



# 11<sup>TH</sup> ESLA CONGRESS OF SPEECH AND LANGUAGE THERAPY

New frontiers in speech and language therapy:  
advancing practice, research and education



26-28 MAY 2022 | SALZBURG-AUSTRIA



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## "Project tele-rehab Kids Chance": Scientific analysis of tele-rehab of children with cerebral or physical disabilities.

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### Background

Through the COVID-19 pandemic, the rehabilitation center "Reha Radkersburg" including the department "Kids Chance" (KC) – which treats and promotes the independence of children with cerebral or physical disabilities – faced a major challenge, as it was not possible for the patients to participate in rehab. This led to the introduction of tele-rehab measures. The present project was commissioned by the KC and carried out by master students ("Health Management and Public Health") from October 2020 to June 2021.

### Objectives

The project followed three main goals: the preparation of an argumentation aid for the financiers (health insurance), the development of a legitimation for therapeutic continued employment of staff members (during times of limited client contact) as well as to design roll-out recommendations for children's rehab and aftercare.

### Methods

Before carrying out the study, a comprehensive research concept was developed, followed by literature research to gather the current state of research on tele-rehab. Furthermore, 11 guided interviews with experts in the fields of e-health, medicine, therapy, research and insurance were conducted for qualitative data collection. In order to integrate practical experience of the KC, data on the effectiveness and benefits of tele-rehabilitation as well as on satisfaction of relatives were provided by the KC.

### Results

The results were summarized by fact sheets based on the three mentioned objectives. The main findings include an increase of treatment and life quality through the use of tele-rehab, as well as benefits for facilities and professional groups. Furthermore, hybrid rehab concepts represent a major roll-out opportunity and extramural care is strengthened.

### Conclusion

With increasing digitalization and need for flexibility, tele-services will continue to evolve and expand to provide best possible care for patients. However, there is still a need for research on tele-rehab regarding effectiveness, cost-benefit analysis and technologies to be used and their integration.



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## A case of Oculo-Pharyngeal Muscular Dystrophy: dysphagia with atypical features

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### BACKGROUND

Oculo-Pharyngeal Muscular Dystrophy is a form of muscular dystrophy that occurs with the following symptoms: eyelid ptosis and dysphagia. The prevalence of OPMD in Europe is 1: 100,000.

### AIM/OBJECTIVES

Description of a clinical case and sharing the symptoms of an atypical dysphagia in order to recognize them and set up a correct (re)habilitation pathway. In the literature, there are only a few articles on OPMD and none of them is specific on rehabilitation.

### METHODS

A 61-year-old female diagnosed with OPMD in 2016 came to SLP for dysphagia and asthenophonia. She exhibited a velar motility deficit with leakage of air and, occasionally, of liquids from the nose.

The patient follows a soft solid, semisolid diet and liquids. The patient describes as if a bolus pushes the previous one and, consequently, of having difficulty in managing the last bolus which she often expels with the hands. The latter cannot be cleansed with water because what the patient described as the 'dam effect' occurs, i.e. filling the oropharynx without being able to pass through the esophagus.

Asthenophonia led to fatigue and an increase in open rhinolalia, affecting her intelligibility. FEES was performed and the patient was advised to respect the posture with the head flexed and turned to the left. Muscle maintenance exercises, passive thermal stimulation and swallowing tests were performed. For the asthenophonia, setting of pneumo-phonetic coordination was performed.

### RESULTS

The patient has learned the compensatory posture from which she finds benefit and she feeds herself with soft solid alternating with semi-solid food when she feels too tired. There remains a velar deficit with reduced episodes of nasal regurgitation, improved movements of mouth and tongue musculature.

### CONCLUSIONS/TAKE HOME MESSAGE

OPMD requires further investigation and studies, mostly in the rehabilitation sphere. Team work was fundamental, but can the SLP do more?

### KEYWORDS

#Oculo-PharyngealMuscularDystrophy #raredisease #Dysphagia #SLP #rehabilitation



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## A prospective 14-year follow-up study of the persistence and recovery of stuttering

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**Introduction:** The aim of the study was to identify the recovery rate from stuttering in a cohort followed longitudinally and to estimate the impact of stuttering on social communication and quality of life.

**Methods:** The participants (38 children who stuttered) were seen on three occasions; Occ-1 during the preschool years (aged 2-5 years), Occ-2 during the school years (aged 9-13 years), and Occ-3 during late adolescence aged (15-20 years). On every occasion speech samples were collected along with detailed questionnaires on the onset, development, severity of stuttering and other developmental information. At Occ-3 the participants also provided information on their social communication and quality of life. Recovery was classified as: (a) fully recovered ( $\leq 1\%$  syllables stuttered; severity rated at  $\leq 1$ ; parent, investigators, and participants report recovery), or (b) partly recovered ( $\leq 1\%$  syllables stuttered; severity rated at  $\leq 1$ ; parent and/or participants report occasionally stuttering. Attrition rates were 0% at Occ-2 and 16% at Occ-3.

**Results:** At Occ-2 55% were fully recovered and 71% were fully or partially recovered. At Occ-3 66% were fully recovered and 88% were fully or partially recovered. Preliminary analyses showed no significant difference between participants who were classified as recovered and those who were classified as persistent regarding their general approach towards social communication and quality of life.

### Discussion

The rate of recovery of stuttering increased with age and in late adolescence up to 88% of participants could be classified as recovered. Most of the participants with persistent stuttering stuttered very mildly, but two showed moderate stuttering. It seems that by late adolescence, the experience of having stuttered during early or middle childhood did not impact on their daily communication or quality of life.



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## Applying the Behaviour Change Technique Taxonomy to Parent-Led Language Interventions

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Parent-child interaction intervention (PCII) involves a speech and language therapist (SLT) employing complex combinations of techniques to support parents to modify their behaviour in order to enhance their child's language environment. These techniques are generally unspecified both in clinical practice and in academic studies. To understand more about how SLTs can best work with parents, we need to specify the techniques they employ.

This study aims to build on research describing SLT techniques using the Behaviour Change Technique Taxonomy (BCTT) for interventions with adults and school-age children, by producing a comprehensive list of behaviour change techniques (BCTs) used by SLTs in PCII.

Following a systematic literature search, papers were coded according to BCTT guidelines. Any techniques that appeared to facilitate behaviour change but were not listed in the BCTT were noted and a label formulated based on majority of use within papers. Based on these findings, an online survey was developed for SLTs to confirm or reject BCTs according to their practice. Finally, observations of SLTs were carried out to measure use of BCTs in practice.

A total of 84 papers containing descriptions of 45 interventions were analysed. Techniques used between a therapist and a parent (Level 1) and those taught to the parent to use with their child (Level 2) were identified. Of 27 Level 1 BCTs identified, 22 were existing BCTs, five were new SLT specific BCTs. Of nine Level 2 BCTs identified, five were existing BCTs, four were new SLT specific BCTs. All except one of the techniques identified in the literature analysis were identified by SLTs in the survey. During observations, 12 Level 1 BCTs, and five Level 2 BCTs were confirmed.

The BCTT is a viable, useful, and insightful basis for categorising SLT techniques in PCI interventions, with some SLTs specific additions.



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## Associations between phonological memory, vocabulary, and grammar in bilingual children

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**Purpose:** This study examined multiple associations between language domains in bilingual children with a focus on phonology. Previous studies indicate within- but not cross-language associations between vocabulary and grammar in bilingual children. We investigated whether the relation between phonology and other language domains differs from the one reported between vocabulary and grammar. In particular, we investigated within- and cross-language associations between phonological memory, vocabulary, and grammar in French-English (n=43) and Spanish-English (n=25) bilingual children at 30, 36, and 48 months. We predicted that phonological memory would display both within- and between-language relations to language development and that these relations would be stronger at the youngest age.

**Method:** Bilingual children participated in free play sessions in both of their languages at each age, from which vocabulary and grammatical information (Number of Different Words and Mean Length of Utterance) was extracted. Vocabulary information was also obtained from parent inventories completed when the children were 30 months and a standardized receptive vocabulary test administered at 36 and 48 months. The children were administered non-word repetition tests in both of their languages at each age.

**Results:** Mixed logistic regression indicated that phonological memory was associated with vocabulary and grammar within the same language and phonological memory in the other language. In two of the four statistical models, phonological memory exhibited positive cross-language relations, and in one model, it exhibited negative cross-language relations to language development. Results also indicated that within- and cross-language effects remained constant, or cross-language associations decreased during the age range studied.

**Conclusions:** Overall, the findings provide some support for cross-language associations between phonological memory and lexical and grammatical skills. These findings have implications for language remediation since they reveal that strong phonology in one language has the potential to bootstrap phonology, vocabulary, and grammar in the other language of the bilingual.





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Behavioral intervention together with rTMS appear to improve sentence comprehension in early Alzheimer's disease.

