorial fluency disorder has facilitated a broader perspective for understanding the complexities of stuttering and highlight the individual variability and unique differences among children and adults who stutter. There is challenge for speech language therapists to find effective ways how to deal with the cognitive, affective, linguistic, motor, and social performance areas (CALMS components) as five key components of stuttering.

Methods: The main methods are review of literature related with evidence based data about The Comprehensive Stuttering Program and practical experience using components of program with school age children who stutter. CSP has three phases: (1) acquisition, (2) transfer and (3) maintenance (Langevin, Kully, 2012). In Acquisition phase, PWS learn speech restructuring, stuttering modification, cognitive behavioural techniques and self-management skills. The main techniques for fluency enhancement are prolongation, easy onsets, soft contacts, smooth blending, ect. Speech naturalness is a central focus throughout the programme. Cognitive behavioural techniques are used for attitude and emotions related with stuttering change. CBT include identification and reframing of ineffective self-talk and graded exposure to feared talking situations. During graded tasks, clients systematically progress through their hierarchy of feared talking situations while using fluency skills. Self-management strategies help to learn goal setting, self-measurement, self-evaluation and problem-solving skills (Finn, 2007; Kully et al., 2007).

During the Transfer Phase, school age children apply fluency skills in every day situations, such as telephone calls, conversations with strangers, individualized school, family and social talking tasks. The goal of Maintenance Phase is to carry out speech and transfer practice independently.

Results: There were five studies completed with purpose to evaluate efficacy of Comprehensive Stuttering Program. Regarding the 1 and 2 years outcome studies, between 71% - 86% of participants were categorised as maintaining clinically significant stuttering reductions (Langevin et al., 2006). Across other CSP studies, including the 10-year outcome data, 71–86% of participants were categorised as maintaining reduced stuttering at 1, 2, 5 or 10 years post-treatment (Langevin et al., 2010). Data show that differences between the pre-treatment and post-treatment %SS measures were statistically significant and were stable during the 5-year period. These outcomes have given Phase II levels of evidence that suggest that the CSP is efficacious in helping adolescents achieve durable reductions in stuttering with speech naturalness at follow-up measures.

Conclusions: A strength of the CSP is its integrated treatment approach in that it targets overt stuttering as well as the attitudinal and emotional consequences of the disorder. A further strength of the CSP is the independent replication of the programme. Data show that CSP is evidence base which must be addressed in future research.

Keywords: stuttering therapy, multidimensional approach

References:

1. Boberg, E., Kully, D. (1985) *Comprehensive Stuttering Program*. San Diego, CA: College-Hill Press.

2. Healey, E.; Trautman, L.; Susca, M. (2004). Clinical Applications of a Multidimensional Approach for the Assessment and Treatment of Stuttering. *Contemporary Issues in Communication Science and Disorders*, 31, p. 40–48.

1. Finn, P. (2007) Self-control and the management of stuttering. In: E. G. Conture & R. F. Curlee (Eds.), *Stuttering and Related Disorders of Fluency* (3rd ed., pp. 344–360). New York: Thieme.

2. Kully, D., Langevin, M., Lomheim, H. (2007) Intensive treatment of stuttering in adolescents and adults. In: E. G. Conture & R. F. Curlee (Eds.), *Stuttering and Related Disorders of Fluency* (3rd ed., pp. 213–232). New York: Thieme.

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Program across Dutch and Canadian adults who stutter. *Journal of Fluency Disorders*, 31, 229–256.

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5. Langevin, M., Kully, D. (2012). The Comprehensive Stuttering Program and Its Evidence Base. In S. Jelcic Jaksic, M. Onslow (Eds). *The Science and Practice of Stuttering Treatment: A Symposium*. John Wiley & Sons, Incorporated

READING FLUENCY AND COMPREHENSION OF PRIMARY SCHOOL STUDENTS: DEVELOPMENT, ASSESSMENT AND INSTRUCTION

Piret Soodla, PhD, Associate Professor

Tallinn University,

School of Educational Sciences,

Objectives

1. To reflect on research findings of Estonian students' reading development.
2. To examine teachers' role in evaluating and supporting the development of students' reading skills.
3. To introduce new assessment instruments for reading literacy of Estonian primary school students.

Methods. The presenter reviewed previous research carried out among Estonian students and teachers. Different samples were used for the analyses. Quantitative research methods, including variable- and person-oriented methods, were applied.

Results. Findings from several studies published in international journals showed areas of concern related to reading development.

A comparison of the development of Estonian and Finnish students' reading fluency and comprehension provided an opportunity to examine how reading instruction in these countries, whose languages share much in common, affected the subsequent development of students' reading skills. Although Estonian children had better reading skills at the beginning of the school year, fluency and reading comprehension skills were at the same level across both groups by the end of first grade (Soodla et al., 2015). From second grade onward, Finnish children demonstrated better performance than their Estonian peers (Soodla et al., 2019b).

In addition, an examination of teachers' assessments of students' reading skills indicated that, although such assessments are generally accurate, teachers do not have a common frame of reference for age-appropriate skills. Indeed, teachers' evaluations are associated with students' relative standing of reading skills in class, combinations of some cognitive-linguistic skills, learning behavior, and previously identified special needs (Kikas et al., 2018; Soodla & Kikas, 2010).

Furthermore, the general efficacy of part-time special education on students' reading fluency and task persistence was analyzed (Soodla et al., 2019a). The development of

treatment and control group students' reading skills and task-focused behavior was followed from the beginning of first grade until the end of second grade. The treatment group was not found to have any advantages in reading fluency based on objective measures. However, slightly different trajectories in teachers' evaluations of the treatment and control group children's reading skills and task persistence emerged. The findings indicate that a full year of special education support in the form of extra lessons without a prior diagnostic assessment, frequent progress monitoring, or focused interventions might not effectively support children with reading difficulties.

Finally, recently developed digital assessment tools for third- and sixth-grade students were introduced, and the benefits for and challenges facing teachers when using these assessment instruments to support students' development of reading skills were discussed.

Conclusions. The findings indicate the need to improve teacher training in several aspects of the field of reading. First, teachers and special education teachers need more knowledge and tools to assess students' reading skills. Second, the assessment should inform the instruction, which should be adapted to students' skills. Finally, further research is needed to find effective methods to support the development of reading fluency and comprehension of those students at risk of encountering reading difficulties.

Keywords: reading fluency, reading comprehension, assessment, special education support

References:

1. Kikas, E., Soodla, P., & Mägi, K. (2018). Teacher judgments of student reading and math skills: Associations with child- and classroom-related factors. *Scandinavian Journal of Educational Research*, 62, 783–797.
2. Soodla, P., & Kikas, E. (2010). Teachers' judgment of students' reading difficulties and factors related to its accuracy. In Toomela, A. (Ed.), *Systemic Person-Oriented Study of Child Development in Early Primary School (73–94)*. Frankfurt: Peter Lang Verlag.
3. Soodla, P., Lerkkanen, M.-K., Niemi, P., Kikas, E., Silinskas, G., & Nurmi, J.-E. (2015). Does early reading instruction promote the rate of acquisition? A comparison of two transparent orthographies. *Learning and Instruction*, 38, 14–23.
4. Soodla, P., Tammik, V., & Kikas, E. (2019a). Is part-time special education beneficial for children at risk for reading difficulties? An example from Estonia. *Dyslexia*. doi.org/10.1002/dys.1643

5. Soodla, P., Torppa, M., Kikas, E., Lerkkanen, M.-K., & Nurmi, J.-E. (2019b). Reading comprehension from grade 1 to 6 in two shallow orthographies: Comparison of Estonian and Finnish students. *Compare – A Journal of International and Comparative Education*, 49, 681–699.

