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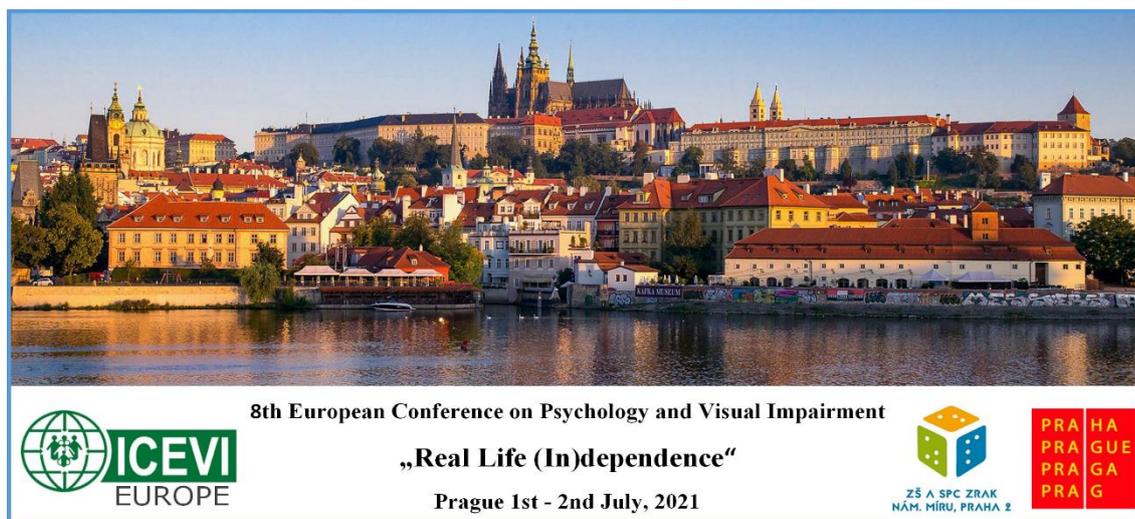


ICEVI European Newsletter
ISSN Number 2666-1527

SPECIAL EDITION OF ICEVI EUROPEAN NEWSLETTER

Proceedings of the 8th ECPVI- European Conference on Psychology and Visual Impairment, Vision Prague 2021 Online

„REAL LIFE (IN) DEPENDENCE“ 1.-2. July, 2021



Editors: **Martina Malotova & Katerina Gibalova, Prague, 2021.**

Primary And Low Secondary School for children with Visual Impairment in Prague;
University Palacky in Olomouc, Faculty of Physical Culture, Department of Kinantropology
and Faculty of Pedagogy, Department of Pedagogy.

1 PREFACE

The focus of the 8th European Conference on Psychology and Visual Impairment „Real life (In) dependence“ was on how to support visually impaired persons to reach their full potential and achieve true independence in their daily life. This conference was hosted by Primary and Low secondary School for visual impaired and Special Centrum for visual impaired children, located in Prague. The organization team worked closely with representatives of ICEVI EUROPE, cooperated with colleagues from the ENPVI team, the European network for psychologists and related professions working in the field of Visual Impairment. The whole event was fundamentally supported by the capital city of Prague, the founder of the organizing organization. The chairwoman for education and training of the Prague City Council took over the auspices of the event. The conference was originally planned for November 5-6, 2020, in a full-time design, but due to unfavorable global developments in connection with covid-19, it was moved to July-July 20, 2021. During the preparatory work, a change was made again, in the month of March 2021, based on a discussion with consultants, the conference from the ranks of ICEVI EUROPE, resp. ENPVI decided to change the design to an online form.

Members of the organizing team and consultants throughout the event

Hans Welling, President of ICEVI-Europe

Beáta Prónay, Board Member of ICEVI-Europe

Martha Gyftakos, Executive Assistant to the Presidency of ICEVI-Europe

Martina Malotová, Board member of the organizational team

Anna Jílková, member of the organizational team

Katerina Gibalová, member of the organizational team

Elke Wagner, member of the steering committee of the ENPVI professional interest group

Michael Bergström Morman, member of the steering committee of the ENPVI professional interest group

Bo Kjærgaard Andersen, member of the steering committee of the ENPVI professional interest group

Martin Trefný, webmaster, member of the organizational team

CONFERENCE TARGET GROUP

Professionals from a range of disciplines including therapy, psychology, education and other fields concerned with vision impairment across all ages.

2 TOPIC OF THE CONFERENCE AND MAIN AIM

(In) dependence life of people with visual impairment

A major concern in leading a life with visual impairment is the issue of (in)dependence. What does it mean to be free and independent? This is the key question for our conference in Prague. How best to help blind and visual impaired people on their way throughout their life? How do psychologists, special educators, medics, visual therapists, and others help solve the problems faced by individuals with VI and their families

and how can they maintain cooperation across the different specializations? What does independence mean? Is it a universal, or subjective idea? Can we evaluate it, or should we evaluate it?

These are just a few examples of themes that we discussed, explored and presented in our workshops, presentations, and discussion panels. During the conference we wanted to monitor assumptions about the skills that specialists need to have for their professional work, because it is important for our clients, patients, families of clients and everyone who is working with blind or impaired people. It was a great opportunity to exchange knowledge, experiences and skills with colleagues.

3 PARTICIPANTS

The conference was attended by a total of 54 colleagues, of which 22 were active participants from nine European countries. The number of participants from the Czech Republic, from the country of the organizing organization, prevailed. Colleagues from Slovakia, Romania, Bulgaria, Slovenia, Poland, Denmark, Sweden, the Netherlands and the United Kingdom also joined.

Active participants presented a total of 13 lectures and presented 3 posters. The conference participants agreed to publish their lectures on the conference website and signed the GDPR statement.

4 CONFERENCE DESIGN

The conference was in the form of online design as a two-day event. Conference language was English. The technical support was concentrated in the place of the organizing, where a virtual broadcasting studio was set up. In order to improve the quality of audio and video transmission and to eliminate possible delays and ambiguities in transmission, two virtual studios were created. First for active participants, including speakers, and the second one for passive listeners. The entire transmission is translated from Czech into English. Each conference day was followed by an online evaluation meeting to evaluate the course of the day in order to eliminate undesirable elements that appeared during the event.

The conference was technically supported by AV Media, Czech Republic www.avmedia.cz, in the ZOOM environment.

5 PROGRAMME

VISION PRAGUE 2021 – Conference´s Programme		
Thursday, 1 July 2021		
8:30 – 9:30	Opening on- line registration	
9:30 – 9:40	Conference introduction by Ondřej Cerha and Michael Bergström Mörman	
9:40 – 9:45	Welcome speech from Prague SONS Vice President	Mr. Rudolf Volejník
9:45 – 9:50	Welcome speech from ICEVI Europe President	Mr. Hans Welling
9:50 – 9:55	Welcome speech from subregion Central European countries	Mrs. Beata Pronay
Topic 1. Quality of life and visual impairment		
9:55 – 10:00	Introduction to the Topic 1 Quality of life and visual impairment	Ondřej Cerha
10:00 – 10:30	Acceptance of disability and perceived life's meaningfulness among people with visual impairment.	Ondřej Cerha
10:30 – 10:50	Children´s with visual impairment Gait analysis	Martina Malotová
10:50 – 11:10	Coffee break	
11:10 – 11:40	Early intervention	Carmen Costea Barlutiu
11:40 – 12:10	Identification of depression and anxiety in adults with visual impairment (the patient's perspective)	Edine van Munster
12:10 – 13:10	Lunch	
13:10 – 13:40	The impact of visual impairment and comorbid mental disorders on functioning in essential life domains based: outcomes of a qualitative Delphi study	Hilde van der Aa
13:40 – 14:10	The role of season and sunlight in self-reported depressive symptoms by adults with visual impairment	Rob van der Linden
14:10 – 14:40	Needs of parents and professionals in early intervention	Andrea Hathazi
14:40 – 15:00	Closing 1 st Conference´s day	Ondřej Cerha

Friday, 2 July 2021

Topic 2. Cortical visual impairment (CVI)

8:20 – 8:50	Opening registration	
8:50 – 9:00	Introduction to the second Topic Cortical visual impairment (CVI)	Michael Bergström Mörman
9:00 – 9:30	Children with CVI: Opportunities and Challenges in Early Intervention	Halka Tytykalová
9:30 – 10:00	My CVI"; a serious game that can be used in psycho-education for children with CVI, developmental age 6-12 years	Mariska Stokla-Wulfse, Yvonne Kruithof
10:00 – 10:20	Coffee break	
10:20 – 10:50	CVI in children with dysfázia; the team work model: Low vision therapist, speech therapist and psychologist	Martina Malotová, Dagmar Moravcová
10:50 – 11:20	EDA PLAY: Fun and vision development for children with CVI	Markéta Skalická

Topic 3. Poster´s presentation

11:20 – 11:30	Development of imagination through tyflografic representations as a facilitating elements in independent movement and spatial orientation	Kateřina Kroupová, Veronika Růžicková
	Design and evaluate the reliability and the usability of a tool for the early detection of visual disorders at the level of the visual apparatus in children with cognitive deficits for special pedagogues	Helena Štrofová
	Accessibility of Czech Primary school for students with visually impairment	Martina Vrubel

11:30 – 12:30 Lunch

Topic 4. Education of children and adults with visual impairment

12:30 – 12:40	Introduction to the third Topic Education of children and adults with visual impairment	Michael Bergström Mörman
12:40 – 13:10	Students with visual impairment at Charles University	Lea Květoňová, Pavlína Šumníková, Anna Kubíčková
13:10 – 13:40	Students with special education needs – assessment of their situation and possible interventions	Anna Kubíčková, Pavlína Šumníková, Lea Květoňová
13:40 – 14:00	Conference´s closing	Mariana Čapková, representative of the Prague´s government Michael Bergström Mörman - ICEVI Europe

6 CONFERENCE INTRODUCTION BY ONDŘEJ CERHA AND MICHAEL BERGSTRÖM MÖRMAN

Both conference days had own moderators. The first day was moderated by Mr. Ondrej Cerha, psychologist and Ph.D. candidate social psychology, the next day moderated by Mr. Michael Bergström Morman, Lic. psychologist, specialist in educational psychology. Both moderators did a great job and thanks to them, the individual topics were always presented in the concept of impacts on everyday life.

7 WELCOME SPEECH FROM THE VICE PRESIDENT OF CZECH SOCIETY SONS

Mr. Rudolf Volejník, Vice President of the Czech Society SONS (United Organization of the Blind and Visually Impaired in the Czech Republic), spoke at the beginning of the conference, mentioned the importance of ICEVI EUROPE's work and expressed satisfaction that the Czech Republic has the honor to establish and strengthen ICEVI - EUROPE ideas. He spoke about the need to perceive the daily needs of all people, regardless of disability, and warmly supported the main theme and idea of our conference. He spoke of SONS as an organization helping to spread information about the needs and opportunities of the blind and partially sighted. He expressed his idea in connection with the main topic of (In) Dependence, as the possibility for visually impaired people to learn, discover and participate in the development of society.

„Dear ICEVI Officers, dear presenters, dear Conference participants, ladies & gentlemen, I feel truly privileged to be able to address your conference on behalf of Czech Blind United, the long-term partner of ICEVI through our full membership in the European Blind Union and the World Blind Union. This Conference actually represents a continuation of the ICEVI General Assembly, held in conjunction with the 10th General Assembly of the WBU. We are all on-line, which is NOT what was originally desired and intended; however, this unwelcome circumstance will not make your Conference less successful than under regular conditions. Czech Blind United, the representative voice of blind and partially-sighted people of this country, welcomes initiatives of the ICEVI, particularly, in the field of combined disorders, reflected and well-represented among the topics of your Conference. We are, as a rule, not experts – we may be users and beneficiaries of your services, or even mentors who are expected to give guidance. Though blind people are not totally disregarded, the main focus of your conference is concentrated on low vision persons in the widest scope. Czech Blind United regards this policy as correct because our membership has been made up primarily by low vision or partially-sighted persons who naturally need proper educational attention. The Conference provides ample evidence of this beneficial trend.

In spite of not being a special educator by profession, I have been involved both directly and indirectly with education of the blind for the last 40 years. My idea of independence (the motto of your Conference) extends far beyond your own objectives: you are here to educate, to train, to instil alternative techniques in order

to enable blind and low vision people to look for their own place in the sun; Czech Blind United and other similar organizations all over the world are here to advocate and to help find gainful jobs for people you have educated. I wish that your conference were thoroughly successful, beneficial and useful both for the community of blind and partially-sighted people and your own science and expertise environment. I hope to meet you in person at one of your next events. Thank you".