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We present preliminary results on the application of behavioral language intervention coupled with repetitive transcranial magnetic stimulation (rTMS) in one individual with mild and two individuals with moderate Alzheimer's disease (AD). Behavioral language intervention in the form of Treatment of Underlying Forms (TUF, Thompson, 2007), has been beneficial for aphasic patients. TUF focuses on complex sentence structures and operates on the premise that training underlying properties of language allows for effective generalization to untrained structures that share similar linguistic properties. Combined with rTMS, the beneficial effect of TUF is substantially amplified (Thiel et al., 2013; Martin et al., 2014). The current study investigates the combined effect of these two methods in neurodegenerative conditions. We use TUF and placebo-controlled rTMS over the left and right dIPFC in Slovenian-speaking individuals with AD. Participants are randomized to groups A (high-frequency 10-Hz rTMS) and B (placebo), followed by 60 mins of behavioral treatment (5 sessions/week, 4 weeks), using the TUF method. They are trained in comprehension of centre-embedded relative clauses of the type "The girl who the mom kissed holds the mirror". Up to now preliminary data from 3 participants (1 with mild-AD, and 2 with moderate-AD), all of them from group A, showed a therapy effect for the participant with mild-AD both immediately and 2 weeks after therapy ( $z=2.58$ ,  $p=.01$ ). Participants with moderate-AD did not show any effect in the tested structures (overall main effect of therapy:  $\chi^2=1.62$ ,  $p=.44$  for the first patient and overall main effect of therapy:  $\chi^2=2.25$ ,  $p=.32$  for the second participant). Results are promising for the beneficial effects of behavioral therapy and rTMS in complex sentence comprehension, at initial stages of dementia, something which is demonstrated in the literature for the first time.



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## Biographic Conversations about life with the elderly – effects on communication and quality of life

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**Background:** Age-related changes associated with reduced communication are accompanied by a reduced social exchange which can lead to social loneliness and therefore depressive symptoms (Drageset et al., 2011; Luanaigh & Lawlor, 2008). A systematic review showed benefits of biography work for older people with mild cognitive deficits (Menn et al., 2019). Group settings are particularly recommended for improving social participation (Housden, 2009). A portable software application to stimulate biographical conversations could support non-professionals in conducting the conversations.

**Aim / Objectives:** The research project BaSeTaLK aims to promote the quality of life and communication of nursing home residents through a volunteer-led group approach with tablet-supported biography work.

**Methods:** The study was conducted in a randomized controlled pre-post and follow-up design. There were 12 sessions per intervention group, which were conducted online via videoconference on a weekly basis. Volunteers, who took part in a training course beforehand, moderated the groups. An app developed specifically for the project was used to stimulate conversations about their own lives. Quality of life is assessed with the WHOQOL-BREF & -OLD (Conrad et al., 2016). A special screening was developed to assess communicative participation.

**Results:** At the time of congress, pre, post, and follow-up data for a total of 7 volunteers and 25 residents will be analysed and will be presented.

**Conclusion:** If the evaluation is positive, the app can also be used with other groups of people, e.g. people with aphasia or dementia. Easy access to the app and training on its use will enable its introduction to a wide audience. Speech and language therapists can be involved to teach non-professionals in a special training how to use the app and how to have conversations.





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## Communication skills among incarcerated adults

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**Background:** Adult prisoners are reported to have increased prevalence of many challenges, like language, learning and attention disorders, drug induced impairments and mental disorders. Albeit language disorders and communication skills have been studied in juveniles in custody, few studies have reported on language and communication skills in adults in the correction system, despite the immense consequences this could have for their legal rights, both in court and in custody.

**Aim:** The main aim of the present project was to assess communication challenges in adults in custody, and to investigate how the communication scores are related to learning and language impairments among the responders.

**Methods:** We used the La Trobe Communication Questionnaire (LCQ) as a part of a national questionnaire survey among prisoners in Norway. A total of 877 male prisoners with a mean age of 39 years participated as voluntary responders. Thirty-five percent had completed secondary education, five percent reported no formal education, and 18 percent had higher education.

**Results:** Preliminary analyses show that the full scale LCQ score discriminated significantly between responders who reported both language and reading impairments from those who report no such impairments. A principal component analysis returned a five-component solution, and a diversity of independent variables like number of earlier convictions, formal educational level, and other educational challenges, were found to be differently related to the sub-scores based on the component solution. In particular, the responders reporting language impairments showed elevated scores on factor one, but those who reported ADHD had elevated scores on both component one and two. Further analyses are expected to yield a more precise description of the participants.

**Conclusions:** The LCQ thus appears to explain important variance in communication skills important to understanding communication challenges among incarcerated adults. Practical implications of the finding for counseling and policy making will be discussed.



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## Con-tAct: introducing communication partner training to Speech Language Therapy students

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### Background:

Training Con-tAct is a Communication Partner Training, used by Dutch Speech Language Therapists to train health care professionals (HCP) to communicate successfully with people with aphasia (PWA). A former study showed that, after the training, HCP used more supporting and checking strategies while communicating with PWA and considered themselves as having more knowledge about aphasia and managing communication problems with PWA better.

Besides professionals, SLT-students can also lack confidence when communicating with PWA. In this study we investigated if SLT-students also can benefit from Training Con-tAct.

### Objective:

To evaluate the effect of Training Con-tAct on the communication skills of SLT- students when communicating with PWA and to find out how the students value Training Con-tAct as part of their SLT- program.

### Method:

Mixed methods design with pre and post measures. Nine SLT-students attended Training Con-tAct voluntarily. PWA participated as 'trainers'. We measured student-experiences in communicating with PWA qualitatively (focus group) and quantitatively (questionnaire pre and post ). The effect of Training Con-tAct was measured by analyzing videos of conversations between PWA and students, using a conversation-assessment tool (Meting Con-tAct).

### Results:

After Training Con-tAct the student skills in acknowledging competences of the PWA were improved. Their skills in supporting communication were significantly improved. Results of questionnaire and focus group showed that students considered Training Con-tAct a valuable contribution to the SLT-program; they valued especially the practicing part with persons with aphasia. They felt more skilled and had more knowledge and confidence.

### Conclusion and Take home message:

Training Con-tAct can positively contribute to the SLT-program, not only related to communicating with PWA but providing guidance for successful communication with communication-vulnerable people. This kind of training can improve interprofessional collaboration and access to health care for communication-vulnerable people.

A communication partner training can be part of the program of SLT-students and can improve their skills in communicating with PWA.



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## Developing approaches to successfully involve parent/caregivers in research: experiences of the 'Collaboration for Communication' network

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### Background:

The 'Collaboration for Communication' (CfC) Network is an international team, aiming to find the best ways for parents/caregivers and Speech and Language Therapists (SLTs) to work together to support children's speech, language, and communication (SLC) development. The Network aims to involve parents/caregivers as equal partners at every stage of our research, to ensure our work is shaped by their lived experiences of raising children with SLC needs and of interacting with SLTs and services. However, it is our experience that enabling this involvement is challenging, with multiple barriers to traditional approaches. This paper is presented by a team of researchers and parents/caregivers.

### Aims

To pilot a novel approach to parent/caregiver involvement drawing on qualitative and participatory research methods. To draw on learning to inform the direction of the CfC network, methods for further parent/caregiver involvement in our work and the conduct of our current research activity: two scoping reviews.

### Methods

Parent/caregivers, recruited via researcher networks, will be involved on four occasions, aligning with four phases of the scoping review methodology. Flexibility will be maximised to accommodate parent/caregiver preferences regarding length and type of involvement. Methods for each phase are: 1) Establishing aims and research questions – critical incident methodology and semi-structured interview; 2) Developing data extraction codes - 'walk through' methods; 3) Evaluating results-sorting and ranking activities and focus group; 4) Writing-co-written with parents/caregivers.

### Results

Phase one is underway with early reflections reinforcing the need to research and develop SLT practices which place compassion, hope, trust, and investment in connection at the centre of our work with families.

### Conclusions

We reflect on how these conversations with parents/caregivers have and will shape the motivation, focus and conduct of the CfC network. The benefits, challenges, and key learning for wider research for children with SLC needs will be discussed.



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## Development of a Platform for Teletherapy for People with Aphasia: A User-Centred Design Process

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**Background:** Teletherapy can improve the access and frequency of care for people with aphasia (PWA) (Keck & Doarn, 2014). During the covid pandemic, this was temporarily the only way to maintain care. The benefit of teletherapy and face-to-face therapy for PWA is comparable (Cordes et al., 2020). However, the use of technology is linguistically and cognitively demanding and therefore difficult for PWA (Menger et al., 2020). The project TELL aims to develop and evaluate a platform for teletherapy including therapy management specially for PWA. Based on current literature and two focus groups (4 PWA, 5 speech language therapists (SLTs)) a catalog of requirements was developed including requirements like distraction-free design and emojis for multimodal communication.

**Aim:** We aimed to specify the known requirements by continuously conducting user workshops during the development of the platform.