THE DEVELOPMENT OF READING IN POLISH, DYSLEXIA AND EARLY INTERVENTION

Marta Łockiewicz, PhD.

Institute of Psychology, Faculty of Social Studies, University of Gdansk, Gdansk, Poland

Polish is a West Slavic, consonantal language, with a rich and complex inflectional and derivational morphology. The grapheme-phoneme correspondence is relatively high for reading, but rather low for writing. Formal literacy education starts with a Reception Year, usually entered at the age of around six years, followed by eight years of a primary school (including three years of early integrated education).

Reading instruction uses an analytic-synthetic (a bottom-up) strategy, based on the sound/letter segmentation and blending. Simplified coursebook reading materials focus on the order of introducing letters (year 1), and their consolidation (year 2), as mostly single word decoding skills are trained. This is accompanied with a holistic (a top-down) approach, for example by teachers reading authentic fiction and non-fiction texts to the students, to develop their motivation and interest to read, and to promote comprehension.

Krasowicz-Kupis (1999) identified the following key stages in reading acquisition in Polish:

1. Dominance of Analytical-Phonological (sound blending) Strategy. During this stage, intrasyllabic units: rhymes and alliterations exert no clear impact on reading, due to the transparency of the orthography, as reading is based on grapheme-phoneme correspondence.
2. Interim between Analytical-Phonological to Global Word-based (syllable and morpheme blending) Strategy. During this stage, metalinguistic skills play a bigger role.
3. Dominance of Global (word and/or phrase, corresponding to syntactic and semantic structures, recognition) Strategy. During this stage, children read entire words and/or phrases.

Thus, phonemic awareness influences reading fluency in the highest degree in the Reception Year (corresponding to stage 1), but its impact decreases in the next two years. These key stages, which start when children begin their formal literacy instruction, are preceded by the initial stage (taking place before formal literacy instruction), which involves the development of linguistic skills, script awareness, motivation to read and write. They are then followed with the final proficiency stage, when reading is automatized, and

the learner can concentrate on the content and pragmatic functions, not on the technical side of word decoding and recognition (Krasowicz-Kupis & Awramiuk, 2014).

Reading problems are characteristic of dyslexia. Polish studies identified in the following typical dyslexic deficits in: the accuracy and fluency of words and nonwords reading, spelling, phonological awareness (as measured with phoneme blending, phoneme deletion, and spoonerisms), the tempo of the access to mental lexicon, working memory, and short-term phonological memory of pseudowords. Likely, students with dyslexia rely longer on analytical, rather than on global, reading strategies.

According to M. Bogdanowicz, children at risk of dyslexia are young learners (up to the third year of formal school instruction) who either manifest specific disturbances in psychomotor development leading to later specific difficulties in reading and writing, or already present such difficulties. To start early intervention, she developed (M. Bogdanowicz, K. M. Bogdanowicz, Łockiewicz, 2015) “The Good Start Method”, which aims to teach young children letters and letter-like shapes multisensorily, combining visual, auditory, tactile, and kinaesthetic-motor experiences, in order to develop the perceptual-motor integration. The method is popular in Polish pre-schools and schools.

Keywords: reading, phonological awareness, Polish, dyslexia, intervention

References:

1. Awramiuk, E., & Krasowicz-Kupis, G. (2014). Reading and spelling acquisition in Polish: Educational and linguistic determinants. *L1-Educational Studies in Language and Literature*, 14, 1-24.
2. Bogdanowicz, M., Bogdanowicz, K. M., & Łockiewicz, M. (2015). *The Good Start Method for English. Metoda Dobrego Startu we wspomaganiu rozwoju i uczeniu się dzieci rozpoczynających naukę języka angielskiego*. Gdańsk: Wydawnictwo Harmonia.
3. Krasowicz-Kupis, G. (1999). *Rozwój metajęzykowy a osiągnięcia w czytaniu u dzieci 6-9 letnich*. Lublin: UMCS.

A SET OF CRITERIA FOR TEACHERS TO RECOGNIZE READING DIFFICULTIES IN PRIMARY SCHOOL

Sarmīte Tūbele, Dr. paed., Professor

Latvijas Universitāte

Presentation is devoted to state a set of criteria for teachers to recognise reading difficulties in primary school children. When acquiring reading skills children often face some problems, which we can call Reading difficulties. It is very important to recognise these difficulties as early as possible to solve them, to become happy readers. Otherwise there is a possibility to get deeper in Reading disabilities or even – Learning disabilities.

Tasks of the presentation are to underline theoretical framework of reading difficulties; to reveal problematic areas in children when they acquire reading skills; to define a set of criteria and signs for teachers to recognise reading difficulties in primary school children.

Methods: analysis of theoretical scientific literature.

Results: There are signs of such difficulties and who will be the first to notice it? From one side there are parents. If they devote time and care enough to think about their children, they notice their strong sides and weaknesses. If not – a child goes to primary school and there are teachers. If they are working together with speech therapist, they are informed how to recognise and fix the problem. There are no speech therapists in every school in Latvia and situation is not getting better. Therefore, teachers must be informed, which signs are important to recognise reading problems.

There are areas of great importance for acquiring reading skills: cognitive development (especially speech and language); phonological awareness; visual and spatial perception. Main criteria are based on these areas: memory, speech development, phonological awareness, processing of auditory skills, organizational skills, motor development, visual perception, and spatial perception. Some children have problems in more than two or three areas some find difficulties in reading in general. If it is not due to the lack of interest, poor school attendance, teacher has to think about problems.

Conclusions A set of criteria would serve as a support for teachers to recognise signs, which present reading difficulties in children and without help later could lead to real reading disorders.

Nevertheless teacher must find the support of speech therapist that will provide regular and appropriate intervention to avoid possible Learning disabilities.

Atslēgas vārdi: skolotājs, lasīšanas grūtības, sākumskola

Key words: teacher, reading difficulties, primary school

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MOBILE APPLICATION FOR DYSLEXIA INTERVENTION FOR YOUNG ADULTS

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Dyslexia is a lifelong condition and affects 1 in 10 persons in Europe. Most people reduce dyslexia to just a reading and writing difficulty. But dyslexia is a multi-faceted problem that affects not only literacy acquisition. The main objective of DYS2GO is the provision of a range of mobile highly motivating and stimulating learning games for a carefully selected range of skills known to be important for young dyslexic adults.