8 WELCOME SPEECH FROM ICEVI-EUROPE PRESIDENT

The conference was significantly supported by the introductory speech of the President of ICEVI -EUROPE, Mr. Hans Welling. His words encouraged the whole team and significantly contributed to clarifying the main topic of the whole conference. The President emphasized the need for the independence of the visually impaired and pointed out the possibilities of their application in everyday life. He said that across European countries, but also around the world, support and discussion of topics related to helping professions is irreplaceable. „Dear colleagues. I would like to begin by congratulating the organising committee and, in particular, Martina, with whom we have had a lot of contact in the preparation of this conference. It is your eighth conference due to Covid 19 now digital. I am glad Covid did not stop you from organizing this conference. Congratulations again. I remember the first tentative meeting led by Peter Rodney. Now the eighth conference with 58 participants and with interesting presentations. Your professional interest group is an example for other professions in Europe. You know that Icevi-Europe is a strong supporter of professional interest groups. It is very important to know your colleagues in Europe and to share knowledge and experiences. The titles of the presentations at this conference also show that. CVI, disability acceptance, impact of impairment on life domains, the needs of parents, early intervention, possibilities of treatment, Rehabilitation and so on. This brings me to the ICF. the international Classification of Functioning, Disability and Health, known more commonly as ICF. The ICF provides a standard language and framework for the description of health and health related states. ICF is named as it is because of its stress on health and functioning, rather than on disability. ICF is a tool for measuring functioning in the society, for inclusion no matter what the reason is for one's impairment. I mention the ICF because I think it is so incredibly important for our support of people with visual disabilities, to know the interaction between health condition, body functions and structure, participation and contextual factors It is a tool to arrive at a good support plan for individuals with disabilities, for scientific research but it is also a planning and policy tool for decision makers. I am thinking about the ICF for a moment because I believe that your professional interest group plays an important role in the use of this tool, so that we have a common way of thinking, a common language between all disciplines when it comes to Functioning, Disability and Health. I wish you an inspiring conference and good contact with your colleagues. Unfortunately, a visit to Prague is not possible now. Good luck supporting Real Life Independence. I hope that we will meet at the 10th European Conference next year, which is expected to take place in Romania. Thank you".

9 WELCOME SPEECH FROM THE BOARD MEMBER OF CENTRAL EUROPEAN COUNTRIES REGION

Mrs. Beata Pronay, representing ICEVI - EUROPE in Central European countries, encouraged participants and speakers, talked about the development of the idea of organizing conferences on the needs of visually impaired people and wished the conference a successful process.

„In the name of the Board of ICEVI-Europe I greet you as the representative of the Central European Countries and in this position my special task is assisting ECPVI and rehabilitation special interest group. I'm a special education teacher, psychologist and rehabilitation specialist for visual impairments.

I was present in all ECPVIs since the first occasion. You might not know the line of these conferences:

2006 COPENHAGEN – ENPVI (European Network for Psychologists and Related Professionals

2008 HUIZEN

2010 VILNIUS

2012 HEIDELBERG

2014 BRATISLAVA

2016 BUDAPEST

2018 THESSALONIKI

2020/2021 PRAGUE

We should mention at first place the important role of the initiator of these events Peter Rodney. He suggested to establish the network of psychologists and related professionals in Europe who are working with and for individuals with visual impairments. He was the organizer of the first meeting in Copenhagen and was one of the members of the steering group for many years together with Peter Verstraten. Peter Rodney from IBOS, Copenhagen, Denmark is a psychologist who was active in this field for many years. His co-organizer partner was Peter Verstraten, psychologist formerly at VISIO, now at Robert Coppes Foundation, The Netherlands. They together were the motor of this network and the conferences organized biannually for many years.

Since 2014 ECPVI Bratislava, Elke Wagner PhD, Germany, joined them in the Steering group and in 2018 ECPVI Thessaloniki, Michael Bergström-Mörman, Sweden and Bo Kjærgaard Andersen, UK completed their group.

ENPVI - ECPVI

ENPVI (European Network for Psychologists and Related Professionals) and the conference ECPVI (European Conference for Psychologist and Related Professionals for Visual Impairment) have the mission to connect us - our small family of professionals working on the field of psychology and related professions for visual impairments in Europe.

Among the professionals of this field an even smaller but strong and connected group is ours of psychologist and related professionals, thanks to this network and conferences.

We are different: internationally colourful, and active in sub fields of psychology & related professions for visual impairment.

We are common: in our interest and commitment for psychological wellbeing and support of the mental health of individuals with visual impairments. We are facing the same challenges during our daily work.

Let's keep together, build new contacts, and support each other in the future years as we did in the past 15 years.

Thanks for the Steering group and for the national organizers in Prague to put this lot of effort into the preparation of this online conference and give us opportunity to meet and share knowledge again even in this difficult time due to the pandemic!

We hope that next time we can meet personally!

I wish you a great Conference!"

10 ALL FULL-TEXT PAPERS OF ORAL AND POSTER PRESENTATIONS FROM PRESENTERS

10.1 My CVI

Drs. Mariska Stokla, Child psychologist,
mstoklawulfse@bartimeus.nl

Drs. Yvonne Kruithof, Educational psychologist,
ykruithof@bartimeus.nl
Bartiméus, The Netherlands



My CVI is a serious game for psycho-education for children with cerebral visual impairment (CVI) in the age of 6-16 years old. When you are diagnosed with CVI there are disturbances in the visual functions as a result of brain damage or abnormal development of the brain. The problems are often not in the eye itself but in the processing of visual information in the brain. CVI is the most common cause of visual impairment in childhood (about 30%) and has many manifestations depending on the area in the brain

that is damaged. Therefore it is complicated to understand for parents, children and their teachers and children with CVI experience a lot of misunderstanding.

Through the use of psycho-education problems in social-emotional development can be prevented. In 2018, the psycho-education program My CVI was developed in answer to the questions from children, parents and teachers. The aim of My CVI is to give children insight into CVI, the influence of CVI on their functioning and how they can deal with this in their daily lives. They also learn there are other children with CVI, develop a sense of self-esteem and learn how to participate in school and in leisure time. My CVI consists of a digital series of 8 lessons on 8 topics related to CVI (e.g. visual recognition of objects, reading, recognizing people and emotions). In each lesson children who have CVI themselves talk about how they deal with these topics. The children who play the serious game watch the interviews and indicate the videos that are recognizable to them and which advice suits them. This results in a personal playlist which participants can use to explain to others what their impairment entails.

In 2019 we started a study into the effectiveness of the serious game My CVI. Thirty-nine children (19 boys, Mage = 10.6, SDage = 2.1 years) with diagnosed CVI (90%) or symptoms of CVI (10%) participated. Two-third of children were enrolled in primary education (58% mainstream, 42% special education), and 1/3 in secondary education (31% mainstream, 69% special education). Eighty-five percent of participating children had had their visual impairment since birth. Almost 4/5 of participating children (79.5%) had additional impairments besides their visual

impairment (most common: 54% physical impairment, 13% intellectual impairment). Before the start of the program (T0), after finishing the game (T1) and three months later (T2) they and their teacher filled out several questionnaires. The primary outcome measure was improved knowledge on CVI. Secondary outcome measures were self-concept (SDQ; Marsh, Craven

& Debus, 1998), well-being (HRQoL, (Simeoni et al., 2007); Cantril ladder, (Cantril, 1965); PERIK (Mayr & Ulich, 2009) and coping (SCQ; Röder, Boekarts & Kroonenberg, 2002). In addition, children were asked about their subjective evaluation of the serious game and a selection of participants (14 children, 8 teachers and 8 parents) participated in qualitative interviews.

Data-collection for the follow-up assessments is ongoing. Preliminary analyses into changes between pretest and posttest show that children's knowledge on CVI significantly improves ($M_{\text{before}} = 9.44,$

$SD_{\text{before}} = 6.13; M_{\text{after}} = 14.63, SD_{\text{after}} = 3.94, t(32)=5,80, p < .001$). Children's improved knowledge was associated with less negative feelings regarding their visual impairment ($r = .356, p = .045$). So far, no changes in the other secondary outcome measures have been found. This could change with the availability of the follow-up data as we expect that changes in self-concept, well-being and coping will start with improved understanding of the impairment and may take more time to become visible.

Qualitative data show that overall children enjoyed playing the serious game (80.6%) and rated the discussed topics as recognizable and relevant to their situation (77.8%). The subjective statements corroborated the quantitative data by showing that 74% of the children answered their understanding of CVI has improved, as well as their knowledge on available solutions to deal with their impairment (81%). In addition, a major effect of participating in the serious game is that 100% of the children replied they now realized there are children with comparable problems. Translating increased knowledge on CVI into being able to better explain to others what CVI means is still relatively difficult: just slightly more than half of the children (55.6%) responded positively to this statement. Parents and teachers painted a similar picture in the interviews.

This Fall all quantitative data on the effect-study into My CVI will be available and results will be further analyzed and presented in a peer-reviewed international journal.

More information:

Film What is CVI? www.youtube.com/watch?v=W6OwI9Atqyg

Animation CVI at a young age (explanation for children)
www.youtube.com/watch?v=ThAe3Wc3U2o

10.2 EDA PLAY: Fun and vision development for children with CVI

Dr. Markéta Skalická, low vision therapist, and Mgr. Ivana Bajgarová, app development coordinator
EDA cz, z. ú., Czech Republic

VISION DEVELOPMENT METHODOLOGY AND NEW TECHNOLOGIES IN THE PROCESS OF VISION STIMULATION

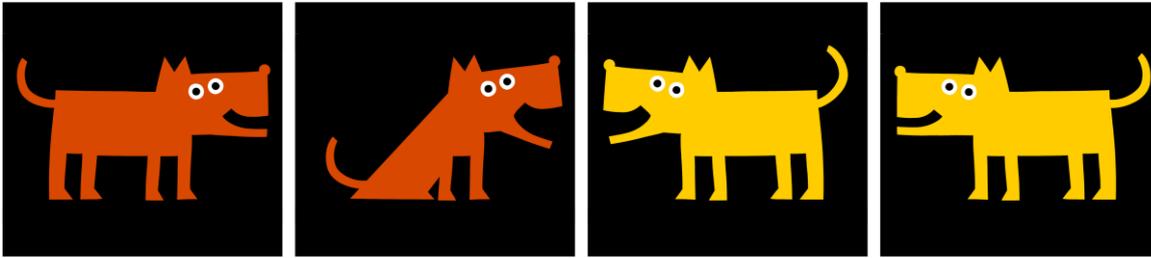
The EDA PLAY apps are designed for children with visual and multiple disorders to help them train their vision and fine motor skills. These games are tailor-made for children with central visual impairment (CVI) and developed under the supervision of early intervention experts, low vision specialists, and the methodologist for the development of visual perception. The EDA PLAY apps family offers five games: The EDA PLAY, the EDA PLAY PAULI, the EDA PLAY ELIS, the EDA PLAY TOM, and the EDA PLAY TOBY. The last two are available for free for both iOS (iPad devices) and Android tablet devices.

Children with CVI often have difficulty understanding new subjects or situations. These children need to be repeatedly acquainted with the seen object, picture, toy. In the EDA PLAY apps, there are game situations that can be easily imitated by a parent or a teacher in real life and help children understand the surrounding real world and its depiction through illustrations and games.

Creators of the EDA PLAY apps from the non-profit organization EDA cz, z. ú. have more than 30 years of experience in the fields of early intervention and vision stimulation. The experiences of these professionals are reflected in the apps.

THE EDA PLAY APPS: TAILOR-MADE FOR CHILDREN WITH CVI

Authors of the EDA PLAY apps are inspired by the needs of CVI children and their ways of playing and interacting in everyday life. These apps respect their needs – such as the preference for one or two colors, bright, bold colors – the game scenes work especially with red, yellow, orange, the colors most preferred by children with CVI. These games also respect the latency of the response to a visual stimulus. The apps contain slow animations so that children have time to process the information: the game provides sufficient time to present the image on the display and sufficient time for children to react.

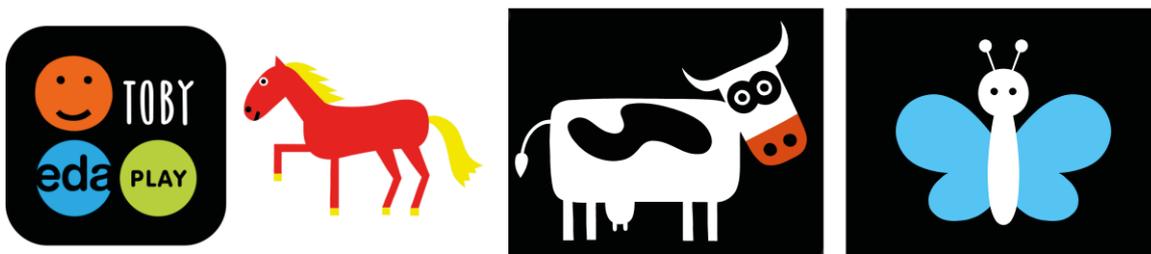


THE EDA PLAY APPS: HOW TO SUPPORT THE MOTIVATION TO PARTICIPATE IN THE GAME

When a touch response is expected, the child is encouraged by the pulse animation of the image, along with a sound or verbal encouragement. EDA PLAY apps respect a common problem with complexity - the perception of a complex object, the perception of multiple objects in one scene, or a complex background. The tailor-made apps for children with CVI, use a black background and pictures that have a simple, typical shape, of one color, or a maximum of two colors and have a clear contour in terms of shape.

Children with CVI often have difficulty perceiving new objects. They focus better on familiar objects. Therefore, in the latest EDA PLAY TOM game, pictures from the older EDA PLAY TOBY app are used. The child will accept the new game better because it already contains a familiar animal, a familiar car with a familiar sound.

The EDA PLAY TOBY app contains tasks graded according to difficulty. This game starts with animations. The child does not have to actively touch the screen, just watches objects on the tablet screen. Then come the tasks, where the child is encouraged to touch. After touching the screen, the child can see the change. The EDA PLAY TOM app responds to touch anywhere on the tablet screen. In the other EDA PLAY apps, there are also tasks where the child has to touch a specific place or a specific object on the tablet display so we can train eye-hand coordination.