**Methods:** Firstly, according to user-centred design (Heitplatz et al., 2019), drafts (wireframes) of the platform were developed. Those were tested and evaluated in digital user workshops. Two workshops were conducted, each with 4 PWA (various degrees of aphasia severity) and 4 SLTs. Qualitative content analysis and ad hoc observational checklists were used for evaluation.

**Results:** Using the drafts, user requirements were specified regarding the design and usability of the platform. The analysis of the checklists showed which functions (e.g. set reminders, start/ end therapy session) were accessible and intuitive for the users.

**Conclusion:** The results are integrated into the iterative process of development. For example, long and misleading texts or the position of control buttons are being changed in response to user feedback. For specific feedback, it is crucial to work with visualized drafts. With user-centred design the usability of PWA and SLTs is constantly in the focus of development. This approach can increase technology use and thus ensure facilitated access to teletherapy.



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## Early lexical processing, lexical and social-communication skills in very preterm children - preliminary findings

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**Background:** Preterm children are at risk for language problems. More knowledge on connections between preterm children's early lexical processing, and lexical and social-communication skills is needed.

**Objectives:** To study associations between lexical processing and concurrent lexical and social-communication development at 18 months corrected age in 21 very preterm (born <32 gestational weeks) children.

**Methods:** Lexical processing (reaction time, correct looking time) was measured with an eye tracking based processing task at 18 months, modified for the present study. Lexical and social-communication skills were measured at 18 months with the following screening instruments, validated in the Finnish population: the short form version of the MacArthur Communicative Development Inventories and the Communication and Symbolic Behavior Scale: Infant-Toddler Checklist.

**Results:** Reaction time correlated negatively with receptive and expressive skills ( $r=-0.48$ – $-0.55$ ). The slower reaction time, the weaker were the skills of the child. Correct looking time correlated positively especially with expressive skills ( $r=0.45$ – $0.76$ ). The longer the correct looking time, the stronger were the skills of the child. Lexical processing did not correlate with social-communication abilities. Children with weak lexical skills demonstrated less correct looking time.

**Conclusions:** Very preterm children's lexical processing at 18 months was associated with concurrent lexical development, but not with social-communication skills. The findings suggest an interrelation between early lexical processing and lexical skills in very preterm children. The findings also provide information on utilizing eye tracking for assessing early lexical processing and new screening methods for evaluating lexical and social-communication development of very preterm children at 18 months corrected age.



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## Evaluation of bilingual children in narrative and in morphosyntax: the strength of dynamic assessment

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**Background:** Although bilingual children can encounter language difficulties due to a lack of linguistic exposure in each language spoken, they do not show learning potential differences, as compared to monolinguals (Barac & Bialystock, 2010). It is known that dynamic assessment (DA) of syntactic and narrative skills differentiate English-speaking children with typical development (TD) from those with a Developmental Language Disorder (DLD), regardless of linguistic status, i.e., mono- or bilingual (Hasson et al., 2013; Petersen et al, 2017).

**Aim/Objectives:** We aim to create a DA of syntactic and narrative abilities suitable for French-speaking children, allowing us to discriminate DLD from TD, in mono- and bilingual children.

**Methods:** Our DA tasks were administered to 74 French-speaking bilinguals (27 with DLD) and 95 monolinguals (31 with DLD). Children, aged 6 to 10, were given a syntactic DA task (based on Hasson et al, 2013) and a narrative one (based on Petersen et al, 2017). In the syntax task, children had to describe pictures of toys performing simple actions and received graduated prompts if needed. In the narrative task, children had to tell a story in pre- and posttest phases and participated in-between in a short teaching phase of narrative scheme elements.

**Results:** Preliminary results (for 85 participants) showed that cognitive status (DLD versus TD) was the only discriminant variable, in syntax ( $F(1, 39) = 24.28, p < .001$ ) and in narration ( $F(1, 40) = 4.78, p = .03$ ). Thus, mono- and bilingual TD demonstrated similar results on the syntactic task, as was the case for mono- and bilingual DLD (all  $p > .3$ ). Similar results were found for the narrative task with measures of story grammar elements and language complexity.

**Conclusions:** Findings suggest our DA tasks can be used to distinguish TD from DLD in French-speaking mono- and bilingual children. The tasks are designed to be used by French-speaking clinicians.





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## Executive Functions in Primary Progressive Aphasia: A Meta-Analysis

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**Background:** Primary Progressive Aphasia (PPA) is a neurodegenerative disorder, differentiated from other dementias by its speech and language symptoms. There are three clinical variants of PPA, based on different language impairments. Diagnostic criteria stipulate relatively intact executive functions (EFs) in PPA, but there is evidence of impairments of EFs, even early on in the disease. Considering the known and complex relationship between language and executive functions, analysis of EFs in PPA is necessary.

**Objectives:** The main objective of this meta-analysis is to investigate whether and what kind of EF deficits exist in patients with PPA, and whether this differs according to test modality (verbal/nonverbal) and PPA variant.

**Methods:** This meta-analysis was performed according to the PRISMA guidelines, searching three electronic databases. Tasks were classified according to the three components of EF proposed by the 'unity and diversity' model of Miyake et al. (2000): Inhibition, Shifting and Updating. After applying exclusion and inclusion criteria, data of 216 articles was extracted for meta-analysis.

**Results and Discussion:** We present results on impairments of EFs in patients with PPA, for all EF components combined and for each EF component specifically, since EFs are not a unitary construct and there currently is no clarity on which component(s) might overlap with language processing. Further, an analysis is made regarding possible differences between results on verbal and non-verbal tests, as PPA-related language impairments may confound performance on tests mediated by language performance. We evaluate whether EFs impairments differ according to the clinical variant of PPA to make a more precise assessment of EF in PPA, as the three variants come with different specific cognitive profiles.

**Take home message:** Evaluation of EFs in PPA can help to better understand the nature of language deficits in these patients, but is also relevant for evaluation and treatment in clinical and practice settings.



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## Going digital: teaching and learning scenarios in a BSc Speech and Language Therapy programme in wake of the pandemic

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**Background:** During the COVID-19 pandemic, the development of digital learning opportunities in higher education was of particular interest. Within the digital learning space, e-learning systems form the new basis of a mobile and flexible study structure for heterogeneous students. Designing innovative digital learning formats at Universities of Applied Sciences simultaneously provides opportunities and challenges for existing structures.

**Aim / Objectives:** This project aims to show how teaching and learning spaces at universities can evolve through digitization. Therefore, the aim of the survey was to explore how both students and lecturers experienced the unexpected and forced transfer into a digital-only learning environment.

**Methods:** Students and lecturers were asked about their experiences trying different methods for digital teaching and learning scenarios. The survey was carried out through written qualitative interviews.

**Results:** The new presence of both students and lecturers in the digital space has created a new learning environment. This development both increases accessibility and density of digital content and enables continuous support throughout the learning process. It was possible to show which elements of digital learning formats can be used effectively in order to successfully support students and lecturers in the future.

**Conclusions / take home message:** Desirable learning outcomes can be achieved, regardless of the respective form of the teaching and learning space. Ideally, digital learning scenarios and on-site teaching are successfully merged through the implementation of blended learning concepts. These concepts of blended learning create an accessible and flexible teaching environment and improve the digital literacy of students.

**Keywords:** speech and language therapy, digital teaching, digital learning, blended learning



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## Health and illness perception in Italian people with chronic dysphagia treated for head and neck cancer: a pilot observational study

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### Introduction

Dysphagia, a frequent chronic consequence of head and neck cancer (HNC) treatment, can negatively interfere with the daily life of patients and caregivers. The possible coexistence of mental health and chronic conditions has not yet been investigated in this specific population.

### Methods

In this pilot observational study, 11 disease-free Italian adults with dysphagia following (chemo) radiotherapy for HNC were involved (63.6% men; M age = 67.0, SD = 11.1). The severity of dysphagia was self-assessed through the Italian-Dysphagia Handicap Index (I-DHI) and objectified through an endoscopic study (Dysphagia Outcome and Severity Scale-DOSS). The presence of an informal caregiver was recorded. Participants completed the Mental Health Continuum-Short Form (MHC-SF) and Beck Depression Inventory-II (BDI-II) questionnaires as indicators of mental health and illness, respectively. The associations between the perception of health and illness were explored using contingency tables.

### Results

At the instrumental evaluation, the participants presented mild to severe dysphagia (DOSS 1-5), while at I-DHI they tended to underestimate their swallowing difficulties.

At the MHC-SF, 4 participants (36.4%) reported high levels of emotional, psychological and social well-being (flourishing), 1 (9.1%) low levels of these dimensions (languishing), and 6 (54.5%) intermediate levels (moderate mental health). At the BDI-II, 5 (45.5%) participants presented mild to moderate depressive symptoms. Both the flourishing participants and those who reported depressive symptoms presented dysphagia of varying degrees of severity on instrumental evaluation and self-evaluation. Similarly, the presence of depressive symptoms did not exclude the possibility of enjoying high levels of mental health. Finally, all flourishing people and 60.0% of participants with depressive symptoms were cared for by an informal caregiver.