A dyslexic person needs to train his or her perception skills on a regular base, otherwise all inclusive education measures, for example, in VET, higher education or adult continuing training, may fail. Such training is a prerequisite for phonological and orthographic processing. Inclusive learning requires accessibility of individual learning resources (for example, digital learning tools tailored to general or specific learning needs) to learn in a variety of ways that compensates deficiencies. Interactive exercises can help dyslexic persons to train specific skills. Such exercises are available, but the majority of them are focused on children and do not usually address specific problems. Not surprisingly, young dyslexic adults do not like these exercises due to their childish nature or because they are seen as irrelevant. Therefore, there is a need for training tools that consider and address the preferences of young dyslexic adults from the age of 16 onwards. And usually such training has to take place in the afternoon or evening (outside of formal education institutions) and has to be provided by teachers/trainers specialised on dyslexia.

Mobile devices have indeed become immensely powerful (not only from a technical point of view) and popular especially with young adults and offer huge opportunities for learning "anywhere and anytime" especially for our target group. The current games are provided online via internet browsers and were designed to work on a desktop computer with keyboard and mouse and a relatively large screen.

DYS2GO will address both teachers/trainers as well as dyslexic young adults.

The focus will be on the following 7 areas:

1. Visual discrimination,

2. Visual memory,
3. Visual sequence,
4. Auditory discrimination,
5. Auditory memory,
6. Auditory sequence,
7. Spatial position (e.g. top, bottom, behind, ahead, left, right).

The games will be available for mobile devices (Android, Apple IOS) as well as for Windows desktop (also planned Windows tablets). The DYS2GO games will be mini-learning games based on perception training approaches for Special Education Needs (SEN). The learning game apps will be accompanied by a teacher's guide on how to use the apps in the classroom. Apps and teacher's guide will be available for free in English, German, Latvian, Czech, Lithuanian, and Bulgarian language.

Keywords: Dyslexia, mobile application, dyslexia intervention

References: <http://www.dys2go.eu/>

LASĪTPRASMES APGUVES KOMPONENTU IZVĒRTĒJUMS PIRMĀS KLASES SKOLĒNIEM

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Lasītprasmes apguvi nodrošina vairākas pamatprasmes jeb komponenti – valodas skaņu apzināšana, analīze un sintēze (fonoloģiskā apzinātība), burtu zināšana un sasaiste ar atbilstošu fonēmu (alfabētiskais princips), vārdu kodēšana un dekodēšana (pamata fonika), precīza un raita saistīta teksta lasīšana, lasītā izpratne, vārdu krājums un valodas prasmes. Daļa no šiem komponentiem tiek apgūta pirmsskolas vecumā, un tas ir pamats veiksmīgai lasīšanas apguvei un pilnveidei sākumskolas vecumā. Pirmsskolas izglītības obligātajā saturā ir definētas prasmes un zināšanas rakstu valodas apguves jomā, bet nav precīzi norādīts to apjoms. Līdz ar to 1. klases skolēnu lasītprasmes apguves līmenis rudens semestrī ir ļoti atšķirīgs. To ietekmē pirmsskolas izglītības īstenošanas process, vecāku attieksme un līdzdalība, topošā skolēna individuālie attīstības nosacījumi.

Pētījuma uzdevumi

Pētījums tika veikts, lai noskaidrotu, kāds ir agrīnās lasītprasmes un tās komponentu apguves līmenis uzsākot mācības 1.klasē, kāda ir lasītprasmes apguves dinamika pēc 3 mēnešiem un kā to ietekmē lasītprasmes komponentu apguves līmenis pirmsskolas vecumā, runas un valodas traucējumi.

Metodes: teorijas izpēte un analīze, runas un valodas pārbaude, DIBELS Next tests (1.klases rudens mērījumi – fonēmu segmentēšanas raitums, burtu nosaukšanas raitums, nevārdu lasīšanas raitums un to monitorings), datu statistiskā analīze, datu salīdzinošā analīze.

Rezultāti

Agrīnās lasītprasmes komponentu apguves līmeņa noskaidrošanai, uzsākot mācības skolā, tika veikta pirmās klases skolēnu (n=82) runas, valodas un agrīnās lasītprasmes pārbaude. 72% 1.klases skolēnu (n=60) tika konstatēti runas, valodas attīstības traucējumi vai tās nepietiekamība. Labs agrīnās lasītprasmes un tās komponentu apguves līmenis tika konstatēts 32% skolēnu, bet 14% skolēnu – starpdiafazona līmenis, savukārt 54% skolēnu – zem riska robežas. Pirmajā pētījuma dalībnieku grupā (skolēni ar runas un valodas traucējumiem, n=60) tikai 20% skolēnu prasmes bija labā līmenī, 13% skolēnu – starpdiafazona līmenī, bet 67% skolēnu agrīnās lasītprasmes apguves līmenis bija zem

riska robežas. Otrajā pētījuma dalībnieku grupā (skolēni bez runas un valodas traucējumiem, n=22) tika konstatēti augstāki rezultāti – 64% skolēnu bija labs agrīnās lasītprasmes apguves līmenis, 18% - starpdiafazona līmenis, 18% - zem riska robežas. Nepietiekamas agrīnās lasītprasmes (salikto punktu vērtība zem kritiskās robežas) apguves gadījumā visiem lasītprasmes komponentiem bija pazemināti rādītāji. Veicot monitoringa mērījumu pēc 3 mēnešiem tika konstatēts, ka būtisks agrīnās lasītprasmes un tās komponentu apguves uzlabojums ir otrajā pētījumu dalībnieku grupā – 91% skolēnu agrīnās lasītprasmes līmenis bija labs, un tikai 9% skolēnu tas atradās starpdiafazonā. Arī pirmajā pētījuma dalībnieku grupā tika konstatēta pozitīva dinamika, tomēr rādītāji bija zemāki – labas agrīnās lasītprasmes bija 45% skolēnu, starpdiafazona līmenī – 15% skolēnu, bet zem riska robežas – 40% skolēnu. Būtiskākās grūtības abās skolēnu grupās tika konstatētas fonēmu segmentēšanas jeb fonoloģiskās apzinātības komponenta apgūvē, vārdu kodēšanas un dekodēšanas jeb pamata fonikas komponenta apgūvē.

Secinājumi

Agrīnās lasītprasmes apgūvei ir nepieciešama visu tās komponentu optimāla attīstība. Fonoloģiskā apzinātība ir viens no svarīgākajiem komponentiem, un tas būtiski ietekmē pamata un paplašinātās fonikas apgūvi. Grūtības fonoloģiskās apzinātības komponenta apgūvē un nepietiekama bērnu runas un valodas traucējumu korekcija pirmsskolas vecumā negatīvi ietekmē agrīnās lasītprasmes apgūvi 1.klasē.

Atslēgas vārdi: lasītprasme, lasītprasmes apguves komponenti, runas un valodas traucējumi.