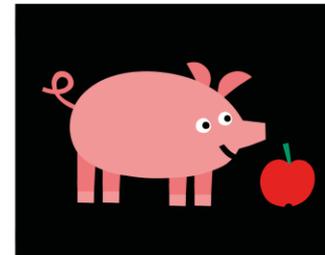
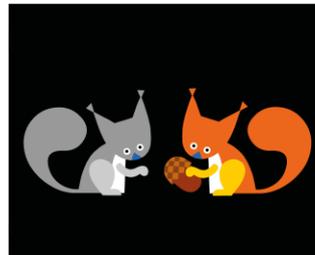


EDA PLAY TOBY

EDA PLAY TOM

These games are designed for both iPads and Android tablets and are available for free. So if you have a tablet device, you can try it in practice. In addition to children with CVI, these apps help to train the vision and fine motor skills of children with attention disorders, communication disorders, and developmental delay and can often be used for stimulation in occlusive therapy of children with amblyopia of one eye.

As previously mentioned, when preparing these games, authors were inspired by real children. See more at www.edaplay.com/eda-play-tom and www.edaplay.com/eda-play-toby



[play-toby](#)

THE EDA PLAY APPS: HOW TO EXPAND THE GAME INTO THE REAL WORLD

Children with CVI often have difficulty understanding new subjects or situations. Our EDA PLAY games can help to understand the world around them. Children need to see objects repeatedly, a toy, a picture, and everyday things. Thanks to repetition they can understand them.

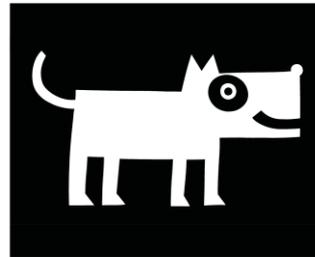
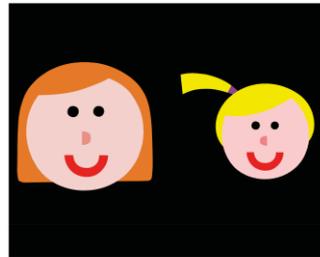
In the apps, there are game situations that parents or teachers can easily imitate by playing with real objects or toys, imitate real life, and help children discover the real world through pictures and games.

EDA PLAY ELIS

This game is inspired by Eliška, a girl with multiple impairments and CVI. Her mother was even part of the team that prepared the app. The game is inspired by Eliška's interests. She likes to watch what is

happening in the household, she likes the sound of a bathtub filling and then draining. Or the sound of a washing machine. She has her assistance dog Sam, whom we also put as a picture into the game.

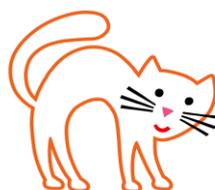
According to her mother: "Eliška has been using the iPad since preschool. I can say that thanks to the Pad and suitable apps such as EDA PLAY, she has improved her visual attention skills."



It is easy for Eliška's mother to switch to viewing photos of the real Sam after a few tasks because Eliška knows him. Even for other parents, it is not difficult to use the pictures from the game in a new context, they can use the offered worksheets, or they can introduce the child to photos of other dogs from their surroundings. Baking a cake or washing clothes is also on offer. Even these activities can be imitated very easily by parents playing with real objects. See more at <https://www.edaplay.com/eda-play-elis>

EDA PLAY APPS AND WORKSHEETS

Worksheets give us the opportunity to involve siblings in the event. Children can use knowledge from the EDA PLAY apps in real 3D space and together create a new game with familiar realities and using manual skills according to the possibilities of visually impaired children. See more at www.edaplay.com/activities



USEFUL FEATURES IN THE EDA PLAY APPS FOR PARENTS, TEACHERS AND THERAPISTS

The Simulator of visual disorders is a special section in the EDA PLAY apps. It enables adults to better understand how complicated the world is for children with visual disorders. How to use this simulator: You are on the game screen of any EDA PLAY app. Hold the button on the right bottom corner for several seconds. Tap on the Info button, tap on the Visual disorders Simulator button. Choose one of the 8 visual disorders simulations. The Simulator uses the iPad camera. When the user chooses one of the visual disorder options, he/she can see through the iPad camera in the way that the child with a visual disorder perceives things. Each visual disorder is fitted with a short explanatory text. We take privacy seriously: The app does not save

any data from the iPad camera. In the Info section of the apps, there are some more useful settings. A white frame can be set to distinctively demarcate the work surface of the tablet display.

Therapists, teachers, and parents can turn “on” the Skills section and observe the work (progress) of the child with the app. After installing the app, the recording of skills is switched off. The parent or therapist can switch the Skills recording on, or leave the Skills recording switched off. The skills log is only available on the iPad and



it is not saved or sent anywhere outside of the iPad

CONTACT

Try the EDA PLAY apps with your clients. We will be happy if you share with us your experience, what worked for you, what the children liked, what comments you have and other ideas for future apps: info@edaplay.com

10.3 Students with special education needs – assessment of the situation and possible intervention

Anna Kubíčková, Pavlína Šumníková, Lea Květoňová

INTRODUCTION:

This text covers the pupils with visual impairment who are educated in schools with the use of supportive measures of varying degrees. Following text provides detailed analysis of support areas and each supportive measure designed for pupils in need of support in education due to the visual impairment and impaired visual perception.

Low vision in children

Children face a lifetime of vision difficulties which can affect their education, employment, and social opportunities. Many children benefit from the use of special services and devices to optimize the use of the vision they have. Parents and children voice similar quality of life concerns, highlighting the importance of social interaction, fitting in and maintaining independence. In addition, parents also emphasize the importance of family and community support, particularly in terms of providing good role models for their children, and the need for equity in the access to education. The economic impacts of low vision in children are also experienced by families and societies, particularly in the world's poorest communities where most of childhood vision loss occurs. For the individual child, vision loss can have a major impact on their quality of life. Children themselves have expressed three main areas of concern in this regard (Corn, Erin, 2010).

1. Social interaction

"I can see so I get to see how the sighted people react around blind people and they don't usually do visual signs. Usually, it's in their voice... That's generally a fact. I get to realise how „vision impaired people are treated compared to sighted people."

"My social life isn't really ultra-affected except the things like taunts, like "blindy" and...."

"Communication's the biggest thing for me. It's frustrating! "

2. Fitting in

"I try and be like everyone else, try and stick in the crowd and kind of, yes, be like them."

"I didn't really want any attention drawn to me at all."

"I just want to be like everyone else."

3. Maintaining Independence

"It's also important to know how to ask for help, because you might feel too shy to ask for help, but you shouldn't worry about it, because you are there to learn, and the teacher is there to teach you, or if you need help you should really ask them. "

"People are always telling me I can't do what I want to do, and I think if I just agreed with them then I'd get nowhere." (Corn, Erin, 2010).

The definition and classification of terms used in the Catalogue of support measures in the Czech Republic is introduced and defined in Czech educational system as followed (Tab. 1, 2, 3).

Tab. 1: Categories of severity of visual impairment according to the International Statistical Classification of Diseases

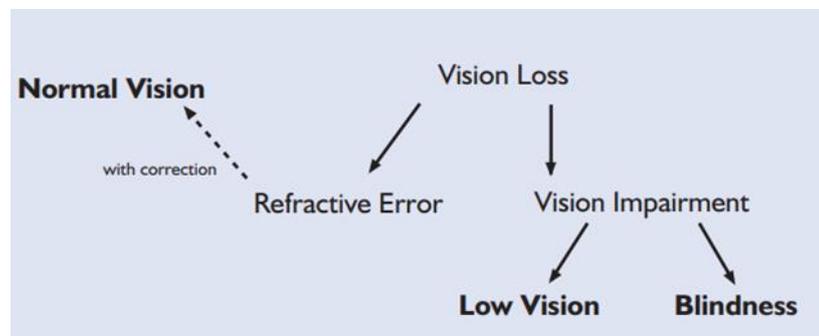
Table 1
Categories of severity of visual impairment according to the International Statistical Classification of Diseases [1].

Category of visual impairment	Visual acuity with best possible correction		Or central visual field*	Classified as
	Maximum less than	Minimum equal to or better than		
1	6/18	6/60		Low vision
	3/10 (0.3)	1/10 (0.1)		
	20/70	20/200		
2	6/60	3/60		Low vision
	1/10 (0.1)	1/20 (0.05)		
	20/200	20/400		
3	3/60	1/60 (finger counting at 1 metre)	10° or less but more than 5°	Blindness
	1/20 (0.05)	1/50 (0.02)		
	20/400	5/300 (20/1200)		
4	1/60 (finger counting at 1 metre)	Light perception	5° or less	Blindness
	1/50 (0.02)			
	5/300			
5	No light perception			Blindness
9	Undetermined or unspecified			Unspecified

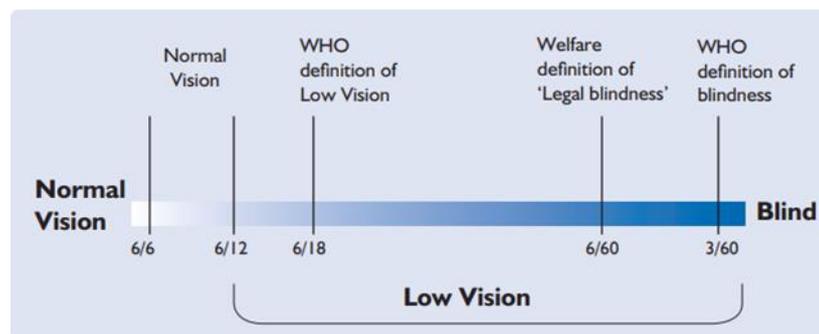
*Visual field restriction criteria applicable even if visual acuity is better than for that category of visual impairment.

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1435919/>

Tab. 2: Classification of Low Vision – medical model



Tab. 3: Classification on Low Vision – model WHO



Source: Vision 2020 WHO <https://www.who.int/news-room/factsheets/detail/blindness-and-visual-impairment>

Support in the Czech Republic

The goal of most people is to enjoy a high quality of life through mutually satisfying interpersonal relationships and meaningful contributions in a manner that allows them to value themselves and to be valued by others. The purpose of low vision services is to help individuals with low vision maximize the use of their vision and learn to use their visual abilities as effectively as possible.

Optometrists, orthoptists and ophthalmic nurses serve as primary eye care providers. *Clinical low vision therapists* perform the following function:

- assesses the clinical visual functioning,
- prescribes various optical and nonoptical devices,
- provides follow-up services such as training and examinations to ensure that visual skills are successfully integrated into the individual’s life.

Special pedagogical centres (SPC) with special education teachers provide training in visual skills and the use of devices, according to the level of educational support and corresponding recommendations from the Catalogue of support measures. SPC provide counselling services to pupils with disabilities as such and pupils with disabilities integrated in schools and school facilities, as well as to pupils with disabilities and disadvantages in schools, classes, departments or study groups with adapted educational programs, pupils with disabilities in special primary schools and children with profound mental disabilities. SPC performs its activities on an outpatient basis at the centre's workplace (Decree No. 72/2005 Coll.).

Legislative definition

The activities of special pedagogical centres (and other school counselling facilities) are regulated by the Education Act No. 561/2004 Coll., Decree No. 73/2005 Coll. and its amendment Decree No. 147/2011 Coll., especially Decree No. 72/2005 Coll. and its amendment Decree No. 116/2011 Coll.

DATA COLLECTION:

We contain detailed analysis of 7 pupils (tab. 4):

- From medical reports (visus to long and short distance, refraction, and diagnosis),
- From special pedagogical centres reports (adapted educational programs).

Tab. 4: Analysis from medical reports and SPC

	ZO do dálky	ZO do blízka ¹	Brýlová korekce	Diagnóza stanovená lékařem
ŽÁK 1 2. stupeň PO	OP: nat.: 6/15, s kor.: 6/7,5 OL: nat. 6/12 s kor.: 6/7,5 OPL s kor.: 6/6 č.	S korekci: OP: J.č. 1 OL: J.č. 1 OPL: J.č. 1	OP: -2,0 D OL: -1,5 D	- atrofie optiku - částečná porucha barvocitu
ŽÁK 2 3. stupeň PO	S korekci: OP: 6/9,5 OL: 6/6 OPL: 6/6	S korekci: OP: J.č. 6 OL: J.č. 2 OPL: J.č. 2	OP: +1,75 D OL: +1,75 D	- vývojová dysfázie - zhoršená pozornosť - amblyopie OP
ŽÁK 3 3. stupeň PO	S korekci: OP: 6/12 OL: 6/12 OPL: 6/9,5	S korekci: OP: J.č. 6 OL: J.č. 6 OPL: J.č. 6	OP: +8 D -1 D ax 5° OL: +7,5 D -2 D ax 170°	- vysoká hypermetropie - paralytický strabismus - opoždení PMV
ŽÁK 4 3. stupeň PO	S korekci: OP: 6/30 OL: 6/48 OPL: 6/30	S korekci: OP: J.č. 15 OL: J.č. 16 OPL: J.č. 15	OP: +3,75 D OL: +3,0 D (samozatmavovací brýle)	- anomálie duhovky - nystagmus - fotofobie
ŽÁK 5 4. stupeň PO	S korekci: OP: 6/300 (0,02) OL: 6/60 OPL: 6/60	S korekci: OP: J.č. - OL: J.č. 16 OPL: J.č. 16	OP: -7,5 D OL: -7,5 D	- vrožený glaukom - zašednutí rohovky OP - nystagmus
ŽÁK 6 4. stupeň PO	Naturálně: OP: 6/80 OL:světlocit	Naturálně: OP: J.č. 17 OL: J.č. -	-	- retinitis pigmentosa
ŽÁK 7 4. stupeň PO	S korekci: OP: 6/200 (0,03) OL: 6/200 OPL: 6/200	S korekci: OP: J.č. 17 OL: J.č. 17	OP: +8,0 D -1,25 ax 10° OL: +7,5 D	- degenerace sítnice - nystagmus - hypermetropie

Source: Cvachová, Šumníková, 2020

RESULTS:

The recommendations of supportive measures are in most cases in accordance with the characteristic manifestation of visual impairments. In the research survey has been found insufficient interconnection and cooperation of the special pedagogical and medical system (Cvachová, Šumníková, 2020). Another problem discovered was a different description of the pupil's difficulties by ophthalmologist and special education teacher.