### Conclusions

The results suggest the possibility to adapt satisfactorily to chronic dysphagia in people treated for HNC and the importance of combining health and illness perception. Studies on larger samples are needed to confirm these preliminary results.



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## HouseHub NGO: Working together for a better tomorrow

Mrs Ellianna Mantaka-Brinkmann, Mrs Evi Maragkou

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HouseHub is a non-profit organization founded in 2018 by two therapists, Mrs. Ellianna Mantaka-Brinkmann, a speech and language therapist, and Mrs. Evi Maragkou, a Psychologist-Psychotherapist. Having both worked in various placements, and having experienced diverse therapeutic approaches in Greece, they decided to set up a different place to work and collaborate with other professionals.

They both took part in an one-year incubator program for setting up a non-profit organization, sponsored by Bodossaki Foundation's Social Dynamo\*, a program which is the expression of the Foundation's vision for a dynamic Civil Society that acts, influences and engages people (January 2017-January 2018\*\*)

Since October 2017 HouseHub\*\*\* has started to organize events and in May 2018 was legally founded.

HouseHub NGO is a community of people and professionals that come together with the vision to set up a society that offers equal rights to everyone and is more open to diversity. The aim is to co-work together having similar philosophies.

The mission of HouseHub is to create a co-working space for all the professionals, NGO's and organizations establishing collaboration together with the aim to empower each individual and contribute to the well-being of the families in an intergenerational environment.

Throughout the last years, HouseHub has organized events with 70 different professionals, has made partnerships with 15 different organizations in 50 events hosted on the premises of HouseHub having approximately 400 people and 30 families participate. Now HouseHub has 10 professionals that make use of the co-working space and a non-profit organization for the empowerment of refugee women and families.

The aim of this presentation is to show our experience in working together with families, with or without disabilities and/or mental health issues, looking at the results through a therapeutic approach.

### References

\*<https://www.bodossaki.gr/en/our-initiatives/social-dynamo/>, \*\*[https://www.socialdynamo.gr/hosted\\_group/house-](https://www.socialdynamo.gr/hosted_group/house-)

\*\*\*[hub/https://www.facebook.com/househubgr/](https://www.facebook.com/househubgr/)



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## Impaired attentional control in individuals with severe and mild nonfluent aphasia - independent from the effects of their stroke

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**Objectives:** Impairment in maintaining vigilance, resisting distraction, or suppressing irrelevant responses, functions related to the attention control system, can be observed in post-stroke aphasia (Murray, 1999; Ewans, 2017). However, it is unclear whether these deficits are directly associated with the stroke or with the resulting aphasia. Our goal was to test the impact of different attentional control deficits on language performance in individuals with aphasia (IWA) by comparing their performances with control groups. The group of IWA included participants with Broca's aphasia (N=9) and transcortical motor aphasia (TMA) (N=13). The non-aphasia groups comprised individuals (N=13) who had had a stroke attack but demonstrated no language disorder (IWS) and 13 healthy, age-matched control participants.

**Methods:** We developed computer-based tasks to measure vigilance, resistance to distractor interference and response inhibition abilities. Linear mixed effects modeling and non-parametric tests of analysis were used to measure group differences.

**Results:** In the vigilance, distractor interference, and response inhibition tasks individuals with Broca's aphasia and TMA did not differ, however, both groups of IWA demonstrated slower responses than the non-aphasia groups. There was no difference between IWA and the control group.

**Conclusion:** Results show that impairment of sustaining attention together with the impairment of the inhibition of irrelevant and distracting stimulus responses are associated with aphasia. The findings suggest that the accessibility of these attentional control functions might be independent from both the severity of aphasia and general slowing - that is the result of the stroke itself. Similar to previous findings (Szöllősi, Lukács, & Zakariás, 2015), the outcomes suggest that lower attentional capacity characterizes individuals with nonfluent aphasia, which increases uncertainty in response selection. These deficits of the attentional control system are different from the overall psychomotor slowing that often appears as a consequence of stroke and are more closely associated with participants' nonfluent aphasia.



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## Improving care for communication in Surinam by strengthening the position of SLT

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### Background and objectives:

This presentation will describe the results of a 'twinning' collaboration between Rotterdam University of Applied Sciences and the professional association of speech therapists (LogoSu) in Surinam. This project was set up because in Surinam, there is a major friction between supply and demand on the labor market of speech-language therapists (SLTs). On the supply side there are SLTs who want, can and are allowed to work, but there is little or no demand on the part of employers because the possibilities for hiring SLTs are not or hardly known.

SLTs provide communication access on three levels: the individual level, the level of the environment and the level of the community. In Surinam, SLTs addressed only (few) individual people and their immediate environment. By working also on a community level, they could have more impact. The aim of this project was to strengthen the position of the SLTs in Surinam, ultimately increasing the quality of life for the population with communicative vulnerability and / or swallowing problems.

### Methods:

Participatory Action Research (PAR) was conducted. Post-graduate training, internships and training-on-the-job went hand-in-hand with development and execution of action plans in different SLT contexts in Surinam. Seven SLTs working in five different contexts were followed during this project by conducting qualitative interviews and diary analysis.

### Results:

Preliminary results show that SLTs feel empowered by conducting this PAR in a collaborative way. Furthermore, they are more aware of the barriers and facilitators in their work setting. Further results are under analysis.

### Conclusions and take home message:

Participatory Action Research proved to be a fruitful method to address both professional and promotional aims. Empowerment of SLTs proved to be an important prerequisite for being able to strengthen their own position in the Surinamese community.





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## Language performance in English and German of bilingual German-English children aged 7-10 years old.

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**Background:** Language assessment procedures used currently in Speech and Language Therapy (SLT) are insufficient for bilingual children (Abed Ibrahim & Hamann, 2017). This is due to the difficulties in differentiating bilingual typically-developing children (BiTD) from bilingual children with DLD (BiDLD). The Sentence Repetition Task (SRT; Marinis et al., 2011), alongside other tools, help SLTs determine if bilingual children have DLD. The SRT can be used across multiple languages, and results between languages are comparable.

**Aims:** This study aimed to investigate if the SRT could profile the language abilities of German-English BiTD aged 7-10.

**Methods:** Participants (n=9), aged 7-10 were tested online using Zoom. Participants were recruited from a German-English bilingual school in Germany via a gatekeeper. Language exposure of participants was determined through the PABIQ (COST IS0804, 2011). Tests used included; the English (Marinis et al., 2011) and German SRT (Hamann et al., 2013). Children were scored using three scores; Identical Repetition (IR), Sentence Structure (SS) and Target Structure (TS). Error analysis focused on Functional/Content Substitutions, Omissions and Additions.

**Results:** IR was strongly correlated with SS and TS across/within both languages. This suggests that clinicians can score using IR only. Substitutions in German were the most frequent error across both languages. Multilingual typically-developing children, with limited language exposure, make frequent substitutions (Gauthier et al., 2012).

**Conclusion:** Clinicians should use the IR score only, saving time. Error type may distinguish BiDLD from BiTD (Komeili & Marshall, 2013). Future research should compare errors made on the SRTs across two groups; German-English BiDLD/BiTD.



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## Language Sample Analysis in Clinical Practice: Speech and Language Therapists' Barriers, Facilitators, and Needs

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**Background:** Most speech and language therapists (SLTs) working with children with developmental language disorder (DLD) do not perform language sample analysis (LSA) on a regular basis, although they do regard LSA as highly informative for goal setting and evaluating grammatical therapy in children with DLD.

**Aim:** The primary aim of this study was to identify facilitators, barriers, and needs related to performing LSA by Dutch SLTs working with children with DLD. The secondary aim was to investigate whether training would change the actual performance of LSA.

**Methods:** A focus group with 11 SLTs working in Dutch speech and language therapy practices was conducted. Barriers, facilitators, and needs were identified using thematic analysis and categorized using the theoretical domain framework (TDF). To address the barriers, a training program was developed using the software program CLAN. Changes in barriers and use of LSA were evaluated with a survey sent to participants before, directly after, and 3 months post training.

**Results:** The barriers reported in the focus group were SLTs' lack of knowledge and skills, time investment, negative beliefs about their capabilities, differences in beliefs about their professional role, and no reimbursement from health insurance companies. Post training survey results revealed that LSA was not performed more often in daily practice. Using CLAN was not the solution according to participating SLTs. Time investment remained a huge barrier.

**Conclusions / take home message:**

A training in performing LSA did not resolve the time investment barrier experienced by SLTs. User-friendly software, developed in codesign with SLTs might provide a solution. For the short-term, shorter samples, preferably from narrative tasks, should be considered. We have taken first steps in developing time-saving software that also addresses gaps in knowledge and skills of SLTs.