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CLASSROOM ACOUSTICS, TEACHERS' VOICE AND LEARNING SUCCESS

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Voice ergonomics is a part of the broad ergonomic field. It includes providing comfortable speaking and hearing environments for both teachers and pupils. Moreover, it creates conditions for successful learning. Vocal fatigue is a common complaint of teachers who experience extensive vocal load. Voice intensity (SPL), fundamental frequency (F_0), and phonation time (D_t) are voice parameters characterising vocal load. Sound field amplification systems (SFAS) can be used for the purpose to decrease vocal load and increase a signal-to-noise ratio. The study aimed to investigate (1) the impact of SFAS on voice parameters in elementary school teachers and (2) the impact of SFAS on the improvement of monosyllabic non-word perception in Grade 1 to 4 pupils.

Methods: (1) Twenty teachers with and without voice disorders were selected. The long-term voice monitoring was provided with Vocal Holter Med in conditions with and without using of SFAS. (2) Two hundred fifty primary school pupils were included in the study. Acoustic measurements were made in occupied and unoccupied classrooms. Monosyllabic non-word perception test was carried out in classrooms with and without SFAS.

Results: The use of SFAS in classrooms statistically significantly decreased mean F_0 in teachers with healthy voices (-2.4 Hz). Statistically significant decreasing of mean D_t (-4.09 %), SPL (-1.5 dB) and F_0 (-4.14 Hz) were observed in teachers with voice disorders.

Numbers of errors in non-word perception test when SFAS was used decreased in Grade 1 pupils with typical language development and with language disorders ($Z = -2.273$, $p = .023$; $Z = -1.965$, $p = .049$; $Z = -2.410$, $p = .016$; $Z = -2.156$, $p = .031$). Mean number of errors in pupils with typical language was higher in classrooms with bad acoustics (Grade 2 $U = 68.5$, $p = .001$, Grade 3 $U = 97.5$, $p = .045$, Grade 4 $U = 165.5$, $p = .046$).

Conclusions. SFAS benefits perception of monosyllabic non-words in monolingual Grade 1 pupil both in bad and good acoustic conditions. SFAS has a positive effect on the decrease of vocal load in teachers.

The study was supported by Post-doctoral Research Aid, N 1.1.1.2/16/I/001. The research project "The long-term effects of sound amplification systems on teachers' vocal load and comprehension of verbal instructions of children", 1.1.1.2/VIAA/1/16/001.

Keywords: Voice ergonomics, classroom acoustics, teachers, voice, speech perception

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SWALLOWING PROBLEMS IN PATIENT WITH PARKINSON'S DISEASE

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Parkinson's disease is a slowly progressing chronic neurodegenerative disease caused by lack of dopamine in brain structures and other neuroanatomic structures (Werner FM, 2014). More than 80% of patients with Parkinson's disease experience swallowing difficulties, the consequences of which include malnutrition and aspiration pneumonia (Suttrup, I., Warnecke, T. 2016).

People with Parkinson's disease experience swallowing difficulties right from the first stages of the disease. The intensity of symptoms grows with the progression of the disease. As a result of Parkinson's disease, not only movements are hindered but also the muscles in the face, mouth and throat are impacted, which results in swallowing and speaking difficulties (Dr. Chauncey Spears, 2009).

Tasks:

- To determine the stage at which people with Parkinson's disease develop swallowing difficulties;
- To research the severity of symptoms depending on the severity of Parkinson's disease.

Aim of the research: to determine the clinical symptoms of swallowing difficulties for patients at stage 1 to 4 of Parkinson's disease.

Methods: Anonymous questionnaire "Swallowing problems in patient with Parkinson's disease" and Hoehn&Yahr scale evaluation.

Results: There were 24 participants in the study. According to assessment using the Hoehn and Yahr scale, 37.51% (n=9) of participants were at stages 1 to 1.5 of the disease, 33.33% (n=8) participants were at stages 2 to 2.5, 29.16% (n=7) were at stages 3 to 4. Swallowing difficulties were noted by 87.5% (n=21) of the participants. The most common dysphagia symptoms were the following: dry mouth during the day 41.67% (n=10), salivation not caused by food 37.5% (n=9), cough or choking on saliva 37.5% (n=9), choking on liquid food 54.17% (n=13). Dysphagia symptoms were noted by patients already at stage 1 on the Hoehn and Yahr scale. More pronounced progression of

symptoms related to swallowing difficulties was noted at stage 2.5 on the Hoehn and Yahr scale. Correlation between the stage of Parkinson's disease and swallowing difficulties in participants in the research was determined as statistically significant and moderately positive ($R_s= 0.41$).

Conclusions: the symptoms of clinical swallowing difficulties increase with the progression of Parkinson's disease.

Keywords: Parkinson's disease, dysphagia, Hoehn & Yahr scale

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REHALNGEST NEW DEVICE FOR PHARYNGEAL SWALLOWING BEHAVIOUR EVALUATION, MONITORING AND REHABILITATION

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Medlinkas UAB

Rehalngest is Dysphagia solution for pharyngeal swallowing behaviour evaluation, monitoring and rehabilitation. Based on a unique two-step EMG and Bioimpedance measurement via surface non-invasive electrodes on the neck, Rehalngest device provides in real time a quantitative and qualitative evaluation of the swallowing. Rehalngest enables efficient screening of a large number of patients in busy departments in the shortest possible time. The risk of an existing aspiration tendency can be detected early and treated. Rehaingest can help to reduce risk for silent aspiration during sleep, with its long-term measurement function and reduce hospitalization for aspirational pneumonia. This is the world's first mobile system for the long-term non-invasive swallowing behaviour monitoring up to 8 hours.

Keywords: dysphagia, swallowing monitoring, rehabilitation, EMG, bioimpedance

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BILINGUAL STUDENTS WITH SPECIAL EDUCATION NEEDS – A CHALLENGE FOR THE TEACHERS

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The aim of the study was to investigate problems in identifying, assessing and teaching bilingual students with special needs. Semi-structured individual interviews were carried out with 10 teachers and speech therapists/special education teachers from four schools with different language (Estonian, Estonian/Russian). The results showed that a variety of problems were identified among bilingual students, but the lack of knowledge about special needs made it difficult to understand and formulate their nature. There was a lack of ability among teachers to distinguish between lack of language skills and developmental language impairment. Also, there were difficulties in identifying specific learning difficulties. The teachers pointed out students' uneven language proficiency levels when they begin their studies. Insufficient communication with parents and inadequate information from kindergarten were identified as further obstacles to noticing problems. The study also identified training needs and pointed out the lack of simplified teaching materials.

Keywords: bilingual student, special needs, identifying and teaching a student with special educational needs

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THE SMILEYS CHALLENGE: A NEW APPROACH TO ENCOURAGING CHILDREN AND PARENTS IN SPEECH THERAPY

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Perifērā artikulācijas aparāta muskulatūras vingrinājumi ir plaši izmantota metode logopēdiskajā darbā. Amerikas Savienotajās Valstīs tika izpētīts, ka 68% speciālistu izmanto artikulācijas aparāta vingrinājumus kā papildus “iesildīšanās” paņēmienu pirms runas korekcijas uzsākšanas (Lof, & Watson, 2008).