Recommendation

Communication between eye practitioners and their patients (clients, pupils) and parents plays a critical role in use of supportive measures in pupils with visual impairment.

Lit.:CORN, Anne Lesley a Jane N. ERIN. Foundations of low vision: clinical and functional perspectives. 2nd ed. New York: AFB Press, 2010. ISBN 978-0-89128-883-1.

CVACHOVÁ, Aneta. Využívání podpůrných opatření u žáků s funkční poruchou zraku. Praha. 2020. Pedagogická fakulta UK, katedra speciální pedagogiky, 15. 09. 2020. Vedoucí práce: Pavlína Šumníková

10.4 Students with visual impairment at Charles University

Anna Kubíčková, Lea Květoňová, Pavlína Šumníková

INTRODUCTION:

Charles University seeks to enable all students' equity in education and therefore it offers various types of support to students with special educational needs, i.e., to those who, due to a congenital or acquired health condition, require modification of study conditions for the purpose of the successful study.

University students with visual impairment (VIs) often face academic and social difficulties and thus develop their own means, methods, and skills to adjust to university life (Myers& Bastian, 2010). Many discover that they do not have sufficient learning skills necessary to meet academic demands. Thus, some students choose programs that do not fully match their potential, some must repeat specific courses several times or lengthen the period of studying at university for another semester or even added years (Gurb, 2000). Special education in the conditions of inclusive education at Charles University has been mapped in the years 2009-2011 (GAČR 406/09/0710).

Summary of the mapping:

- One of the outputs: Experiences of university students with special educational needs
- One of the categories: visually impaired students
- Selection: 100% agreement - special conditions for performing the entry test
- Need for assistance during studies (71%)
- Other special measures (51%)
- Expectations: access to presentations, editing texts, editing scripts, high administrative burden at the beginning of the study.

Key topics of the created publication (Hájková et al. 2013):

- philosophical-historical and ethical reflection of differences in the context of the university environment
- the forms of support available to university students with special educational needs and the experience of students with special support
- assistance to university students with special educational needs
- analysis of attitudes to differences in primary and secondary school pupils
- attitudes of university teachers to inclusive education

Conclusions

Despite various difficulties and despite the obstacles related to their otherness, respondents did not resign to the desire for education.

A key prerequisite for successful university studies - acceptance of one's own identity - acceptance of one's own disability is for most students demanding and long-term process.

Optimism - a common element for most.

Even challenging situations can contribute to personal growth.

Support provided to special needs students at Charles University in Prague now:

Since 2012 the documentation of students with special needs has been a basic prerequisite for reception of contributions from the Czech Ministry of Education towards the increased costs of facilitating study for students with special needs.

The amount of the contribution is derived from the type of disability of the student (classification: A1 and A2 – sight impairment, B1 and B2 – hearing impairment, C1 and C2 – physical disability, D – specific learning disorders and E – psychological disorders and somatic illnesses) and field of study. Students are registered in the Student Information System at the student's home faculty. The student's profile contains a record of their disability (stating letter A–E).

Students are registered by contact persons in cooperation with department staff.

Students may be registered when all the following conditions have been fulfilled:

1. *granting of informed consent by the student* – the student grants their consent to data entry on their registration and allocation to the relevant category of special-needs being entered into the 'Student' system,

2. *confirmation of the student's disability* – as follows: a) documentation of disability pursuant to Section 67 of Act no. 435/2004 Coll., the Employment Act, or b) documentation of invalidity of any degree pursuant to Section 39 of Act no. 155/1995 Coll., the Pensions Act, or c) ID card for disability of any degree pursuant to Section 34 of Act no. 329/2011 Coll., on the provision of benefits to persons with a disability, or d) documentation of specific learning disorder found on the basis of generally agreed results in generally agreed psychometric tests, or e) medical report on the results of a specialist medical examination in the case of persons with mental illness or with a chronic somatic illness, in the event that they are unable to produce the documents listed above,

3. *functional diagnosis of student's needs* - the purpose of which is to identify the needs of the student over the course of their study considering the specific field of study and subsequently propose suitable mechanisms and modifications to the conditions of study in order to meet or compensate for these needs. A written record is made of the functional diagnosis, which then forms part of the student's records as kept by the department. The student also receives a copy.

Functional diagnostics are carried out by faculty centres authorised for this task on the basis of an agreement between the contact person of the faculty to which the student is registered and staff of the specialist centre. An assessment of the functional diagnosis can also be carried out by a qualified staff member of the student's home faculty. Data gathered during student documentation is treated as confidential, sensitive information.

Functional principle of classification

It is not a medical diagnosis itself that is decisive, but its practical impact on work and communication procedures, which must be chosen for students during their studies or research at the university.

The procedures are not decided by the students themselves but are the result of an agreement concluded between the student, the professional service department of

the university and the representative of the faculty, resp. field of study, based on examination of the student's communication possibilities and with the main goal to enable the formal and content passage through the field of study and the achievement of the necessary study, work or research goal.

Some categories do not appear in the classification, which for clear medical reasons are separated (e.g., Cerebral Palsy), because by applying the chosen principle, it should always be possible to project their functional impact into one of the groups listed.

DEFINITION OF TYPES OF DISABILITIES STUDENTS WITH SPECIFIC NEEDS FOR UNIVERSITY EDUCATION: visual impairment

Slightly visually impaired / Vision user (A1)

A person whose visual impairment still allows to use vision (including text), with common (including visual) document formats, Image editing consists of enlargement or other optical changes, no need to use screen readers.

Severely visually impaired / Touch / voice user (A2)

A person who works with either tactile printed documents or screen readers (in combination with a tactile display or voice output) who requires an editable text document format, or document adapted in content and form. Therefore, those are students with severe visual impairment, blind, or practically blind (<https://centrumcarolina.cuni.cz/CC-24.html#2>).

ASSESSMENT OF SPECIAL EDUCATIONAL NEEDS

A1 student, user of sight:

- Educational programme in social and verbal communication
- Space and duration of communication assessment, by agreement
- Requirements for work with written text – time compensation
- NED (non-editable electronic document) assessment, by agreement
- Requirements for work with symbols and graphics
- Time compensation, NED assessment, by agreement
- Requirements for work with technology
- Time compensation, occasional pedagogical intervention
- Individual tuition assessment, by agreement
- Personal needs related to disability
- Occasional personal assistance
- Spatial orientation assessment, by agreement

A2 user of touch/voice:

- Educational programme in social and verbal communication/space and duration of communication
- Requirements for work with written text – time compensation
- EED (editable electronic document), 1st or 2nd class
- TD (touch document), by agreement
- Requirements for work with multimedia – compensation of video documents assessment, by agreement
- Requirements for work with symbols and graphics – time compensation

- EED, TD assessment
- Requirements for work with technology
- Time compensation
- Study assistance
- Occasional or transitional pedagogical intervention
- Individual tuition assessment, by agreement
- Personal needs related to disability – occasional, regular personal assistance
- Spatial orientation assessment, by agreement

DATA COLLECTION

Tab. 1 NUMBER OF STUDENTS - DATA AS AT 31 OCTOBER 2020

	Visual impairment	Hearing impairment	Physical disability	Specific Learning Disabilities	Autism spectrum disorders	Other difficulties	Combined disability	TOTAL
	AND	B	C	D	E	F		
KTF		1	3	4		3	1	12
ETF				2		3		5
HTF	2	2	2	10		14	10	40
PF	8	1	2	15	1	18	6	51
1LF				11		2	1	14
2LF	2			5		2		9
3LF	1	4		7		3		15
LFPI	2	2		7		6		17
LFHK		1		6		1		8
FaF	1		1	5	1	10	1	19
FF	11	18	9	43	9	83	21	194
PřF	2	4	1	16	14	21	4	62
MFF	1	2	1	38	9	23	6	80
PedF	7	10	3	40	5	23	10	98
FSV	3			10	2	18	6	39
FTVS		2	4	6		3	3	18
FHS	5			4	2	13	3	27
Total	45	47	26	229	43	246	72	708

Tab. 2 NUMBER OF STUDENTS - COMPARISON OF THE NUMBER OF STUDENTS IN 2012 AND 2013

	A	B	C	D	E	Overall
2012	23	26	18	27	45	139
2013	28	33	24	50	69	204
Increase	5	7	6	22	24	65
%	22%	27%	33%	81%	53%	47%

Innovations in learning and assistive technologies, as well as provisions in disabilities supports, were viewed as central factors contributing to the increase in enrolment and graduation rates from colleges for individuals with disabilities as well as with visual impairment (tab. 1, 2).

PANDEMIC EXPERIENCE

„... I have already mastered about 5 platforms, and everything has been successful. And this week I learned how to share a presentation via Zoom. The teacher was so kind that she allowed me to try presenting via Zoom in advance and guided me where to click with computer mouse. When I said I didn't have a mouse, she said I should use a touchpad. [loud laugh] Well, fortunately, my computer literacy is reasonable, so I figured it out myself. I even made a big discovery that today's readers allow you to run a presentation and see it at the same time. So, perhaps for the first time in history, I presented as a sighted person (not counting previous use of the presentation in text form). Sure, I could have sent it, but I just wanted to see if it could learn how to do it. And it's even more pleasant because I'm in touch with what others see (it was quite some adrenaline when someone skipped slides instead of me). ”

CONCLUSIONS

CU Rector's Decree no. 9/2013 is a key internal regulation governing the conditions for the provision of support to CU students and applicants for study with special needs. The decree is divided into 10 basic articles, which contain provisions relating to basic support tools both before and during study, as well as information on the organisation of support services and the use of library, information, accommodation, and catering services. The decree came into effect on 1 July 2013.

Students are grateful for the support. They want to be like everyone else. Offer (all) students the opportunity to overcome challenges.

Lit.: Gurb, E. (2000). Maximizing the potential of young adults with visual impairments: The metacognitive element. *Journal of Visual Impairment and Blindness*, 94(9), 574–583.

Květoňová, L., Hájková, V., Strnadová I (2012). *Cesty k inkluzi*. Praha: Karolinum.

Myers, K. A., & Bastian, J. J. (2010). Understanding communication preferences of college students with visual disabilities. *Journal of College Student Development*, 51(3), 265–278.

Centrum Carolina Charles University <https://centrumcarolina.cuni.cz/CC-24.html#2>

Special-Needs Students at Charles University in Prague https://cuni.cz/UKEN-191-version1-ipsc_80_version1_specialneeds.pdf

10.5 Children with CVI: Opportunities and Challenges in Early Intervention

Halka Tytykalová, Raná starostlivosť

Our story

A fundamental change: families come with children who have other difficulties with their vision than before. Their number is growing.

Many of these children were born prematurely.

Parents come to us and often only know that the child does not see and that this state is related to the brain. They were told by a doctor that they need to stimulate the child's vision.

Many of these children behave like blind. We observe them staring at a light. Children are concerned about the busy environment... Parents say that their child visually responds to some stimuli, but not always.

We know from our experience that families with visually impaired children need support as soon as possible.

We feel the urgency of the situation, and, therefore, we have begun to look intensively for ways to help children with CVI and their parents. We see the solution in a thorough diagnosis of the child's visual behavior and targeted aftercare.

Who we are

At Raná starostlivosť, n.o., we specialize in early intervention in families with children with visual and multiple disabilities under the age of seven.

The early intervention service includes family-centered service. It contains social prevention activities, counseling, social rehabilitation, comprehensive support for the child's development, and community rehabilitation.

We provide service mainly in the households of families.

Our internal team:

a specialist in counseling (social law), psychologists, special education teachers, and a Physical therapist.

We focus, e.g., at:

- supporting the family in gathering information about the child's diagnosis,
- support for parental competencies,
- providing information on the specifics of the child's observed reactions,
- supporting the family in identifying functional needs,
- helping the family to set up a stimulating environment for the child,
- **supporting an active participation of the child in daily routines in the family.**

Our challenges

1. Recognize as soon as possible the visual and behavioral characteristics of children with CVI.
2. Targeted intervention.
3. Find or create collaborative teams of experts - within internal and external collaborators.
4. Develop a partnership with the family and create the Individualized family plan (IFP).
5. Encourage the family to realize its goals and the child to stay active and at the same time develop its vision.
6. Create a support group for parents.
7. Share our experience with other child care providers with CVI.

Education

Perkins School for the Blind, The National Institute for the Blind, Visually Impaired and Deafblind, Iceland, EDA CZ, various resources (online, books ...)

Two specialists (psychologist and teacher for visually impaired children) trained the other members of the team. They also prepared the first educational workshops for parents and other care providers.

We obtained the major funding for education and verification of knowledge in practice from Vital Capacities - program ACF - Slovakia, (2019 - 2020). And also, from the financing of private donors combined with volunteering.

We currently work with approximately 25 families with children with CVI - some as part of an early intervention service, with others on an educational or a support group for parents.

We most often work with children in I. or II. phase CVI.

Often these are children with complex needs, movement, and communication issues.

Sometimes CVI coexists with ocular forms of visual impairment.

When planning an intervention with the family, we use the functional vision assessment The CVI Range (Roman-Lantzy, 2007; rev. 2018).