**Keywords:** Language Sample Analysis, Developmental Language Disorders, Speech and Language Therapy, CLAN, Behaviour Change



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## Longitudinal follow-up of new immigrant children in Montreal: French learning and lived experiences

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**BACKGROUND:** Much recent research has increased our understanding of variables that impact the language levels individual children reach in their first and second language, notably the amount and quality of language input. Although such findings provide great help in more accurately assessing bilingual children, the identification of Developmental Language Disorder (DLD) in bilingual children remains a daunting process. More information on how fast typically developing children acquire a second language (L2) provides an additional reference point against which to compare children suspected of having DLD.

**OBJECTIVES:** This study followed new immigrant children in Montreal, Canada, within the French-language province of Quebec, in their initial learning of the community/school language, French, assessing their language skills and interviewing them and their parents on their experiences.

**METHODS:** 40 children newly arrived in Canada (age 2 to 14) and their parents, from Mandarin and Spanish home languages were seen at three time points separated by a year. Children were administered formal tests of French and spontaneous language samples were collected. Qualitative interviews were conducted and analyzed.

**RESULTS:** Receptive French vocabulary increased steadily over the time points, regardless of age within the school-age range, but was slower for children not attending school. Language samples showed increasing length of utterance but grammatical and semantic errors were frequent. The fairly rapid vocabulary growth is consistent with earlier studies showing the initial contact with a new language to be a period of relatively fast learning. The errors in spontaneous speech may represent a development stage in L2. Children reported neither overly positive or negative feelings. Parents' attitudes towards bilingualism were positive.

**CONCLUSIONS:** The study provides novel information on the rate of second language growth and associated experiences.



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## Making the most of together-time': Development of a Health Visitor led intervention to support children's early language and communication development

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### Background

If early identification procedures are to bring benefits they must be coupled with evidence-based interventions which are acceptable, feasible and equitable.

### Aim(s)

To co-design an intervention for use with children identified as having language and communication needs at the 24-30 month review offered to all children in England as part of the Healthy Child programme

### Method

Study methods were based on the most recent guidance regarding best practice in complex intervention design and behaviour change. Methods synthesised child language intervention research evidence with expert knowledge, practitioner expertise and parent/caregiver views and preferences through iterative co-design workshops.

### Results

We found practitioners have an appetite and enthusiasm to promote children's language and communication development but were not sure precisely how to support families. Parents/caregivers wanted to be supported to be proactive and have agency in helping their child. An intervention model was developed to support families to increase their use of responsive interaction behaviours within their daily routines. For equitable delivery, we found we must not only create a proportionate model but also a tailored one, considering the specific barriers and enablers for each family. Potential barriers and enablers to the behaviour change across families were identified and a method devised for tailoring interventions accordingly. Communication between practitioner and parent/caregiver was identified as vital to success: language, which invites partnership, dialogue and shared decision-making, is essential.

### Conclusion

The intervention model, designed to be universal in reach and personalised in response was considered acceptable, practicable and equitable to the stakeholder participants



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## Markers of expressive grammar impairment in Italian children with childhood Apraxia of Speech: A longitudinal study of morphological errors

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**Background:** Childhood Apraxia of Speech (CAS) is a subtype of motor speech disorder, whose core deficit involves the planning and/or programming of the spatio-temporal parameters of speech movement sequences. Children with CAS often show also deficits in expressive language and currently it is debated if these issues should be interpreted as a consequence of their motor speech disorder (“cascade effect”) or a symptom of a co-occurring language impairment.

**Aim:** to investigate in a longitudinal perspective the acquisition of free morphology in Italian children with CAS to see whether the errors involving free morphemes are explained by the motor disorder or if they are linguistic in nature.

**Methods:** we longitudinally investigated the speech and language performances of 20 children with CAS at two time points (T1 and T2). The mean age at T1 was 63 months (SD 6 months) and at T2 84 months (SD 8 months). We considered the number of obligatory contexts for a set of free morphemes and counted the occurrences, omissions and errors involving determinants, clitic pronouns, auxiliary verbs and prepositions.

**Results:** between T1 and T2 there was a statistically significant increase in the obligatory contexts and in the correct use of all the free standing morphemes with the only exception of clitic pronouns. In particular the clitic pronoun profile remained substantially unchanged, even though object clitics share the same phonological and motor form with the determinants (i.e. la, lo, le).

**Conclusions and take-home message:** Deficits in the clitic pronouns system have previously been reported as a possible marker of DLD in Italian. Our results suggest that motor speech constraints by themselves cannot be responsible for the disordered morphology of Italian children with CAS. Therefore, expressive grammar must be considered as a salient target for speech and language therapy.



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## Multilingual approaches in Speech and Language Therapy. Are we there yet?

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### Background

Almost half of the children who receive Speech and Language Therapy (SLT) grow up multilingually (Lüke & Ritterfeld, 2011). There is scientific consensus that Developmental Language Disorder (DLD) always affects all languages spoken by a child (Bishop, 2017). However, despite the high number of multilingual children receiving SLT services, SLTs' approaches to assessing and treating multilinguals are predominantly monocultural and monolingual (Scharff Rethfeldt, 2016).

### Methods

In an online survey, 300 Speech and Language Therapists from Austria, Germany, Italy, and Switzerland were asked about their attitudes and approaches in the service provision for multilingual children. Quantitative and qualitative analyses were conducted. Participants' responses were interpreted in the context of their personal language background, professional experience, country-specific SLT service-related policies, SLT training, and migration history. In a follow-up exploration, the questionnaire results and conclusions were further evaluated by SLTs in terms of their practicality and relevance.

### Results

There seems to be an imbalance between SLTs' knowledge about the specific requirements for providing SLT for multilingual children and their common practice, which - despite continuous need of further training - points to sufficient awareness but still a relatively high presence of monolingual approaches in SLTs' everyday practice, which might be due to a lack of materials or resources. We found experience in working with multilingual children to be the most influential factor on attitudes and approaches towards multilingualism. Follow-ups (partially) confirm our results and support practical implications.

### Conclusion

SLTs' personal experience in working with multilingual children has been found to be most influential in supporting multilingual approaches in SLT service provision. In order to establish this experience early on, our findings suggest the importance of improving pre-exam and early-career professional field-experience with multilingualism to foster SLTs' development of multilingual and multicultural attitudes and appropriate approaches to linguistic diversity in their clinical practice.





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## Non-nutritive sucking behaviours and speech sound development at ages 2 and 5 years

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### Objectives

- Is there a relationship between speech development and NNS behaviours in the first five years of life?
- What are the potential indicators of SSD with regard to NNS?

### Methods

Speech articulation skills and phonetic inventory were described and statistical analysis undertaken to identify differences between groups of children with different patterns of NNS behaviour. Relationships between variables, and specifically the role that NNS plays in the speech development of children with and without SSD, were explored. A multivariable regression analysis using data from a cohort study design explored the relationship between NNS and speech development at ages 2 and 5 in an existing prospective population study (ALSPAC).

### Inclusion Criteria

10% subsample within ALSPAC (Children In Focus subset).

### Exclusion Criteria

Developmental Verbal Dyspraxia; Genetic syndrome; Learning Disability; Sensorineural Hearing Loss; Cleft; Premature birth – due to the impact of enteral feeding.

Regression analysis examined speech error frequencies at 25 and 61 months and NNS behaviour (pacifier or digit sucking) to identify differences between children with different patterns of NNS. Potential confounders included biological sex, socioeconomic status, maternal education, paternal influence, additional siblings, and weak sucking at 4 weeks, word combination at 24 months, low intelligibility and word morphology at 38 months.

### Results

Evidence of a potential protective effect of occasional or frequent NNS behaviours against velar sound errors at age 2 years was indicated. Conversely, digit sucking at age 15 months was found to be associated with increased likelihood of alveolar errors at age 5 years.

### Conclusion / take home

This study adds to the evidence base for an association between NNS behaviours in early childhood and speech sound development in the first 5 years of life. Further research is required with larger population samples to explore this association in more depth.



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## Phonological processes in the speech of three- and four-year-old Icelandic-speaking children with a speech sound disorder

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**Background:** Phonological process analysis (PPA) is used by speech-language therapists (SLT) across the world to describe patterns in children's phonological systems. It allows the SLT to view systematic changes and simplifications that can affect children's speech, in terms of place and manner of articulation in addition to voicing. This type of analysis is, however, still not widely used by SLTs in Iceland.

**Aim/Objectives:** The aim of this study was to compare phonological processes of children with speech sound disorders (SSD) with those with typical speech sound development (TD) and to create a diagnostic tool to map the speech of children with suspected SSD.

**Methods:** 28 Icelandic-speaking children diagnosed with SSD aged between 3;1 and 4;10 years participated in the study. The data were analysed using two different methods: (1) PPA as had been applied in a recent developmental study, and (2) process analysis by using the software Phon to explore whether the software captured the same processes as the manual method.

**Results:** The results showed that the types of phonological processes present in the speech of children with SSD were comparable to those found in the speech of the TD children. However, compared with TD, the number of active phonological processes was statistically higher for children with SSD at 3;0–3;11 ( $t(14) = 9,35$ ,  $p < 0.001$ ) and 4;0–4;11 ( $t(12) = 8,45$ ,  $p < 0.001$ ) who also showed greater variability of processes. For the most part, Phon captured the same phonological processes, however, the number of active processes tended to be higher.