Bērniem ar artikulācijas aparāta muskulatūras (mēles, lūpu, žokļa u.c.) darbības nepietiekamību artikulācijas aparāta vingrinājumus tiek rekomendēts veikt ne tikai nodarbībās, bet arī kopā ar vecākiem kā mājasdarbu. Vecākiem, kuriem nav padziļinātu zināšanu par artikulātorā aparāta muskulatūru un tās attīstīšanas iespējām, vingrinājumu izpildes aprakstu izlasīšana var būt nepietiekama, lai izprastu vingrinājumu izpildes tehniku, tāpēc tika izvirzīta hipotēze, ka vingrinājumu video demonstrācija uzlabo vecāku un bērnu izpratni par vingrinājumiem, sekmē to praktisko izpildi un motivē vecākus un bērnus iesaistīties apzinātā korekcijas procesā.

Mērķis. Pētījuma mērķis bija izveidot video demonstrāciju viena mēneša garam artikulātoro vingrinājumu kompleksam un izpētīt vecāku motivāciju iesaistīties logopēdiskajā procesā, izmantojot “Smaidiņu izaicinājumu”.

Materiāli un metodes. (1) artikulātoro vingrinājumu atlase, video demonstrāciju sagatavošana; (2) anketēšana. Pētījuma grupā tika iekļauti trīs bērni ar skaņu izrunas traucējumiem un viņu vecāki.

Rezultāti. Tika izstrādāts artikulācijas aparāta vingrinājumu komplekss “Smaidiņu mēneša izaicinājums” veiklai mēlītei un lūpiņām. Vingrinājumi iekļāva lūpu, mēles, žokļa muskulatūras vingrinājumus, kā arī elpošanas vingrinājumus. Vingrinājumi tika sasaistīti ar kalendāru, t.i. viena diena – viens vingrinājums. Katram vingrinājumam tika piedāvāta izpildes instrukcija rakstveida formā. Papildus vingrinājumu aprakstiem, tika izveidota 30 sekunžu video demonstrācija, kurā tika iekļauti mutiski norādījumi. “Smaidiņu izaicinājuma” video bija pieejami interneta vietnē www.youtube.com. “Smaidiņu mēneša izaicinājums”

pieejams gan latviešu, gan angļu valodā, kā arī pieejama saite uz aptaujas anketu, tādējādi sniedzot viedokli par izstrādāto vingrinājumu kompleksu.

Anketēšanā piedalījās trīs bērnu vecāki. Iegūtie dati liecina, ka pētījuma hipotēze apstiprinājās, jo vecāki atzina, ka video demonstrācijas atviegloja izpratni par artikulātoro vingrinājumu izpildes tehniku. Vingrinājumu komplekss bija viegli iekļaujams ikdienā, tas aizņēma 2–15 minūtes dienā. Respondentu galvenie ieguvumi bija kopā pavadītais laiks un iesaiste logopēdiskajā procesā. Bērnu vecāki atzina, ka motivācija ir svarīga izvirzīto mērķu sasniegšanā un bērna individuālajā personības attīstībā.

Pētījuma trūkums ir mazais aptaujāto respondentu skaits, taču šīs mazā pilotpārbaudes galvenais secinājums ir, ka artikulātoro vingrinājumu piedāvājums kā izaicinājums, spēle, sacensība, kas ir papildināts ar nepārprotamu video demonstrāciju sekmē vecāku iesaisti logopēdiskās korekcijas procesā un veicina vecāku un bērnu produktīvu mijiedarbību. Nākotnē ir plānots pētījumu turpināt, iesaistot plašāku respondentu loku.

Atslēgas vārdi: artikulācijas aparāta vingrinājumi, motivācija, logopēdiskais process, vecāki

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PIRMSSKOLAS VECUMA BĒRNU VALODAS TRAUCĒJUMU IETEKME UZ RAKSTU VALODAS APGUVI 1. KLASĒ

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Mutvārdu runas un valodas traucējumi ir viens no galvenajiem cēloņiem grūtībām vai traucējumiem rakstu valodas apguves procesā. Savlaicīgi veikts korekcijas darbs pirmsskolas vecumā mazina rakstu valodas apguves grūtības un rakstu valodas traucējumu iespējamību skolas vecumā. Rakstu valodas apguves procesā būtiska nozīme ir spējām precīzi diferencēt fonēmas un spēt tās sasaistīt ar atbilstošo burtu jeb grafēmu.

Pētījums par pirmsskolas vecuma bērnu valodas traucējumu ietekmi uz rakstu valodas apguvi 1.klasē papildina Valsts pētījumu programmā "Latviešu valoda" Nr. VPP-IZM-2018/2-0002 sāktu pirmsskolas vecuma bērnu latviešu valodas apguves izpēti.

Pētījuma uzdevumi

Pētījums tika veikts, lai izpētītu, pirmsskolas vecuma bērnu valodas traucējumu ietekmi uz rakstu valodas apguvi 1.klasē, konstatētu raksturīgākās kļūdas rakstu valodā un noskaidrotu vecāku viedoklis par bērnu gatavību skolai.

Metodes

Teorijas izpēte un analīze, aptauja, agrīnās lasītprasmes tests DIBELS Next (0 klases pavasara mērījumi un 1. klases rudens mērījumi – fonēmu segmentēšanas raitums, burtu nosaukšanas raitums, nevārdu lasīšanas raitums un 1.klases pavasara mērījumi – fonēmu segmentēšanas raitums, burtu nosaukšanas raitums, nevārdu lasīšanas raitums, teksta lasīšanas raitums un lasītā teksta izpratne, atstāstīšana), rakstītprasmes pārbaude, datu statistiskā apstrāde [Microsoft Office Excel, SPSS Statistics 23 (Statistical Package for the Social Sciences)], datu salīdzinošā analīze.

Rezultāti

Lai noskaidrotu pirmsskolas vecuma bērnu valodas traucējumu ietekmi uz rakstu valodas apguvi 1.klasē, pētījuma dalībnieku lasītprasme tika vērtēta ar DIBELS Next lasītprasmes testu 1.klasei. DIBELS Next lasītprasmes tests tika veikts trīs reizes – pirmsskolas izglītības iestādē (2018.gada martā), skolā mācību gada sākumā (2018.gada septembrī)

un mācību gada noslēgumā (2019.gada aprīlī). Pētījums tika veikts sadarbībā ar Liepājas Universitātes Logopēdijas centru. Pētījuma grupā tika iekļauti bērni (n=10), kas apguva speciālo pirmsskolas izglītības programmu izglītojamajiem ar valodas traucējumiem un plānoja rudenī uzsākt mācības skolā. Tika izveidota pētījuma kontrolgrupa – bērni, kuriem pirmsskolas vecumā netika konstatēti runas un valodas traucējumi (n=10).