- ✓ It allows the assessment of the youngest children, including children with multiple disabilities.
- ✓ It emphasizes the importance of information from parents (from their observation of the child).
- ✓ Targeted intervention is part of daily routines to support the active participation of the child.
- ✓ The information obtained from the CVI Range and the CVI Progress Chart can be directly applied to the development of goals.
- ✓ It is easy to share results in teams (including families).

However, we also use other options, for example, using pediatric tests Lea symbols. We also get useful information from projects TEACHCVI, CVI Scotland, and so on.

Several members of the team have gained or are gaining experience in studying for visual therapists in the Czech Republic or in further professional education (Lea symbols - teacher Markéta Skalická).

Our young friends

Dominika

The goal of intervention is to integrate vision into functioning. We adjust the conditions to Dominika to succeed and respect that she cannot functionally use the vision continuously.

Our team: parents, a key worker and specialist in Video interactions guidance, special education teacher for visually impaired children, Physical Therapist, psychologist (Routine based interview - RBI), the teacher for visually impaired children in kindergarten (external worker).

Examples of recommendations for IFP:

Play/Floor Time

We will prepare a one-color carpet for Dominika. We place it by a one-color wall.

Dominika is actively discovering items using the Pegboard book (can be borrowed or made).

Meal Time

We use a one-color plate or placemat.

We smell the food before we touch it.

We will reduce the number of other stimuli.

Bed Time - Reading Book

First, we tell a part of the story (for example, about a propeller from an adapted book). Then we look at the photos (encourage Dominika verbally, give her enough time to process the visual perception). Then praise Dominika and talk about what she saw.

Limit sensory input at bedtime (no music, no toys).

What did Dominika's mother state:

"The findings from the functional vision assessment were especially useful for me. We found out what is difficult for Dominika and what environment does not allow her to use vision."

What did Miroslava say (key worker and a specialist in Video interactions guidance):

"I have seen in my family that when a parent or I try to attract a child, we often do not meet each other in this situation. CVI Range helped us in modifying the environment, objects, and toys that Dominika uses. Also, to understand better what helps Dominika - for example, movement, light or color preference. We linked this to interaction support through Video interactions guidance. The physiotherapist has found a way to make it easier for Dominika to move.

The combination of support via VTG and CVI Range and further support helps Dominika perceive the stimuli from the environment more and get involved in everyday events."

Jakub

For Jakub, vision is the most important sense through which he explores the world. Other senses continue to play an important role compared to children without visual impairment. Jakub is visually curious in a familiar environment. The challenge is 2D images and the use of symbols. We support Jakub in comparative thought and getting to know new objects with the help of Salient Features.

Our team: parents, a key worker and specialist in Video interactions guidance (in training), special education teacher for visually impaired children, Physical Therapist, psychologist (Routine based interview - RBI), the teacher for visually impaired children in kindergarten, and special education teacher (external workers).

Examples from IFP

Play/Floor Time

Goal: Support of autonomous

Strategy: At least once during the day, we will integrate the Play/Floor Time according to Jakub's own choice.

Based on what they see and hear from Jakub, the parents describe and develop the play's theme so that Jakub can continue and develop it.

We adjust the environment - we store toys in one-color boxes, containers, we reduce the sounds from the surroundings.

Dressing

Goal: Jakub is more active in dressing

Strategy: Mom marks the place where briefs, socks, pajamas are stored - a combination of color mylar foil and photos of the type of clothes that are inside. In the morning, Jakub and his mother choose from the marked drawers on what to wear. Mom helps in case Jakub needs it.

Jakub helps to store the clothes in the drawers ("These are my socks, briefs/These are father's"). For Jakub to recognize the front and back of the T-shirt and pants, his mother marks the back of the clothes with a deep colored dot on a black background.

What did Jakub's mother observe:

"The functional vision assessment helped me to clarify my observations of how Jakub uses vision and, most importantly, how to help him. With our special education teacher, physiotherapist, speech therapist, and kindergarten teacher, we were able to modify some of the activities.

We realized the difficulty with the complexity - we started using simpler images on a monochrome background. We use a tablet - backlighting helps Jakub to use his vision. We recognize visual salient features. We are not doing well yet, we use little comparative language, but we are making progress.

We use a blackboard on the wall for difficulties with perception in the lower part of the visual field.

I better understand that Jakub's loss of concentration in a busy environment is not his decision. I try to be more understanding and patient."

What did Andrea notice (key worker and a specialist in Video interactions guidance in training):

"The most useful for me was understanding how to support the vision and learning of a child with CVI, which is in II. to III. phase. Also, that it is important to support the vision and build a visual vocabulary. And working with images through salient features, too. It was also helpful to realize how to work with images."

The most difficult challenges for parents

- Adapting the environment (not to be too complex).
- Positioning the child so that he/she can, for example, engage vision and reach a spoon while eating.
- Requiring the active involvement of the child.
- Providing sufficient time for the active involvement of the child.
- Respecting the difficulties of engaging the vision and at the same time hearing or touching.
- The need for a gradual transition from 3D to 2D.
- Confusion of Visual Fatigue with: "Not interested."
- Understanding the difficulties with new visual targets.
- Understanding the need for predictability and routine - use of Calendar systems to build context, memory, and expectation to support perception and understanding.
- Respecting the specifics of independent movement. The child moves at home with confidence, but on the street or in a busy environment, he/she stops using the vision.

The most difficult challenges for institutions (children's centers, kindergarten)

- Adjustment of the environment - the simplest change is the child's placement away from the primary light source.
- Preference for more accessible communication with the use of objects before using pictures - symbols.
- Use of "rest areas".

How did the parents reflect the changes?

- My son is more perceptive. He registers me when I come to him.
- My daughter is more engaged with coloring books. She doesn't look so hard in the window anymore.
- The son started watching the movement of the toy car on the tablet. He started catching some objects.
- The daughter no longer needs a lighted spoon to find it with her eyes.

- She grabs its hand even though the spoon is yellow (no light).
- The son is more attentive; he doesn't sleep so much during the day. He looks nicely at the stars on the app when he uses CVI Den. His father made this aid for him.
- The son in the Little room is watching his favorite ball. He catches the mylar foil with his hands.
- The daughter feels safer, and she is happier when we offer her an available visual stimulus during physiotherapy.

The son is happier when we offer him Light Aide or slinky with lighting during tummy time.

Thank you for your attention and the opportunity to present our first experience in targeted care for families with children with CVI.

Thanks to Zuzana Krchňavá, Director of Raná starostlivosť, and my colleagues for their help.

And also, thanks to Otká Čechová for her support and inspiration in my work.

I thank all our families for their trust and cooperation.

Our growing fb support group [Deti, ktoré sa učia vidieť](#)

Web [Raná starostlivosť](#)

Please send questions to tytykalova@ranastarostlivosť.sk; I will be happy to answer them.

PHOTO - with the consent of Dominica's, Jakub 's and Marínka 's parents and with the consent Miroslava and Andrea.

Picture: from Jozef Mikulcik Pixabay, <http://roman-word-bubbling.appspot.com/>

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10.6 The impact of visual impairment and comorbid mental disorders on functioning in essential life domains: outcomes of a qualitative Delphi study

Hilde PA van der Aa^{1,3}, Marjolein LA Onnink¹, Lianne BA Teunissen¹, Ruth MA van Nispen³, Peter FJ Verstraten¹

1. Robert Coppes Foundation, Vught, The Netherlands
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3. Amsterdam UMC, Vrije Universiteit, Ophthalmology and the Amsterdam Public Health research institute, Amsterdam, The Netherlands

Background: The impact of visual impairment (VI) and comorbid mental disorders (MDs) on people's daily functioning has been barely investigated. Therefore, the aims of this study were to: 1) determine the impact of VI and comorbid MD on functioning in essential life domains, (2) gain insight into best-practices to support people with this combination of impairments, and (3) determine strategies to optimize care that is provided for them.

Methods: A qualitative Delphi method, based on four steps, was used to obtain input from Dutch professionals (e.g. psychiatrists, psychologists, social workers, group counsellors, n=31) who have extensive experience in working with this target group, i.e. experts. Based on the Self-Sufficiency Matrices they were asked to determine the impact of VI and MD on various aspects of daily functioning.

Results: Experts indicate that anxiety, depression, fatigue and sleep disturbances are often experienced in this target population. Also, many tend to neglect self-care and substance abuse is common. Because of communication restrictions (e.g. no facial recognition) and difficulty in trusting others, social interaction and relationships are complicated. Experts advise using evidence-based treatment options to support this target group and offer multidisciplinary care. They stress the importance of building a trustful relationship, showing patience and empathy, building on positive experiences and involving the informal network.

Conclusion: Experts describe a frail population, in which the VI and comorbid MD have a cumulative negative influence on people's mental and physical health and provide insight into best-practices to support them. More research is needed to determine the best treatment options and clients' perspectives should be included.

11 ORAL PRESENTATION

11.1 Martina Malotová, Low vision therapist: The attention focus effect in visual impairment children ´s gait



THE ATTENTION FOCUS EFFECTS IN VISUAL IMPAIRMENT CHILDREN'S GAIT

Malotová Martina, Faculty of Physical Culture, Natural Science of Kinantropology Department,
University of Palacký, Olomouc

Supervisor: Psotta Rudolf



THE ROLE OF SIGHT

Sight as an important role in a child's **motor development**, especially motivation for activity. (the child sees an interesting object and it **motivates him** to grab him, move behind him).

Sight acts as a natural "lure" that attracts the child and encourages him to stop dealing exclusively with his own body and turn his interest to the world around him (Gregorová, 1999); (Cup, 1984); (Bertoti, 2004).



THE ROLE OF SIGHT

Children with VI compensate visual deficit through the other senses.

Psychomotor development children with VI - dependent on the development of ear - hand coordination.

Hearing stimuli do not have as immediate an effect as visual stimuli even for sighted children.

Grasping goals according to the „sound key“ does not appear in blind children until the last quarter of the first year of life (Jílková, 2004, p. 23). Navarro et al. (2004, p. 657) indicates the beginning of this ability between the 10th and 11th month



**GROSS MOTOR DEVELOPMENT - CHILDREN WITH AND WITHOUT VI,
BY GREGOR, 1998**

Normal sight children	Children with VI
horses on the belly	passively seated sits briefly
rolls over the belly	rolls on tummy
from a position on four, it sits on its own lesion	passively seated sits independently
he rises to an upright kneel	horse grazing (imperfect head straightening)
over the step he rises	The passively built walks along the furniture
walks step by step around the furniture	he rises to his seat
Independent locomotion	it rises over the step
	baby climbing
	the room with support will cross separately
	Independent locomotion

De Jong (in Janečka, 2003)

explain this "illogicality" by the fact

The blind child must actively cope with decreasing contact of the body surface with the mat when changing positions, which significantly increases the demands on his psychomotor maturity without visual control.

The child must overcome the fear of an unknown space with which he has no experience yet.

Therefore, it is understandable that blind children previously manage positions that provide them with safe support.

TABLE 3
GROSS MOTOR ITEMS AND AGE ACHIEVED
BY BLIND (CHILD DEVELOPMENT PROJECT) AND SIGHTED (BAYLEY)

Item	Age Range [†]		Median Age		Difference in Median Ages
	Sighted	Blind [*]	Sighted	Blind	
Elevates self by arms, prone ^a	0.7 - 5.0	4.5 - 9.5	2.1	8.75	6.65
Sits alone momentarily	4.0 - 8.0	5.0 - 8.5	5.3	6.75	1.45
Rolls from back to stomach ^a	4.0 - 10.0	4.5 - 9.5	6.4	7.25	.85
Sits alone steadily	5.0 - 9.0	6.5 - 9.5	6.6	8.00	1.40
Raises self to sitting position ^a	6.0 - 11.0	9.5 - 15.5	8.5	11.00	2.70
Stands up by furniture ^a (Pulls up to stand)	6.0 - 12.0	9.5 - 15.0	8.6	13.00	4.40
Stepping movements ^{ab} (Walks hands held)	6.0 - 12.0	8.0 - 11.5	8.8	10.75	1.95
Stands alone ^a	9.0 - 16.0	9.0 - 15.5	11.0	13.00	2.00
Walks alone, 3 steps ^a	9.0 - 17.0	11.5 - 19.0	11.7	15.25	3.55
[Walks alone, across room] ^a	[11.3 - 14.3]	12.0 - 20.5	[12.1]	19.25	7.15

Note: All ages given in months.

^aAges rounded to nearest half month.

^b3 cases corrected for 3 months prenatally.

MOTOR CONTROL CHILDREN WITH VISUAL IMPAIRMENT

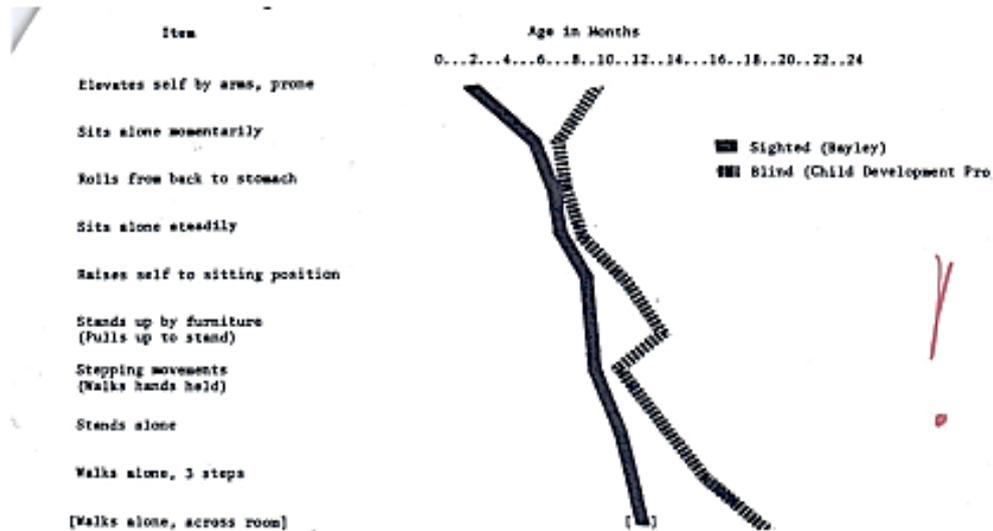


FIG. 2.—Blind and sighted median ages (using the Child Development Project blind group). for the blind sample are rounded to the nearest half month. Three cases are corrected for 3 months maturity. *N* = 10. Brackets indicate the item from the Denver Developmental Screening Test.