**Conclusions:** PPA reliably captures processes, indicating that SLTs have access to accurate tools to diagnose SSD. Suggestions will be made about minor adjustments (a) to the list of processes previously considered, and (b) for Phon to become more accurate for analysis of Icelandic-speaking children's speech.



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## Preliminary results from the “Healthy Mind” intervention program

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**Objective:** Aging causes changes in the cognitive and psychosocial function of older people. Multi-dimensional intervention approaches increase awareness and knowledge, decrease negative memory-related affect.

We will present the theoretical framework that supports the use of the Healthy Mind intervention as part of a systematic psychosocial and cognitive treatment program for older adults. This intervention has a strong educational focus and promotes a more realistic understanding of how cognitive aging affects daily functioning and relevant contextual factors (e.g., health, lifestyle, beliefs). Active components of the program include the development of skills in emotion regulation, memory compensation, problem solving and locus of control. In this session we will present the effectiveness of the intervention program in a group of older adults in Cyprus.

**Methods:** The experimental group included 30 participants receiving the training (Age, M=68.1, SD= 3.6; Education, M= 12.1, SD=2.1) and 30 controls (Age, M=67.2, SD= 2.3; Education M=11.6, SD= 2.2). Pre-test, midterm and post-test, were performed for all participants. Follow-up assessments were performed for trained participants at 1 month and at 3 months after the intervention. Participants underwent a comprehensive neuropsychological assessment to determine the level of cognitive functionality. Dependent measures were Memory Compensation Strategies (MCS), Problem Solving (PS) Emotion Regulation (ER) and Locus of Control (LOC).

**Results:** Repeated measure ANOVAS were used to explore the effectiveness of intervention group. Significant training effects were obtained for the or intervention group  $p < .000$  across time and this improvement was maintained at the two follow-up ( $p < .000$ ) phases. Mixed model MANOVA was conducted to compare the performance between the two groups. There was significant improvement on MCS, PS, ER and Internal LOC for the treated group as compared to the control group.

**Conclusion(s):** The preliminary results from this group intervention implementing a multi-dimensional intervention program suggest that the intervention is both feasible and effective. Treated participants demonstrated improvement in the use of memory compensatory strategies, problem solving, emotion regulation and increased internal locus of control. Implications for rehabilitation will be discussed.



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## Prosodic encoding of focus by Greek speakers with Autism

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One aspect that heavily impacts the social communication of people with Autism Spectrum Disorder (ASD) is abnormal prosody (i.e., atypical prosodic patterns). Unfortunately, very few studies focus on the prosodic characteristics of adolescents and adults with ASD. Despite their relatively high/moderate language abilities, they show reduced ability to mark information structure via prosodic cues, compared to neurotypicals (NT). We report results of how Greek-speaking individuals with different language abilities mark information structure prosodically.

Thirty native Greek-speaking individuals, 16-27 years old, took part in a question-answer task. 20 were autistic (10 with high (High-A); 10 with moderate (Mod-A) language skills) and 10 were NT. Autist participants were matched on age, gender, and those with High-A language skills were also matched that of NT. Their task consisted of three twelve-question blocks, which elicited focus in Wide focus (WF), Narrow Focus Subject (FS), and Narrow Focus Object (FO) and these were counterbalanced across blocks. We analyzed 1833 items. The F0 patterns (i.e., maximum, minimum, and range/span) and duration of the subject and the object nouns of their responses were measured at the word and syllable level (i.e., the first stressed syllable of these nouns). Linear mixed effects (LME) analysis was performed for each variable of interest at each level. The fixed factors included were Gender:Female/Male, Group:NT/High-A/Mod-A, target:Subject/Object, Condition:WF/FS/FO, and some of their theoretically motivated two-way interactions.

All autistic participants exhibited longer duration at word level compared to NT. However, only Mod-A differed from NT on F0max and F0min at word level and syllable level. Upcoming analysis will reveal potential intonational differences on pitch contour (e.g., tones used and their alignment with the syllable/word).

Results suggest that it is important for speech-language therapists to understand the details of prosodic use in different subgroups with autism before applying intervention.

Key words: Autism, Focus, Prosodic marking



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## Public awareness of service delivery options for Developmental Language Disorder: a survey of the public in 18 European countries

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**OBJECTIVES:** Low public awareness and knowledge of the existence and nature of Developmental Language Disorder (DLD) have been identified as major obstacles to adequate access to services (e.g. Catalise Consortium, 1), focusing on English-speaking countries. However, traditions in the use of diagnostic labels and service delivery models vary across countries, with important implications for awareness-raising efforts. Researchers from COST Action IS1406, a European research network, conducted a public survey of DLD awareness across 18 European countries and languages. Published results show significantly lower awareness of DLD than of autism and other developmental disorders across all the countries; however with differences across countries in how aware the public is of DLD and what they think it is (2). This presentation reports on additional survey questions not published previously.

**METHODS:** Members of COST Action IS406 developed and administered a survey to members of the general public in their countries using a friend-of-a friend approach. A total of 1509 responses were obtained. Questions reported on here focus on public awareness of who identifies DLD, where to turn for intervention for preschool and school-age children, the role of parents in the intervention process and whether intervention for DLD is helpful

**RESULTS** indicate that a large proportion of the public in most countries, but not all, think that intervention is helpful, a large proportion of the public thinks that Speech-language therapists/logopedes are the main profession identifying DLD, but other professions are chosen as well by significant numbers of the public.

**CONCLUSION:** The study results confirm the need for international efforts to increase public awareness of DLD (Catalise (2), RADLD (3)) but also that realities are different across countries, necessitating somewhat different awareness raising approaches.

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## Rearing a child with DLD: Parents' experiences with SLT services in 10 countries

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**Background:** Cooperation between Speech and Language Therapists (SLT) and parents to help children with Developmental Language Disorders (DLD) has always been important and in the last decade this relationship has been of increasing interest. The majority of published work is from the perspective of the therapist and what they think and feel parents need to help their children. However, less is known about 1) the processes parents try in order to access and receive SLT services; 2) how they perceive the journey; and finally 3) the service provided to their child.

**Objective:** This paper describes a secondary analysis exploring how parents experience identification and access of SLT services for their language impaired children.

**Methods:** Parents from ten countries and with a child who had received services for speech language disorder participated in semi-structured qualitative interviews. We used thematic analysis to interpret the data.

**Results:** Two main themes were constructed: 1) Parental recognition of the need for services; and 2) difficulties accessing services. Parents provide detailed descriptions of how they recognized that their children needed services and how they went about securing these services. Parents explicitly recounted the process they went through; from making their initial concerns about their child's development, the feelings that this engendered, and how they went about trying to get support and treatment. Parents also talked about the factors that made them decide they had to fight for services for their children and the rationale for these decisions.

**Conclusions:** Across countries parents recount similar experiences. Major obstacles were identified that lead to a perception of delay in obtaining timely access to services. Often, identifying that it is SLT services that children required was the first hurdle, even before trying to get a referral to them.





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## SocCom: An Online Interactive Social-Communication Training for Chronic Moderate-to-Severe TBI.

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**Background-Objectives:** Low self-awareness has been well recorded in TBI survivors, and has been associated with lower treatment engagement and compliance in all recovery stages, including chronic ones. Consequently, TBI survivors who exhibit low self-awareness are less likely to return to pre-injury function. Despite numerous interventions aiming to tackle this phenomenon, individuals with moderate-to-severe TBI still face these challenges. Furthermore, no specific guidelines exist for interventions on increasing SA in moderate-to-severe TBI, and are not always based on clear theoretical frameworks or clearly defined 'active ingredients' that contribute to possible recovery of function. In this workshop the effectiveness of a newly-developed online interactive social-communication training (SocCom) will be presented. The purpose of SocCom is to improve psychosocial skills and promote effective communication strategies, facilitate problem-solving and vocational engagement through realistic goal-setting and self-awareness training, in chronic TBI.

**Methods:** Active ingredients of the intervention will be described including communication training, problem solving, emotion regulation and self-awareness training. Thus far, two groups of eight males with moderate-to-severe TBI have been formed (mean age=37.00 years, SD=15.58; mean education=11.88 years, SD=4.09; median TSI=4.50 years, range=2–7). Participants are currently participating in weekly 1.5-hour group sessions for 11 weeks. Outcome measures include neuropsychological and psychosocial measures, and were administered at baseline and upon study completion.

**Results:** This is an ongoing data collection and analysis process (began July/2021); therefore, results pertaining to the proposed intervention's effectiveness will be presented during the workshop. The intervention is well-tolerated.