DIBELS Next testa 1.klases rudens pārbaudes rezultāti un to salīdzinošā analīze ar pētījuma rezultātiem sagatavošanas klases pavasara pārbaudē apliecināja valodas traucējumu negatīvo ietekmi uz agrīnās lasītprasmes apguves procesu kā pirmsskolā, tā uzsākot mācības 1.klasē. Apkopojot 2018.gada rudens mērījumu rezultātus, tika konstatēts, ka lielākās grūtības bērniem ar valodas traucējumiem sagādā fonēmu segmentēšana.

DIBELS Next salikto punktu rezultāti 1.klases pavasarī norāda uz to, ka tikai 20% bērnu, kas bija apguvuši speciālo pirmsskolas izglītības programmu izglītojamajiem ar valodas traucējumiem pirmsskolas vecumā, ir optimāls agrīnās lasītprasmes līmenis un 50% šo bērnu agrīnās lasītprasmes līmenis ir zem kritiskās robežas.

Rakstītprasmes pārbaudē tika konstatēts, ka 50% (117) jeb puse no visām pieļautajām kļūdām pētījuma un kontrolgrupas skolēnu diktātos ir vārda skaņu sastāva kļūdas (garumzīmju kļūdas, divskaņu pareizrakstības kļūdas, līdzskaņu aizstāšana un izlaidumi, patskaņu aizstāšana un izlaidumi, zilbju un vārda daļu izlaidumi, lieku burtu pierakstījumi un pārstatījumi). Tika konstatēts, ka pētījuma grupas skolēni pieļāva būtiski lielāku skaitu vārdu skaņu sastāva kļūdu (91%) nekā kontrolgrupas skolēni (9%). Pētījuma rezultāti apliecināja, ka pētījuma grupas skolēnu rakstu darbos (diktātā) dominē kļūdas, kas veidojas fonemātisko procesu nepietiekamības dēļ. Skolēniem, kuriem ir bijuši valodas traucējumi pirmsskolas vecumā, arī skolas vecumā ir nepietiekami attīstīti fonoloģiskie procesi, kas negatīvi ietekmē rakstītprasmes un lasītprasmes apguvi.

Secinājumi

Rakstu valodas apguve 1.klasē norisinās sekmīgāk, ja bērniem pirmsskolas vecumā nav konstatēti runas un valodas traucējumi vai ir notikusi veiksmīga to korekcija.

Ja pirmsskolas vecumā runas un valodas traucējumi nav novērsti vai arī nav pietiekami automatizēti pareizas runas modeļi aktīvajā runā, tad skolas vecumā tiek konstatētas rakstu valodas apguves grūtības vai rakstu valodas traucējumi.

Bērniem ar runas un valodas traucējumiem ir nepieciešams intensīvs un mērķtiecīgs logopēdiskās korekcijas darbs gan pirmsskolas, gan skolas vecumā. Viens no primārajiem logopēdiskās korekcijas darba virzieniem ir fonoloģisko traucējumu korekcija.

Lai uzlabotu un nostiprinātu logopēdiskās korekcijas darba rezultātus, ir nepieciešama vecāku un skolotāju informēšana un apmācība.

Atslēgas vārdi: valodas traucējumi bērniem, rakstu valodas apguve, rakstīšanas traucējumi, lasīšanas traucējumi.

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SPEECH THERAPY FOR CHILDREN WITH CLEFT PALATE: INTERVENTION STUDY USING THE EXAMPLE OF THREE CHILDREN

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The aim of this master's thesis was to assess the efficacy of a 12-week intensive speech therapy. In addition, we investigated the impact of therapy notebook on children's motivation during this therapy period. Study group consisted of three pre-school children who were born with cleft lip and/or cleft palate (CLP) and had articulation and resonance disorders that are specific to CLP.

A thorough perceptual and instrumental evaluation of children's speech quality was carried out before therapy. Based on the results, a therapy plan and materials were prepared, taking the child's needs into account. The author of the thesis carried out 12 therapy sessions with each child in the framework of an intervention study. The duration of one therapy session was 45 minutes. The exercises and training tools were prepared based on speech sound correction principles for children with CLP and the interests of the children. Parents were counselled after each therapy session. Doing exercises at home and filling in the therapy notebook was also an important part during the therapy period. To assess the efficacy of speech therapy, the evaluation of children's speech quality was also carried out right after the therapy period and after a three-month period.

As a result of the thesis, it may be concluded that the therapy was effective with children who had only compensatory articulation errors and inconsistent nasal emission or turbulence. The study showed that the use of a therapy notebook in speech therapy motivates the children to actively participate in the therapy. A therapy notebook also supports cooperation with parents and enables a speech therapist to receive feedback from them.

Keywords: *cleft lip and/or palate children's speech, speech therapy, intervention study, efficacy of therapy, therapy notebook.*

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FUNCTIONAL BEHAVIOUR ASSESSMENT OF CHILDREN WITH AUTISM SPECTRUM DISORDER BASED ON FAMILY AND SPEECH LANGUAGE THERAPIST COLLABORATION

Stefanija Ališauskienė, Prof. dr.

Julija Grigėnaitė

Studies have shown that the prevalence of Autism Spectrum Disorders (ASD) reaches 62/10,000 children. The number of autism cases is also increasing due to improved diagnostics (Elsabbagh et al., 2012). Children with ASD have more behavioural and emotional difficulties than children with typical development. Behavioural analysis-based interventions help develop new skills, improve communication and social skills (Maw, The Hague, 2018), language expression and comprehension (Makrygianni et al., 2018). There is still a lack of research that assess the functional behaviour of children with ASD based on collaboration among parents and professionals who are working in systems of education and health care in Lithuania.

The aim of the research is to reveal abilities of functional behaviour assessment of children with autism spectrum disorder based on family-speech language therapist collaboration.

The research is based on **qualitative research methodology**. Methods, including structured interview content analysis, scientific literature analysis, and case study have been employed. Children with ASD (N=4), their family members (N=4), kindergarten teacher (N=1), assistants of kindergarten teacher (N=1), and speech language therapist, who are working in health care institutions and educational institutions in Lithuania (N=17) were participated in the research.

Results reveal that professionals face with problematic behaviour of children with ASD in their practise. Collaboratively processed functional behaviour assessment of a child with ASD using functional behaviour assessment tool allows professionals and parents find a common understanding of child's behaviour and its causes, and together create a strategy that supports positive behaviour of a child.

Conclusions. Based on a scientific literature analysis, autism is defined as a neurological disorder that affects social, verbal and non-verbal communication, imagination, and limited activity and interest. Other disorders and diseases can accompany autism. Signs of autism are seen in infancy, but the disorder is usually identified later on. The causes and characteristics of autism are explained by the theories such as Theory of Mind, Mind

blindness, Anthropomorphism, Central Coherence, Executive Dysfunction, Empathising – Systemising (E-S). Functional Behaviour Assessment enables you to get to know your child in different contexts with different people, to identify the causes of the behaviour, and to identify appropriate strategies that support child's positive behaviour.

Based on functional behaviour assessment tool, parents and professionals similarly assess child behaviour in a familiar environment. They notice that problematic behaviour can be provoked by changes in the environment and people, sensory stimulation, participation in group activities, changing activities, and inability to express disagreement properly as well. Specialists, unlike parents, emphasize that lack of functional language and lack of understanding of verbal language provoke problematic behaviour in children with ASD. Parents and professionals also behave differently when problematic behaviour of child occurs.