Locomotor Development

Downloaded by [Universitaet Duesseldorf] at 08:27 04 March 2016

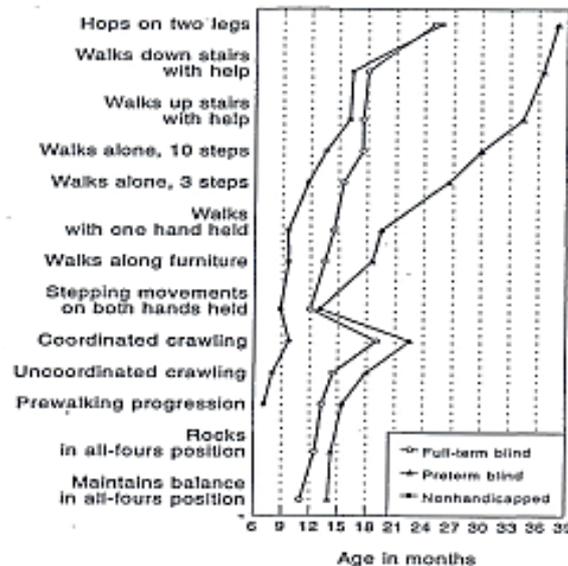


Figure 2 Median age for the acquisition of locomotor skills in full-term blind children (*n* = 5), preterm blind children (*n* = 5, corrected for prematurity), and nonhandicapped children.



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ANTROPOLOGICAL INDICATORS

1. **Body height** (growth rate info) girls and boys 6-15 years (B1-B3) comparable to the age norm of the sighted population
2. **Body weight** and weight and height index (addition of info on the overall constitution)

Girls and boys 6-15 (B1-B3) comparable to the normal population

There are **no significant differences** in selected anthropometric indicators between boys and girls in the period of prepubescence and pubescence (Janečka, Bláha, 2013)



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LEVEL OF MOTOR COMPETENCES

3. **Tests of fitness skills** (tests of strength skills)
 - a) **Long jump stand-** G and B B1 low dynamic explosive force (development of explosive force - task to PE).
 - b) **Sit -up-** performances comparable to the Moravec standard in all age categories.

G B1 prepub. comparable to the norm., in puberty deviations from the norm. B B1-B3 differentiation from the norm - low level of strength and local endurance (the strength of the abdominal muscles is not primarily limited by visual control)



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LEVEL OF MOTOR COMPETENCES

c) **Endurance in the push** G B1 B B1
statistically significantly lower
performance

d) **Dymanometry** (pressing R L hand) B B2 –
B3 – higher performance
B B1 – statistically significant differences
in the strength of both hands, L lower
performance

General endurance test, coordination
tests, motor balance, mobility test



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LEVEL OF MOTOR COMPETENCES

G and B B1 level of motor competence in
prepubert and puberty **differs** statistically
significantly from the normal population

G and B B2-B3 the level of motor competence
in prepubert and puberty **does not differ** in a
statistically significant way from the normal
population

CONCLUSION OF STUDIES EVALUATING PHYSICAL ACTIVITIES in adults



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18-69 years B1-B3

- low participation rate of intensive PA (organized forms predominate)
- walking is the most commonly used PA
- BUT problems in walking parameters the health-recommended criteria for participation in PA are not met to the desired extent average daily values of walking max 3000 steps / daily
- suitable motivation for PA - pedometers
- more time spent sitting



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DEVELOPMENTAL DIFFERENCES IN OTHER AREAS

Lack of feedback manifests itself in typical posture

4. Different posture and gait - reduced need for movement, the development of muscle imbalances and thus poor posture.

5. Postural defects - head tilt or tilting to the side - shoulder protraction - increased kyphosis in the upper thoracic spine - scoliotic posture - increased lumbar lordosis, pelvic anteversion and prominent abdomen.



DEVELOPMENTAL DIFFERENCES IN OTHER AREAS

6. These postural abnormalities usually also affect the gait. In order for a person to compensate for the inclination of the head, in which the center of gravity of the body moves forward, one must widen the support base by crouching and turning the feet out.

Walking forward is uncertain or swaying from side to side.



SPATIOTEMPORAL PARAMETERS OF WALKING

- reduced walking speed (m/ s)
- higher step frequency /cadence (steps/ s)
- shorter length of steps and step cycles (cm),
- shorter and at the same time less stable first phase of contact of the foot until the moment of reaching the full tread (full flat), as a possible manifestation of the effort to quickly reach full support and stay this support even in the swing phase of the second foot.
- longer full flat phase time
- deviation of walking in the frontal line laterolateral differences / cm, given pp. by shifting the center of gravity of the body

7. Space orientation

- Visual experience is important for space orientation (Loomis, 1993).
- Quality spacial orientation is affected by central and peripheral vision (Gilbert in Kandel, 2013) and by kinetic perception, mental representation of one's own body, mental representation of space and cognitive maps of the external environment in VI (Elliot, Khan, 2010).

8. Static and dynamic balance

- Effect of reduced visual info on the dynamic stability of walking young adults (Hallemans, Ortibus, Meire & Aerts, 2010).
- H describes this as cautious (překl. opatrnější) strategy of walking or when a problem with postural stability (Hallemans, 2009). H see changes in the motor control in relation to visual deprivation. H confirms the effect of vision and the resulting changes in movement, thus affect the dynamic stability of the walk.
- Visual deprivation affects postural stability (Menz, Lord & Fitzpatrick, 2003).

Depending (překl. závislost) on the environment and the lack of visual information negatively affects aspects trunk/ body stability and step's speed.

- An increased risk of secondary medical complications (O'Day, Killeen & Iezzoni, 2004).
- **Psychosocial health derives** (překl. odvíjí se) **also from ability to move in space** (O'Day, Killeen & Iezzoni, 2004). (pozn. circulus vitiosus)
- The starting point for teaching is knowledge the focus of attention and use of **adequate instructions. To motivate to movement...**
- Learning movement requires (překl. vyžaduje) knowledge of neural control of movement (modification of the mechanisms controlling the movement intact child).
- Analysis of the mechanisms of the forward and feedback control of the movement: **modified are both controller component.**

- **Higher demands** (překl. nároky) on proprioceptive information processing, concentration, **attention**, and short-term memory.



How is the motor control these children? How to find out?



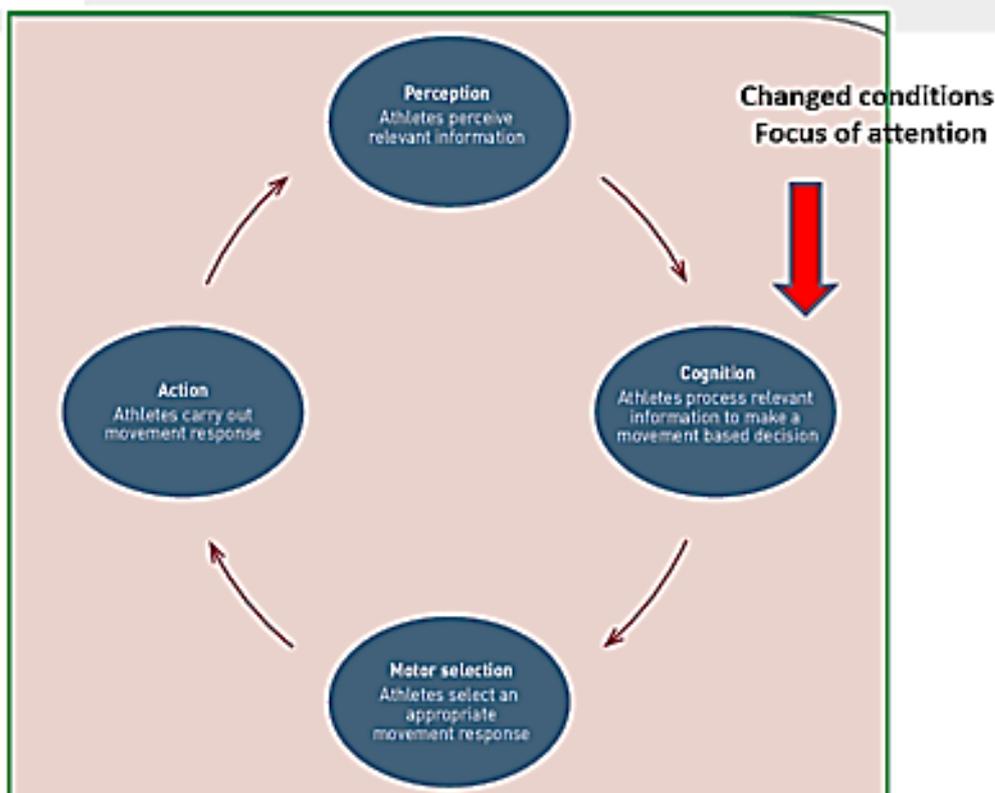
Perception - action coupling

- Through deliberately (záměrný) affect of movement performance



- Affects the motor idea and affects the representation of movement.

(Mental representation of motor movement is proprioceptive and visual effects of movement. Representation of movement or the idea of movement in space belongs to one of the most important areas in VI. The problem of their formation is not yet fully satisfactory solution (Cattaneo et. Al., 2008).



- Is important to know the effects of focus attention (cognitive mechanisms).
- 
- The effect of focusing attention on motor performance describes Wulf (2007, 2013) in health population.
 - Wulf records changes in the kinematics of the participants because of the way the focus of attention



Attentional focus effect

External focus of attention (EFA) significantly improves motor performance than internal focus of attention (IFA).

(Wulf, 2007, 2013)

Most experimental studies to verify the effect of focusing attention on the motor performance in health population, but for VI less papers.



Attention focus effects on static balance (Mc Namara, Becker & Silliman-French, 2017)



- B1 and B2, the external focus of attention disadvantageous.
- External focus of attention can be used in exteroceptive motor control, visual feedback.

Premise:

- children with higher degree of VI - attention to the position and movement of the segments of the body or the whole body related to proprioceptive perception.



- children with higher degree of VI - advantageous **internal focusing attention**.

Premise - a child with a higher degree VI - limited ability to activate the motor idea of motor performance/ output or result of movement (ie. An external focus of attention).

When performing physical tasks - the focus of attention is moving its body- kinesthetic or proprioceptive motor control.

Determining (překl. zjistit) the effects of the focus of attention on gait quality.

1) Describe the use of visual control of gait children depending on the degree VI.

2) Describe the effects of the focus of attention.

(Affecting ideas for motor performance and representations of movement is important to know the effect of focusing attention on these children)

H1: Gait of children with moderate VI is more dependent on visual information than children with severe VI.

We assume that children with a lower degree of VI are used to control gait more visual information than children with higher VI.

Children with severe VI may be limited visual sensory inputs offset by other modalities.

H2: The effect of focusing attention implemented during gait depends on the degree of VI.

We expect that for children with severe visual handicap will be more profitable external focus of attention, while children with severe VI will be more effective internal focus.

PARTICIPANTS

Research method: two consecutive experiments: EX1 and EX2.

n = 45 children

K1 moderate visual impairment (n = 15)

K2 several visual impairment (n = 15)

KG normal sighted (n = 15)

participants age 6-11 years

Primary School for children with visual impairments in the Czech
Republic and Slovak

inclusive criteria

exclusive criteria

INITIAL CONTRACT RESEARCH

**VERIFICATION OF ADVANCED TECHNOLOGIES FOR ANALYSIS OF WALKING OF
CHILDREN WITH VISUAL DEFECT SUMMARY RESEARCH REPORT (contract research)**
Department of Natural Science, Univerzity Palacký Olomouc, December 2020

The initial research was to determine the clinical validity of the evaluation
of the gait pattern using the mobile optoelectronic device

Optogait

and the sensory inertial system Gyko (Microgate, Bolzano, Italy)

to identify spatiotemporal indicators of gait function in visually impaired children,
and to verify the practical feasibility of gait test in children with VI.

indicated the parameters are related to the contact phase and the variability of these parameters **could be clinically valid for the evaluation of the walking ability in children VI.**

further verification is needed in a larger group of children, especially to clarify why a longer single-support phase occurs in gait samples of children VI and why the contact phase as the first part of the total foot-to-ground contact time shows high instability.