**Conclusions:** Comprehensive interventions can help TBI survivors in gaining self-awareness and taking responsibility for lingering difficulties, thus increasing active engagement in the rehabilitation process, during the chronic phase, and implementation of cognitive and communication strategies to increase independence. Barriers and challenges met regarding the online implementation of SocCom, including needs for special assistance in completing homework, and technical support will be discussed.



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## Speech and language therapists' barriers and facilitators in their collaboration with parents

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### Background

Collaboration with parents is key in family-centred therapy for children with developmental language disorders. However, Speech and Language Therapists (SLTs) experience challenges in their collaboration with parents. In order to support SLTs in their collaboration with parents, we have to know their barriers and facilitators.

### Aim

To explore SLTs' barriers and facilitators in their collaboration with parents of children with developmental language disorders aged 2-6 years.

### Methods

Three online focus groups were conducted with 17 Dutch SLTs in total. During the focus groups we used so called 'persona's' to facilitate discussions about collaborating with parents with a variety of characteristics. The data was analysed by two researchers independently, using the Theoretical Domain Framework and the Behavioural Change Wheel.

### Results

Next to more obvious barriers such as time and funding, barriers linked to underlying beliefs about collaboration were expressed. Beliefs about SLTs' professional role and identity seemed to be one of the biggest barriers, since SLTs spoke mostly about child-centred care and saw themselves as being the expert. Parents were seen as important, but working with parents was seen as an extra investment which is challenging for them due to time restrictions. Next to this barrier, several barriers linked to beliefs about consequences of working collaboratively with parents, beliefs about their capabilities, their knowledge and skills were expressed.

### Conclusions

To support SLTs to collaborate with parents, it is important to make explicit what their barriers and facilitators are. For this specific group of SLTs, it appeared that underlying beliefs about collaboration with parents were experienced as the biggest barriers. This insight gives direction for the development of an intervention that will elevate the experienced barriers and support SLTs in their collaboration with parents.

### Keywords

Therapist-parent collaboration, behaviour change, qualitative research, speech and language therapy



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## Speech motor control in Childhood Apraxia of Speech: The role of auditory and somatosensory feedback

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Childhood Apraxia of Speech (CAS) affects sequential motor planning and/or programming underlying speech production (ASHA, 2007). The disorder and its manifold behavioral characteristics, such as disrupted coarticulatory transitions as well as variability in articulation and prosody, have been attributed to impairments of speech motor control, more precisely, feedforward mechanisms. To compensate for that, children with CAS might rely more on auditory and somatosensory feedback than typically developing (TD) children according to studies in neurocomputational modeling (Terband et al., 2009).

Within this framework, we investigated whether dependence on one or both feedback loops is more profound in children with CAS than their TD peers. We used 3D electromagnetic articulography (EMA) and acoustic recordings to study the speech of three children with CAS and three TD controls who are 11- to 13-year-old native speakers of Flemish Dutch. The children produced the target syllables /ba:, bi:, bu:, pla:, pli:, plu:/ within a carrier phrase: "Ik heb de xxx gezegd.". This task was performed in three conditions: without feedback perturbations, with auditory masking through pink noise, and somatosensory disruption using a bite stick. We measured lip aperture during vowel production, the duration of lip closure for plosives, peak velocity of the lower lip, and vowel formants.

In line with expectations, we found high within-subject variability of articulatory and acoustic parameters among the CAS children when feedback was undisrupted. Auditory and somatosensory perturbations influenced CAS as well as TD children differently depending on the parameter measured. As this is a case series analysis, we cannot draw any generalizing conclusions yet. However, we can already see individual differences in articulation and capabilities to compensate for feedback perturbations.

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## Telepractice: The perspectives of SLPs and their clients

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### Background

Telepractice, online therapy, is a means of service delivery that has been documented in research for several years in countries and remote areas where individuals have difficulty to access services face-to-face. In 2020, SLPs had to venture in the use of telepractice, irrespective of their location to minimize physical contact due to the COVID-19 pandemic. The Association of Speech-Language Pathologists (ASLP) immediately sought ways to be of help to its members by providing different resources.

### Aims and Objectives

The aims and objectives of this study were to investigate the effects of telepractice on service delivery when compared with face to face sessions while gathering feedback from both the clients and the professionals perspectives.

### Method

Given that no local data was available, ASLP felt the need to carry out two surveys to explore the perspective of SLPs and clients about telepractice, as well as the benefits and challenges it presents. Quantitative and qualitative data was collected through the electronic dissemination of the surveys. Participants included 66 SLPs and 66 clients.

### Results

98.5% of the client respondents, received online therapy. The vast majority reported that online sessions were effective and, in most cases, telepractice had no effect on the quality of service provision. 90.9% of the SLP respondents engaged in telepractice. Effectiveness of intervention delivered online and advantages and disadvantages of telepractice varied across client groups.

Findings highlighted the ability to set new goals and discharge clients; professionals' confidence to work remotely across different age groups; the importance of reviewing codes of ethics and ensuring that telepractice is covered by ethical guidelines.

### Conclusion

Telepractice in speech therapy can be a useful tool in combination with other delivery methods of therapy. Further research is required to study its effectiveness. There also exists the need that therapists receive training to implement telepractice and make maximum use of it. This study hopes to improve the services provided through telepractice. Telepractice also provided an opportunity to target the quality of parental input.

### Keywords

Telepractice, face-to-face sessions, effectiveness, challenges, parental input, accessibility



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## The Early Language Identification Measure (ELIM): a new measure for use in the 24-30 month review in England's Healthy Child programme

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### Background

Early identification of children with low language skills at a population level would bring clear benefits for the provision of preventative early intervention. Identification of appropriate measures has proved a challenge, principally because measures have tended to have low sensitivity and thus miss many children they are trying to target.

### Aim(s)

To develop a measure to identify children with low language in the community at 24-30 month Health Visitor (HV) review

### Method

Five aspects of development were combined into a single measure (The Early Language Identification Measure - ELIM) and tested blind against a gold standard language measure (The Preschool Language Scale) at the universal review offered to all children in England at 24-30 months of age. The aim was to ascertain which of the five elements in the scale best predicted the outcome. Four hundred and three children were assessed on both the identification measure and the gold standard. Area under the curve (AUC) was reported for each of the five sections on the ELIM

### Results

The optimal combination was a vocabulary word list coupled with an observation scale of the child's communication and related behaviours observed by the HV provided the optimal results with high sensitivity (very few children were missed). The specificity was lower (the false positive rate was higher than the false negative rate).

### Conclusion

With appropriate training and supervision the ELIM provides a valuable tool for HVs when provided in conjunction with the ELIM intervention, and integrated into local Speech and Language Therapy and early education and care provision.





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## The future of allied health research capacity building for excellence in clinical practice

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### Background:

Clinicians and organisations who engage in research improve healthcare processes and outcomes. Allied health professionals (AHPs) can be drivers of innovative patient care as clinical academics by providing a direct exchange pipeline between academia and clinical practice. Strong partnerships between academic and healthcare organisations must therefore be established.

### Aim:

To pilot a partnership approach between a local healthcare organisation and higher education institution to build allied health research capacity and deliver evidence-based patient care, within an Implementation Science framework.

### Methods:

A bespoke 'allied health clinical-academic researcher' seconded role was created two days a week for two years (2020-2022). First, a baseline measurement of AHP research capacity and culture was made using a validated survey. Second, the behaviour change 'Capacity, Opportunity, Motivation-Behaviour' (COM-B) model guided research capacity building interventions. Selected outcomes following Year One are reported.

### Results:

Projects to build research capacity have been instigated, including: (1) an AHP Research Interest Group to develop research skills and peer support; (2) a bespoke and clinically focused electronic research resource; (3) mentorship for clinicians and students to grow research confidence and engagement to build excellence in clinical practice; (4) a collaborative systematic review on the impact of allied health research engagement. Clinical-academic outputs include peer-reviewed publications (n=1, 4 more anticipated in 2022), active research projects (n=4), local and regional research communities (n=2), and conference presentations (n=5).

### Conclusions:

The outcomes following Year One of this collaborative partnership demonstrate that a well-supported clinical-academic role can deliver successful research capacity building interventions through the lens of a behaviour change framework. This resulted in tangible benefits at individual, team and organisational levels. Fostering collaborative partnerships between clinical and academic institutions should be widely implemented and evaluated within allied health, if we are to succeed in sustainable excellence in clinical practice, research capacity building and clinical-academic careers.





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## The importance and necessity of detecting stuttering early by different professionals: the construction and validation of a Detection Instrument Stuttering DIS2

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**Background:** Stuttering requires interventions depending on its severity. Generally, early intervention has a positive impact on the results of treatment. To achieve this, early detection of stuttering is necessary.

**Aim:** (a) to discuss the importance and necessity of a validated detection instrument (DIS2), (b) to check the conditions for screening defined by the WHO and UK National Screening Committee, (c) to present the results of the DIS2 and (d) to suggest strategies for implementation and dissemination.