A plan for maintaining positive behaviour of each individual child has been created according to the results of the functional behaviour assessment. Reasons of problematic behaviour, strengths and abilities of the child have involved in the plan. The main aim of each plan was formation of functional communication.

According to speech language therapists, they assess a behaviour of child with ASD by observation of child in different settings, talking to parents or other professionals. Based on the assessment of the child's functional behaviour, professionals support positive behaviour through structured learning and motivating children according to their needs. They also collaborate with families, peers, colleagues or professionals from other institutions. Some speech language therapists notice that not all parents do tend to cooperate, some of them do avoid to recognize child's behaviour problems.

According to the researchers, functional behavioural assessment helps both speech and language therapists and parents to better understand child's behavioural motives, identify causes of problematic behaviour, and choose appropriate educational strategies.

Keywords: autism spectrum disorder, functional behaviour assessment.

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INTER-PROFESSIONAL SUPPORT TO A STUTTERING CHILD AND ONE'S FAMILY: EXPERIENCES OF PARENTS

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In European scientific sources, the early meeting of children's needs is defined as *organisation of inter-professional support provided by specialists not only to a child, but also to one's family*. Because of multidimensionality of the structure of the stuttering, the coping with this disorder requires complex inter-professional support provided by specialists, which is important not only to a child who stutters but also to one's family.

The research aim is to identify the need for, resources and implementation of inter-professional support grounding on experiences of parents raising early age children who stutter.

The context of research participants' (parents and children who stutter) experiences. The research involved 12 representatives of families raising early age children who stutter (11 mothers and 1 father). In the research, parents' experiences are analysed in compliance with the CALMS multidimensional structure of the stuttering. The problem of the stuttering is perceived by the research participants as a highly sensitive problem which changes not only the life of a child, but also of the entire family. Grounding on the analysis of parents' experiences, qualified support is difficult to find because sometimes specialists do not try to understand the complexity of a situation of a child who stutters and the entire family. On the other hand, collaboration with various specialists usually would limit itself by specific recommendations or advice to parents on how to behave, communicate with a child who stutters.

Results of the empirical research. Analysis of parents' experiences. When analysing experiences of parents, it was observed that majority of research participants (10 representatives of families) complied with specific criteria of the *cognitive* component. Sensitively reacting to the child's problem, parents excessively take care of their child. All families who participated in the research comply with the criteria of the *emotional* component. Parents are sensitive to this problem of their child, negative emotions, the blaming of the selves for child's stuttering prevail. All families who took part in the research comply with the criteria of the *linguistic* component: a fast pace of family members' speech

dominates. Wishing to help their child, parents end the started sentence instead of the child, etc. Majority of the surveyed families undergo social difficulties due to child's stuttering (this complies with the criteria of the *social* component). Striving to help their stuttering child, family members hardly find joint solutions, disagreements arise. The families who participated in the survey have no clear day regimen. Moreover, some families that participated in the survey (less than half) comply with the criteria of the *motor* component, for instance, when striving to help their child they constantly ask him/ her repeat and/ or correctly pronounce a word that has been uttered incorrectly, emphasise mistakes of child's non-fluent speech.

Having summed up the experiences in search for support of all parents who took part in the survey, it is observed that search for qualified, effective support lasted on the average for 12 to 15 months. The support provided in education and health care institutions usually would not meet parents' expectations. Since efficiency of the support was not observed, as the surveyed parents stated, search for support will continue on.

Keywords: Inter-professional Support; Stuttering; Experiences of Parents.

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THE ASSESSMENT OF DYSARTHRIA AND SPEECH CHARACTERICS OF GROWN – UP PATIENT: VIDEO – BASED LEARNING MATERIAL

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The aim of this master's thesis was to develop a protocol for assessment of dysarthria and a video-based learning material in Estonian of different types of dysarthria. The purpose of the material was to give speech and language therapy students and the therapists who attend in-service trainings better samples of the techniques to evaluate dysarthric speech and to illustrate the main characteristics of different forms of dysarthria.

In order to achieve the purpose of the thesis, speech assessment was conducted with 10 people with different diagnoses of dysarthria and 8 video clips of these assessment procedures were put together in a form of a Powerpoint slide show program. Guiding questions and instructions were added to the videos to help the student determine the form of the dysarthria and the neurological damage. The study material includes self-control questions about theory of dysarthria and its neurological background.

The expert opinion for the dysarthria assessment protocol and video-based learning materials suitability as an additional learning tool for speech and language therapy studies was asked from three speech and language therapy students and four experienced speech and language therapists.

As a result, from the students' and therapists' opinions, the techniques represented in the assessment of dysarthria protocol are suitable for pointing out the salient features of different dysarthria types and the video-based learning materials design can be considered as a competent and effective tool for studies of dysarthria.

Keywords: dysarthria, assessment of dysarthria, video-based learning material.

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OVERCOMING STUTTERING AND CLUTTERING IN ADOLESCENCE BY APPLYING THE ELEMENTS OF THEATER AND MUSIC THERAPY

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In order to look at the situation of teenagers with fluent speech disorders holistically, it is important to discuss not only the causes of these disorders and the need for complex support, but also the possibilities of using music and theater therapy elements in speech therapy when trying to overcome stuttering and cluttering in adolescence. The effectiveness of art therapies to overcome language and speech disorders is proven in foreign scientific literature, which encourages to take alternative approaches for overcoming stuttering and cluttering into consideration. Therefore, the elements of music and theater therapy have been chosen. The aim of this study is to divulge the possibilities of overcoming fluency disorders in adolescence by using elements of theater and music therapy. Qualitative research strategy for the case study was used combining both data collection methods (theoretical analysis and surveys), as well as data processing methods (content analysis). Study included three 12 – 16 year old adolescents who were selected according to their age (teenagers) and fluency disorders (stuttering and cluttering). The empirical part of the study examines changes in the ability to speak fluently in adolescents with stuttering and cluttering using a program of speech exercises based on the elements of music and theater therapy.

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Results:

1. Regarding to the dominant components of the structure of fluency disorders (stuttering and cluttering), speech and language therapy plan has been created. It specifies the directions for overcoming these disorders using the elements of music and theater therapy: emotional and psychological health, social skills, self-expression, breathing and motor control, speech rate.
2. In the second and third cases the ability to speak fluently was low both at the beginning so as at the end of the study. Although positive dynamics of fluency were observed, the overall skill level has not change due to relatively short duration of speech therapy. Emotional, social and motor components mostly dominate in the structure of fluency disorders of teenagers who participated in this research.

3. Applying elements of music and theater therapy to speech therapy resulted in positive dynamics of skills that are essential for fluent speech: changes include the shift in speech motor and breathing control, emotional and psychological state, self-expression, fluent communication, and teenagers' attitude towards their speech disorders.