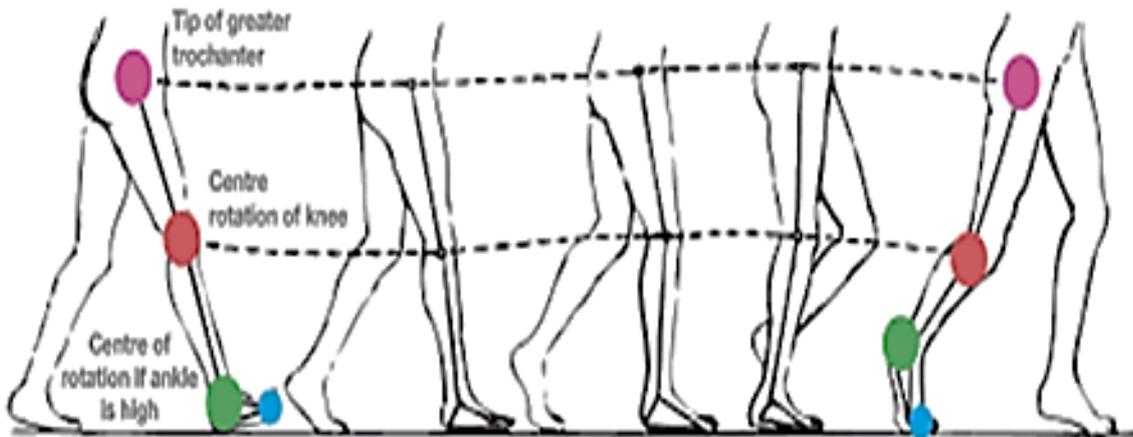
limited by the smaller sample size
the higher age range of the children included in this sample

BUT

walking speed,
stride length,
duration of the bi-support phase and
variability of the single phase
have been shown to be sensitive indicators of walking performance in children VI under markedly altered vision conditions.



THANK YOU FOR YOUR ATTENTION



11.2 Dagmar Moravcová, Low vision therapist, CVI in children with dysphasia

CEREBRAL VISUAL IMPAIRMENT (CVI) IN CHILDREN WITH DYSPHASIA



**COOPERATION OF LOW VISION THERAPIST,
SPEECH THERAPIST AND PSYCHOLOGIST
(THE MOST FREQUENT DIFFICULTIES,
POSSIBLE SOLUTIONS, TEAMWORK)**

DAGMAR MORAVCOVÁ

**LOW VISION THERAPY SURGERY
PRAGUE, CZECH REPUBLIC**

8th European Conference on Psychology and Visual Impairment
„Real Life (IN) Dependence“, Prague 1.-2.7.2021

Speech development delay or dysphasia



- Complicates communication with others
- Complicates understanding
- Impact on school work
- In combination with CVI is a serious obstacle to the training of reading, writing and, as a result, education

What other difficulties do speech therapists observe in these children?

- Problems in working with standard image size
- Problem in working with communication book with standard image and text size
- Problems exploring images, pages in books, does not find image on page, glasses of no help

What difficulties do neuropsychologists observe in these children?

- Lower performance in visual perception subtests compared to other areas
- No delay in reasoning skills: Normal to higher level, in rare cases there are borderline results

What vision difficulties can we expect in children with speech delay or dysphasia?



- **congenital developmental defects in the eyes** (as in population)
- **refraction defects** (as in population)
- **binocularity disorders** (as in population)
- **cerebral visual impairment**
- **disorder or significant weakening of the accommodation**

What does ophthalmologist not reveal in a routine exam



- **disorder or significant weakening of the accommodation** – when hypotonic syndrome or dydylalia in anamnesis
- **cerebral visual impairment** (weakening eye and hand cooperation; *crowding- simultagnosia* ; difficulties in figure –ground discrimination; difficulties in tracking crossed lines; symmetry perception malfunction; spatial perception disorder; weakening spatial orientation in room, building, department stores, sidewalks with many moving people, mass transportation)
- **disorder of visual strategy:** *tracing, tracking, scanning, spotting difficulties;*

Low vision therapist check - up



- Children arrive with results from ophthalmologist. Some children wear glasses, some have had surgery for strabismus, but for the most part, there is no known cause of the eye problem
- Extremely important is anamnesis from the birth, possibly even prenatal, postnatal adaptation, further development of the child
- Neurological results including VEP (visually evoked potentials), description of magnetic resonance imaging (MR)
- Recommendations from clinical speech therapist and psychologist

Characteristic behavior in children with CVI (a)



- some children have **difficulties in making eye contact from an early age**, they do not look into one's eyes, look into light, light source
- **they fix with lag and look away** from objects when examining them with their hands
- **they prefer tactile and auditive sensations to visual sensations:** they have no interest in viewing pictures, in black and white images made of contours
- **they prefer games with colored objects**
- **some children like driving in car**, watching the surroundings while swinging in the swing or in the net
- **when viewing books, they focus on handling the book**, leafing, opening and closing the book, tactile exploration

Characteristic behavior in children with CVI (b)



- Some children when entering a new space (room) are scared; when they have a chance to look around, run around, touch all the objects in it, they calm down and continue to cooperate
- Some children are insecure when walking the stairs, on broken surfaces, on non-contrast rugged surfaces; they have orientation difficulties in excessively brightened, contrast-free rooms; they can be insecure in a room with pavements consisting of differently coloured tiles (dark parts of the pavement are perceived as holes)

School problems (a)



- The children do not distinguish images and texts placed close together
- They have problems in reading printed word with normal character spacing (25%) - textbooks, books, magazines
- They can distinguish even very small isolated characters
- They have hard time reading their own hand – writing, both italics and block letters, if they have to follow required size and line spacing

School problems (b)



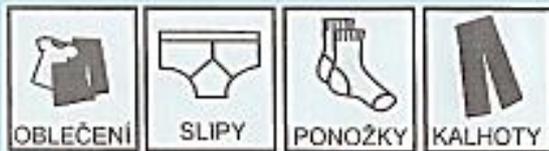
- They have problems in writing in printed lines
- They have significant problems in working with images with texts in communication book (they recognize colour image but do not read name, even if individual letters are correctly identified)
- They do not navigate in a map

Characteristic results of vision examinations



- Characteristic difference between the results of examinations with isolated characters and between examinations with tests with normal spacing (Lea pictures, letters, numbers, geometric characters)
- They do not distinguish geometric characters or numbers on pseudo-isochromatic tables for colour vision testing (Waggoner, Ishihara) but they have no color perception disorder (Color Vision test 16 Hue pass correctly)

Characteristic problems



does not find detail on the picture



does not recognize black and white
imagines and common text



Case study: Tom (1)

- **Age 8 years + 5 months**, recommended by psychologist from the SPC for children with visual impairment
- **Monitored for dysphasia and dyspraxia**, graduated 1st year of school for children with speech impediments, speech improved, recommended transfer to noormal school for vocabulary expansion, but vision difficulties persist when working with texts and pictures
- **Monitored by an ophthalmologist**, surgery for strabismus, wears glasses, for six years he rehabilitation: pleoptic and orthoptic exercises and exercises of convergence, led by an orthoptist, now terminated; no reason to explain the difficulties from an ophthalmologist's point of view,
- **Glasses** OD +3,50 and 3 prism basis nasal
OS +3,50 = -1,0/10° and 3 prism basis nasal

Case study: Tom (2)

- **Prematurely born 33rd g.w.**, pulmonary immaturity, respiratory support by artificial pulmonary ventilation
- **neurologist:** according to magnetic resonance, focal precincts of elevated **signal in white matter both-sided, within PVL** (periventricular leucomalacia)
- **Oculist:** in 2 years of age surgery for strabismus, further refractive defect, exercises with orthoptist, glasses with prisms
- **Speech therapist:** dysphasia, dyspraxia, school for children with speech impediments
- **Psychologist:** significant difference in test situations where visual perception is shown compared to other areas of perception

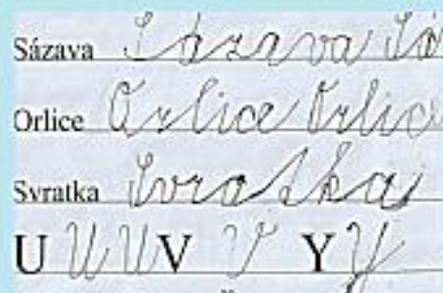
Case study: Tom (3)

Schoolproblems

reading book 1st yr

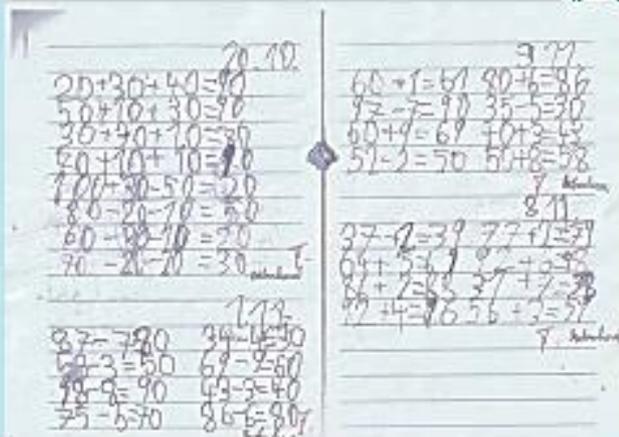


syllabus 1st yr

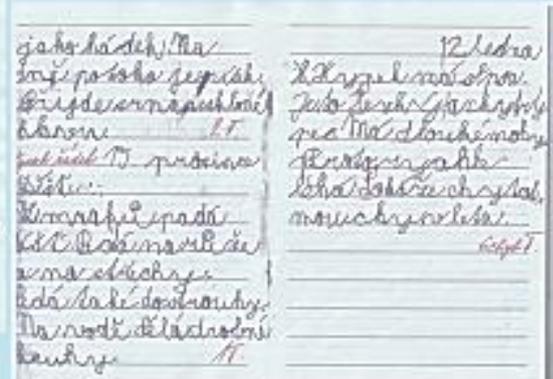


writing exercise book 1st yr

Case study: Tom (4)



Mathematics 2nd yr



Writing exercise book 2nd yr

Case study: TOM (5)

Vision examination by low vision therapist

- Visual functions: Visual acuity into the distance on log MAR tests and near vision acuity reading texts - whole sentences on 25% spacing characters , or isolated letters, or letters on log MAR test
- Contrast sensitivity
- Color vision
- Binocular vision and stereopsis
- Examination of visual perception areas by material according to the age of the child
- In Sight (VISIO) set - red

Case study: Tom (9)



In Sight (Visio), red sed for ages 6 – 8 years

- **Viewing Strategy:** tracing difficulties, tracking in a horizontal line, even when alternating at two viewing distances; better tracing in the vertical line; crowding difficulty; better distinguished larger characters, on contrast surface with large spaces
- **Color and Contrast:** he did not distinguish identical shades of objects near each other (crowding); correctly assigned colors in larger area
- **Perception of Detail:** he did not find grey non-contrast and tiny parts in an intricate small image (crowding)

Case study: Tom (10)



- **Visual Discrimination:** he confused animal names (dysphasia problem), but correctly identified the larger and contrasting differences and correctly assigned the larger images
- **3D - 2D:** he correctly assigned the figures to the figures in the photograph; he had difficulties in orienting himself in a complex full-page picture (crowding), but even there he positioned the pieces correctly
- **Visual Synthesis:** he had no difficulty, finished allk task correctly
- **Part - whole relationships:** difficulties in assigning the correct colored parts to the white areas of the image, focusing on the detail and not distinguishing the greater detail next to it; he correctly assigned the color puzzle, correctly identified the identical shape in the objects, correctly assembled image made of 4 stripes

Case study: Tom (11)

- **Visual spatial perception:** difficulty in distinguishing shape by axis horizontal and vertical on a surface with many images (crowding); he did not name some animal figures (dysphasia, CVI), the rooster and the hen correctly identified, also cat and dog (he has both at home), but he did not recognize them from the profile in the black figurine
- **Perception of symmetry:** he identified correctly 4 out of 6 mirror images , 2 errors; separately, he did not manage place figures in the crossing of axes x, y following the model
- **Visual-motor skills:** he correctly indentified number of circles , shifted to the outhter edge, failed to keep the shape and size of the circles, placed tiny animals one after the other at distance of 1-2 cm, took them away with his right hand; he followed pictures on the page with his right hand index finger, followed the square line path with left hand index finger; symmetrical movement (join together the elephant – cards in right and left hand); he had difficulties; joining together a chain with difficulty, previously has never done such an activity

Case study: Tom (12)

- **Figure ground perception:** from the colored surface he picked up the animals, did not recognize the goat and cat; he identified the bear, the dog and the pig; he had hard time finding a colored image in a group of six others, but he managed; he had hard time distinguishing the interweaving strings and assigning them to teddy bears, was easier to distinguish the vertically oriented ones; with difficulty, but found black birds in a black pen drawing
- **Picture interpretation:** difficulties in distinguishing the black shadows of the animals in profile (he did not recognize the horse, the dog, the cat), he identified the duck, the hare and the pig - different in shape; he assigned the color images correctly; he correctly identified two differences out of 3 by comparing two images after covering them, he remmebered that one difference was on the table, but could not remember the name

Case study: Tom

(13 a)

Images from test situations

Difficult to distinguish contours and
Monochrome animals from the profile



Difficulty
distinguishing
silhouettes

Difficulty
distinguishing crossed
lines

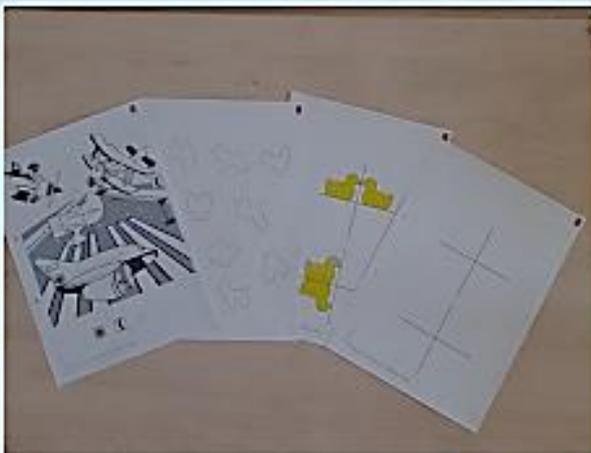


Case study: Tom

(13 b)