### Methods

The DIS 2 was constructed based on: (a) distinctive characteristics of stuttering moments, (b) data of stuttering associated behaviour, (c) epidemiological data related to precipitating factors, (d) reported reactions of stuttering children and (e) of listener reactions toward stuttering. The questionnaire contains 6 questions with multiple choice answers to be completed by the parents of a disfluent child. The DIS2 was obtained from a total group of 679 children and pre-schoolers, of whom 178 were fluent speakers and 501 stuttering.

### Results

The total scores and number of answers given on the DIS2 were calculated. Descriptive statistics, logistic analysis and calculation of the ROC revealed that with a total cut-off score of 10 the sensitivity was 0.98 and the specificity 0.85 and a correct classification of stuttering of 95.7%. ANOVA showed that the speech condition and the severity of stuttering on the total score on the DIS2 were statistically significant ( $p < 0.0001$ ).

### Conclusions / take home message

The DIS2 is a user-friendly valid instrument to detect stuttering accurately. Both the completion by the parents and the decoding by the professional take little time. The DIS2 informs the clinician about the severity of stuttering and qualitative related data. In order to reduce the number of late detected children there is a need to implement and disseminate the instrument.



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## The importance of proper clinical assessment of post-stroke dysphagia and its treatment

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### Background

Associated stroke pneumonia (SAP) is one of the most common post-stroke infections (14% of patients). It is associated with an increased mortality, prolonged hospitalization, higher costs. Guidelines recommend the swallowing screening for all stroke patients administered by a healthcare professional (HP) in the first 24h.

### Aim

To evaluate the outcomes of patients with stroke when treated by a speech and language therapist (SLT) during the acute phase.

### Methods

The study took place in the neurology department of the "Villa Sofia" Hospital in Palermo over a period of six months. 158 hospitalized patients were enrolled. Inclusion criteria were stroke diagnosis, swallowing screening within 24h, SLT treatment within 48h. Exclusion criteria were diagnosis of pneumonia and/or bronchitis at the time of admission. The outcomes assessed were mortality, SAP incidence, changes in patients' swallowing, malnutrition. Changes in the meal consistency assigned to the patient throughout the hospitalization were considered. The HPs were trained by the SLT about the screening, feeding and management of enteral therapy. Following the SLT evaluation, the consistency of the patient's meal was determined. Available diets were: Nasogastric Tube, parenteral feeding, semi-solid consistency, solid-soft consistency, ordinary diet.

### Results

During the period of the study 1 patient died and only 1 developed SAP (0.64%). Our results were compared with 2 studies that did not consider the role of the SLT. In the first study (Arnold et al, 2016), SAP occurred in 22.9% of patients with dysphagia and in 1.1% of those without dysphagia ( $p < 0.001$ ), whereas in the second study (Al-Khaled et al, 2016), 41% of the dysphagic patients had SAP.

### Conclusions

Although at a preliminary stage, our work indicates that both medical and rehabilitative management of the patient with post stroke dysphagia produce better outcomes than medical management alone.



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## The Perceptions of Paediatric Speech and Language Therapists on Telehealth: A UK National Survey

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### Background

Many Speech and Language Therapists (SLTs) across Europe adopted telehealth practices during the COVID-19 pandemic. For the majority, this was a novel experience driven by necessity in the context of health emergency. However, the SLT community is now given a unique opportunity to reflect on the role of telehealth and its potential to become a more sustained feature in SLT provision.

### Methods

An online survey was designed to analyse UK paediatric SLTs' perceptions on the appropriateness of telehealth in their practice. The questions used to elicit participants' views were based on the APEASE criteria: (1) affordability, (2) practicability, (3) effectiveness, (4) acceptability, (5) safety, and (6) equity. The survey was distributed in July/August 2021 via the Royal College of Speech and Language Therapists' (RCSLT) network. 438 paediatric SLTs responded.

### Findings

Telehealth was deemed affordable for the SLTs, but concerns were raised around affordability issues for service-users. SLTs recognised the high level of practicability despite it being less satisfactory to build rapport and more dependent on the service users' resources and access. SLTs considered telehealth to be more effective for certain types of services (such as liaising with staff), but less effective for conducting assessment. SLTs reported the fluctuated effectiveness of telehealth when working with different groups of children. Acceptability was generally satisfactory but SLTs mentioned the negative implications of intense use of telehealth on their wellbeing. SLTs reported concerns around data security. Finally, issues of equity are significant considerations for the implementation of telehealth services. Indeed, SLTs observed that existing inequalities may have been reinforced through digital exclusion.

### Conclusions

Overall, UK paediatric SLTs have established a nuanced picture of telehealth. Their insights are essential to better appreciate the benefits of telehealth, guide strategies to overcome its limitations, and inform the future of SLT provision beyond the COVID-19 pandemic.



# 11<sup>TH</sup> ESLA CONGRESS OF SPEECH AND LANGUAGE THERAPY

26-28 MAY 2022 | SALZBURG-AUSTRIA

New frontiers in speech and language therapy: advancing practice, research and education

## Translation and standardization of the Communication Checklist Adult for a French autistic population.

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**Introduction:** Due to the deficit of French tool for the evaluation of social communication and pragmatics in adults with autism spectrum disorder without intellectual disability, we wished to translate and standardize the "Communication Checklist Adult" test which is validated in the scientific literature in English. We also looked at whether the results showed a significant difference between men and women.

**Method:** After translating the questionnaire, we made it available online in a secure manner. We collected 146 entries from neuro-typical adults and 58 entries from adults with autism spectrum disorders without intellectual disabilities.

**Results:** Statistical analyses showed a good test significance between the two populations. 11 items were non-significant or only suggestive but did not affect the significance of the rest of the assessment tool. The gender analyses showed a significant difference in the pragmatic skills domain in the neuro-typical population but did not show significance in the autism spectrum disorder population.

**Conclusion:** Our translation and standardization of the Communication Checklist Adult is sensitive enough to highlight communicative particularities specific to people with an autism spectrum disorder. On the other hand, our first results do not agree with the current research on the difference of symptoms between men and women with autism spectrum disorders.



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## Understanding the impact of COVID-19 on the lives of people who stammer

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The COVID-19 pandemic has necessitated many changes to our behaviour and communication. Whilst these changes affect us all in different ways the specific effects on people with communication disabilities is not known. Here, we focus on the impact on the lives of people who stammer. We aimed to explore the experience of adults who stammer since the start of the pandemic, changes in contact with STAMMA charity support services, and access to speech and language therapy.

We use a mixed method approach including analysis of 1) online survey responses on the impact of COVID-19 related lifestyle changes, 2) contacts made to STAMMA support services and 3) Stammering therapy outcome data.

### Key findings

During COVID-19, the majority of adults who stammer experienced increased stammering, and anxiety about stammering. Wearing face-masks and using video calls increased anxiety and reduced participation, especially for women and younger people.

Contacts to support services increased by 43%. The greatest increases were seen regarding education concerns, emotional support and accessing SLT. Fewer, and shorter, episodes of SLT intervention for adults and children who stammer were recorded during the pandemic. However, SLT was as effective during the pandemic, for those who could access it.

Strategies to manage the challenges of the pandemic included self-disclosure about stammering and using visual cues on video calls (e.g. raising a hand/chat function). Increased awareness of communication and of mental health in the general public has increased understanding of the challenges faced by people who stammer.

### Conclusions

People who stammer have experienced significant detrimental effects related to life-style changes during COVID-19. Understanding these impacts is critical to providing appropriate levels and types of support as we emerge from the pandemic. We provide a number of recommendations for employers, educators and health service providers to mitigate these effects for children and adults who stammer.



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## Utilizing multimodal strategies in co-constructing meaning in conversations using AAC

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**Background:** Children who rely on augmentative and alternative communication may utilize multimodal strategies in expressing meaning. Using a variety of strategies may reflect individual skills in effective communication with the available means, but also features of communication aids offered to them.

**Aim:** The aim of the study was to investigate utilization of natural gestures and manual signs in addition to and supplement for graphic communication systems.

**Method:** The participants of the study were three young, aided communicators (age between 8 to 11 years) with their familiar communication partners. The aided communicators had no functional speech due to severe motor disabilities and they used graphic communication systems as their main mode of communication. The task for the aided communicators was to share the content of a video event to their communication partners who had not seen the video. Qualitative descriptive analyses included the use and function of multimodal resources and the communication partners' strategies in co-constructing meaning of the multimodal constructs.

**Results:** The aided communicators utilized gestures and manual signs as a support to or an alternative for graphic symbols when attempting to overcome potential vocabulary gaps or repair communicative disrupts. Selecting and alternating between modalities reflected both effective and creative strategies in expressing meaning in the context of sharing information that was unknown to the partners. The partners seemed to treat different multimodal resources as equal although there were differences in the preciseness of interpretations between modalities.

**Conclusions:** The study portrays the benefits and potential challenges in utilizing multimodal resources. The study further highlights the unique strategies in facing communicative demands in conversations that use augmentative and alternative communication.

**Keywords:** Augmentative and alternative communication, aided communication, multimodality, co-construction