Conclusions. Stuttering and cluttering have multidimensional structures that include cognitive, emotional, linguistic, motor, and social aspects. Speech and language therapy, based on the elements of music and theater therapy, can be successfully applied when overcoming these disorders. Collaboration with parents and other professionals, positive feedback, good relationship between the specialist and the teenager, and self-control development are important for long-term results.

Keywords: Stuttering, cluttering, theater therapy, music therapy, adolescence.

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DIFFERENTIAL CHARACTERISTICS OF DYSARTHRIA, CHILDHOOD APRAXIA OF SPEECH, ARTICULATION AND PHONOLOGICAL DISORDER

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The focus of this presentation is on comparison of speech sound disorders in children: developmental dysarthria, childhood dyspraxia of speech, articulation and phonological disorders (delay). The concept of speech sound disorders (SSD) in children was suggested by American Speech-Language-Hearing Association (Bernthal et. al., 2009). Children with SSD comprise the largest number of individuals on caseloads of school based practitioners (over 90% of speech-language pathologists in schools serve individuals with speech sound disorders) (ASHA, 2004; 2006). SSD is an umbrella term referring to any combination of difficulties with perception, motor production, and / or the phonological representation of speech sounds and speech segments (including phonotactic rules that govern syllable shape, structure, and stress, as well as prosody) that impact speech intelligibility (Ruscello, 2016, p. 2). Traditionally, children with SSD have been classified as having phonetic (motor origin) disorders and phonological (cognitive-linguistics origin) (Gordon-Brannan, Weis, 2007). In foreign research literature we could find other classifications as well. There are many subtypes of SSD (Morgan, Webster, 2018). For example, Dodd (2005; 2007; 2014) identified the five subgroups of speech disorder: articulation disorder; phonological delay; consistent (atypical) phonological disorder; inconsistent phonological disorder; childhood apraxia of speech (CAS). Bowen (2011) introduced another classification of SSD: articulation disorder; motor speech disorders (childhood dyspraxia of speech, dysarthria), structurally-based SSD; SSD associated with syndromes and conditions.

According to Bernthal and Bankson (2004), the distinction between phonetic / motor and phonemic / linguistic errors is often blurred and challenging to determine. That's why differential diagnostic of speech sound disorders is a complex task (Kairienė, Daniutė, 2015)

On the ground of analysis of theoretical sources (McNamara et al., 2010; Preston et al., 2010; Hegde, 2011; Hodson, 2011; Lof, 2011; Spielvogel, 2011; Becky et al., 2012; Hegde et al., 2013 etc.), Kairienė, Daniutė (2015) presented typical differential articulation and

phonological disorders. It is very important to analyse the differential diagnosis of phonological disorder (or delay) and motor speech disorders (dysarthria, dyspraxia) as well.

Many authors were interested in this topic. Dodd (2011), Dodd, Bradford (1996) noted speech error patterns associated with phonological delay and disorder (developmental and deviant phonological process). Ozzane, (1995; 2005), Dodd (1995; 2005) presented differential characteristics of inconsistent deviant phonological disorder and dyspraxia of speech (cit. Bowen, 2015, p. 66). Comparison chart of childhood dyspraxia of speech, dysarthria and severe phonological disorder was developed by the advisory committee of the Childhood Apraxia of Speech Association (CASANA, 2001; 2004). Gironda, Fabus (2011) submitted the cluster of symptoms that define the dysarthria, speech dyspraxia, phonological and articulation disorders as well. All of these characteristics of phonological delay or disorder, motor speech disorders (dysarthria, dyspraxia), articulation and phonological disorders will be presented and discussed in the report. They should be recognised when performing assessment of children's speech and language.

It is important to note that all characteristics may not be present in an individual child. It is possible for a child to have both disorders (for example, motor speech disorder and phonological disorder).

Keywords: speech sound disorders; phonological disorder; phonological delay; dyspraxia; dysarthria, differential characteristics; speech error characteristics, differential diagnosis.

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BASIC PRINCIPLES FOR INTERVENTION TO DIMINISH INSUFFICIENT DEVELOPMENT OF PHONOLOGICAL AWARENESS

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The aim of presentation is to define, specify and explain basic principles of intervention to diminish insufficient phonological awareness

Theoretical findings provide evidence on the complexity of intervention. The term (intervention) implies the totality of pedagogical, psychological and speech therapy measures and activities to decrease the disabilities of a child's physical, psychological and speech development, which are performed by teacher speech therapist. In Latvian we use the term – corrective development work, but it correlates with the term *intervention*. It is defined as therapeutical (direct or indirect) interference to decrease communication disorders in humans; it also includes diagnostics, consulting, therapy, and rehabilitation to ensure possible higher level of communication.

Corrective development work is explained as an educational, upbringing and corrective process, where scientific theoretical and practical aspects are taken into account. Consequently, theory can not be separated from practice to gain a positive result, theory and practice form one whole.

Speech therapists in their practice take into account several principles and conditions (pedagogical and specific for speech therapy), which must be in mutual connection and correlation. To achieve results, speech therapists must know the correlation with other sciences (e. g. pedagogy, psychology, special needs education, linguistics, neurosciences and others) and it is an integral part of speech therapist activities.

Mostly children in pre-school age (5-7) are able to pronounce all sounds correctly but if there are any pronunciation problems they are of different character. It can be distortion of speech sounds, missing sounds, substitution and mixing of sounds.

Classification denotes these mixing of sounds and substitutions as phonetic phonological disorders. This implies failure of phonological system of mother tongue in children with insufficient articulation and phoneme perception. Distortion of sounds or not pronouncing them, are qualified as phonetic disorders. In this case pronunciation is distorted, there is omitting of sounds and syllables, and other distortions in oral speech.

There are three stages of activities in the correction developmental work to overcome or diminish phonetic phonematic disorders – a preparatory stage, fixation or consolidation stage and differentiation stage. These stages and correlation form an integral part of intervention.

Keywords: phonological awareness, intervention, basic principles for intervention

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PSYCHOTHERAPEUTIC APPROACH IN THERAPY OF ADULTS WITH SPEECH FLUENCY DISORDER

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Key words:

speech fluency disorders; psychotherapeutic approach; balbuties; therapeutic effect; clinical speech therapist.

Annotation:

Current etiological and diagnostic bases of speech fluency disorders confirm the crucial importance of functional training of appropriate speech and therapeutic activities of clinical speech therapist. In adults, the area of motivation, evaluating one's own speech fluency and induction of self-corrective procedures for improve of speech fluency as a key area of the therapeutic program. The therapist's ability to use the psychotherapeutic approach in practice, especially in the area of endeavors to change the attitude of a person with impaired speech fluency to the perception of their own speech and to change their perception of their / his speech by other people, may be a key moment in the effectiveness of the therapy process.

The clinical study presents a summary of 3 case studies of the effectiveness of the therapeutic effect of a clinical speech therapist, which has the character of a short targeted intervention, focused mainly on the following areas:

- changing the attitude to and understanding of one's own speech;
- inducing an appropriate form of compensation procedure in speech training;
- increased pf sensitivity and self-control for symptoms, which are related to the start of speech fluency disorders.

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