Images from test situations

Difficulty
distinguishing black lines
and
black and white images



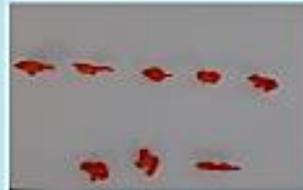
Difficulty
perceiving symmetry



Case study: Tom

(13 c)

Images from test situations



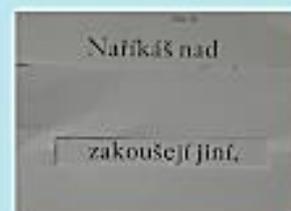
Case study: Tom (14)

- He had CVI (crowding – simult agnosie et other) difficulties in preschool age, but no doctor or therapist investigated them
- Psychologist discovered visual perception deficit only in connection with difficulties at school; speech therapist solved speech difficulties
- For six years he attended orthoptical training, practiced eye cooperation and also visual differentiation; used standard images; exercise did not lead to expected results; terminated due to mental health problems
- He used pictures and texts for developing speech, but he had not seen them well
- He trained visual differentiation, with an orthoptists without effect, he did not want to continue

Case study: Tom (15)

- Identifying problems of CVI led to improvement in school work
- Larger letters and wider lines improved letter discrimination and reading
- The use of a frame facilitated reading of words and texts
- Fewer text and images on a page made it easier to navigate the page
- Focused attention improved after covering pages that are not currently in use
- Workbooks for the low-vision pupils (with wide lines) improved orientation in handwritten text

Case study: Tom (16)



Recommended writing support
and reading

TAKE HOME MESSAGE



- **Vision is an important compensatory sense** for children with dysphasia and speech development delay (hearing and auditory perception is investigated by default)
- **Clinical practice shows that it is not enough to examine the eyes** by an ophthalmologist
- **It is crucial to examine areas of visual perception for possible detection of CVI**
- **Multi - disciplinary teamwork of experts collaboration of experts: psychologist, speech therapist and visual therapist** will make it possible to choose the best support needed to educate children with speech development delay, dysphasia and their reading and writing difficulties

**Thank you for your
attention**



DAGMAR MORAVCOVÁ
LOW VISION THERAPIST

11.3 Rob Van der Linden, SunshEYene Project



SunshEYene Project

Project presentation Vision Prague

Rob van der Linden



The role of seasonal variation and sunlight in self-reported depressive symptoms by adults with visual impairment

Rob TM van der Linden, Hilde PA van der Aa & Ruth MA van Nispen

Amsterdam UMC, department of ophthalmology



Introduction

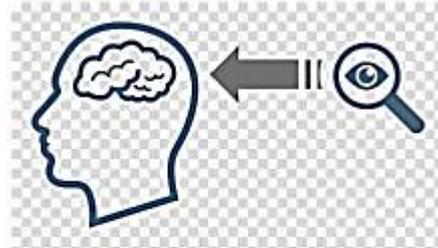
Depression is a common problem in this population ⁽¹⁻²⁾

Caused by acceptance of disability ⁽³⁾

Caused by seasonal variation and the amount of sunlight ⁽⁴⁻⁵⁾

Melanopsin containing ganglion cells ⁽⁶⁾

Blind vs low vision / different eye conditions / sensitivity for bright lights ⁽⁷⁻⁹⁾



Objective

Seasonal variation and the amount of sunlight

Associated with experienced depressive symptoms in adults with visual impairment

- 1) adults who are blind vs. adults who have low vision
- 2) adults with different eye diseases
- 3) adults who are sensitive to bright light vs. those who are not



Methods

Quantitative analyses of pre-existing data (10-16)

Subthreshold depression, CES-D and PHQ-9 (17-18)

Self-reported baseline questionnaires

Authors / Year	Design / Aim	Population	# of study	# included
Van Tilburg et al., 2011	Cross-sectional study to find indications for improvement in care and referral pathways for visually impaired older adults with depressive symptoms	Visually impaired older adults (58 years and older) from low vision rehabilitation organizations in the Netherlands	274	274
Burgmans et al., 2012	RCT to investigate the subjective effects of training in the use of street/curial televisions (CCTV)	Visually impaired adults (aged 18 years or older) from low vision rehabilitation organizations in the Netherlands	111	111
Van der Au et al., 2013	RCT to investigate the (cost)effectiveness of a stepped care intervention to prevent the onset of depressive and anxiety disorders	Visually impaired older adults (58 years and older) with subthreshold depression and/or anxiety from three low vision rehabilitation organizations in the Netherlands and Belgium	814	805
Bruijntj et al., 2014	Longitudinal study to provide more insight into the construct validity and longitudinal interpretation of goals related to coping with mental (dis)ability health aspects of the Dutch ICF Activity Inventory (2.3)	Visually impaired adults (aged 18 years or older) from two low vision rehabilitation organizations in the Netherlands	240	240
Van Tilburg et al., 2015	Longitudinal study to investigate the (cost)effectiveness of intensive rehabilitation of skills focused on the impact on functioning, participation and quality of life	Visually impaired adults (18 years and older) who are rehabilitating at the intensive rehabilitation centers of interest	74	74
Van der Au et al., 2017	RCT to evaluate whether an intervention called E-DeE is cost-effective in comparison with usual care	Visually impaired older adults (58 years or older), that have retinal exudative diseases, receive anti-VEGF treatment and have past symptoms of depression/anxiety	174	174
Scheldt et al., 2018	Cross-sectional study to investigate societal costs of visual impairment and cognitive fatigue	Visually impaired adults from low vision rehabilitation organizations in the Netherlands and normally sighted adults	400	247
Total			2267	1925



Methods

Meteorological seasons

Amount of sunlight (31 weather stations)

Missing data > Multiple imputation

Logistic regression analyses

Checked for confounding and effect modification





Population

1925 participants

Mean age 70 years old

27.5% subthreshold depression

Macular degeneration, glaucoma and cataract

	Total N=1925	Missing
Mean age in years (SD)	70.02 (14.6)	0
Female	1103 (57.3%)	0
Experienced depressive symptoms	512 (27.5%)	60
Higher education	567 (31.6%)	132
Medium education	590 (31.3%)	
Lower education	666 (37.1%)	
Comorbidity	1263 (65.6%)	0
Living alone	825 (43.0%)	7
Employed	235 (12.5%)	39
Sensitive to bright lights	1042 (55.5%)	334
Mean (logMAR) visual acuity of the better eye (SD)	0.73 (0.71)	165
Normal vision (< logMAR 0.30)	455 (26.4%)	165
Moderate vision (logMAR 0.30-0.51)	302 (17.2%)	
Low vision (logMAR 0.52-1.25)	715 (40.5%)	
Blind (> logMAR 1.25)	278 (15.8%)	
Macular degeneration	864 (46.0%)	6
Cataract	257 (13.4%)	6
Glaucoma	245 (12.8%)	6
Diabetic retinopathy	107 (5.6%)	6
Retinitis Pigmentosa	94 (4.9%)	6
Other eye conditions	690 (37.7%)	6



Seasonal Variation

winter (32.8%), summer (27.4%), spring (26.2%) and fall (24.2%)

	OR	95% Confidence Interval	P-value
Spring	0.75	0.56-1.02	0.063
Summer	0.78	0.59-1.05	0.098
Fall	0.66	0.49-0.89	0.004
Spring	0.75	0.54-1.04	0.063
Summer	0.69	0.50-0.95	0.022
Fall	0.67	0.49-0.91	0.011
Cataract	1.12	0.67-1.89	0.660
Cataract * Spring	1.13	0.48-2.66	0.764
Cataract * Summer	2.34	1.09-5.03	0.029
Cataract * Fall	0.91	0.42-1.98	0.809

Winter is reference group



Amount of Sunlight

	OR	95% Confidence Interval	P-value
Sunlight in hours	0.995	0.992-0.998	0.004



Discussion

Previous studies found comparable results ⁽¹⁹⁻²⁰⁾

Depressive symptoms in summer cannot be explained by low light levels

Strengths: large sample, 31 weather stations, MI, Sensitivity analyses

Limitations: missing information for residence, different questionnaires, cross-sectional study design

Implications: Awareness for this subject and possible treatments ⁽²¹⁾



Conclusion

Seasonal variation and the amount of sunlight are associated with experienced depressive symptoms

Further research is needed

Experiences and perspectives of people with visual impairment

Comparison with normally sighted population

Longitudinal design



Thank you for your attention!



Email: r.vanderlinden1@amsterdamumc.nl



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11.4 Edine van Munster, Detection of depression and anxiety in adults with VI

Detection of depression and anxiety in adults with VI

A qualitative study on the clients' perspective

July 1, 2021

Edine van Munster
evmunster@robertcoppes.nl

The logo for Amsterdam UMC consists of a stylized 'U' shape in orange and blue.

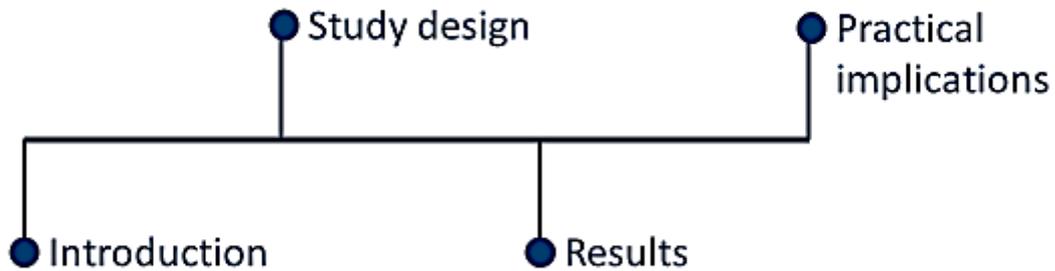
Amsterdam UMC
University Medical Centers

The logo for Robert Coppes Stichting features a stylized blue and red eye or swirl shape.

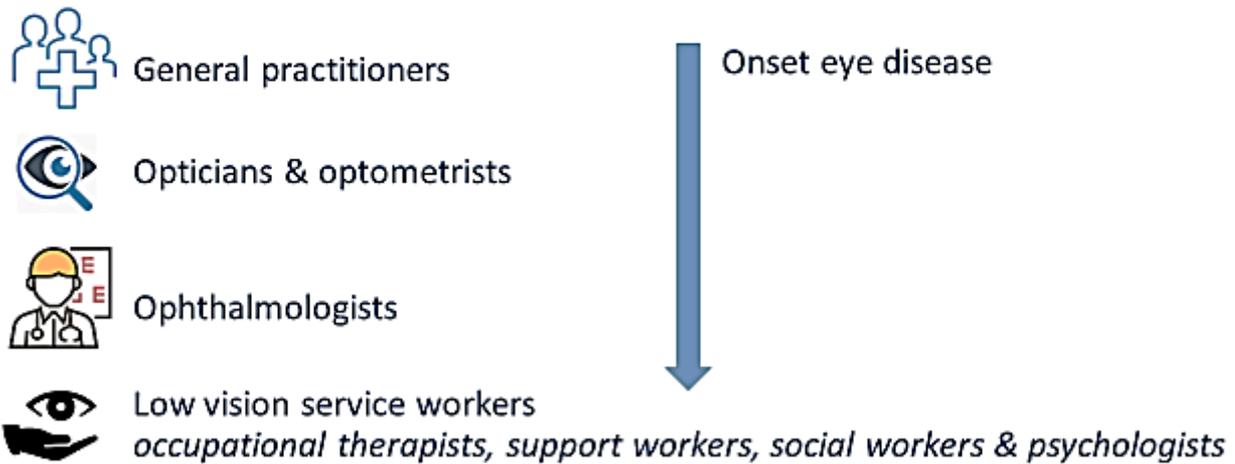
Robert Coppes Stichting

“A visual impairment definitely has an impact. Actually, there are institutions that can help you deal with using an iPad or they tell you that you can no longer drive a car. But in that case your state of mind is ignored.”

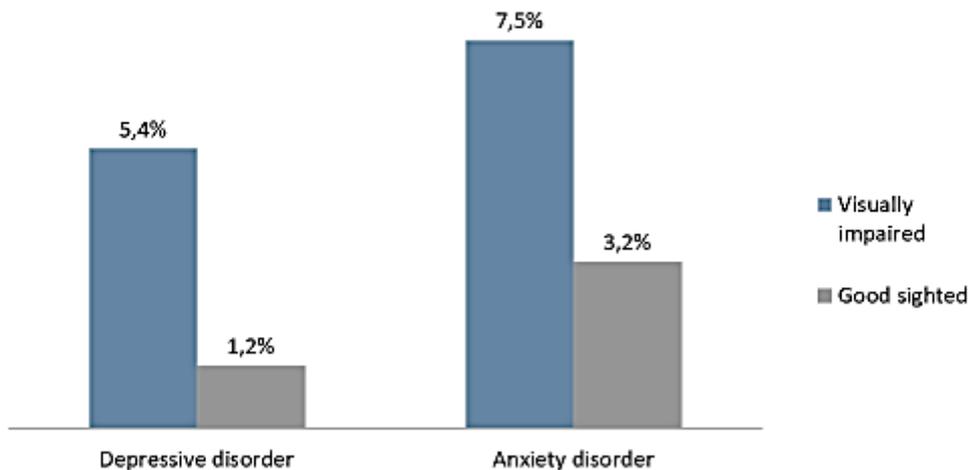
- male participant, 80 years old, low vision



Dutch health care System

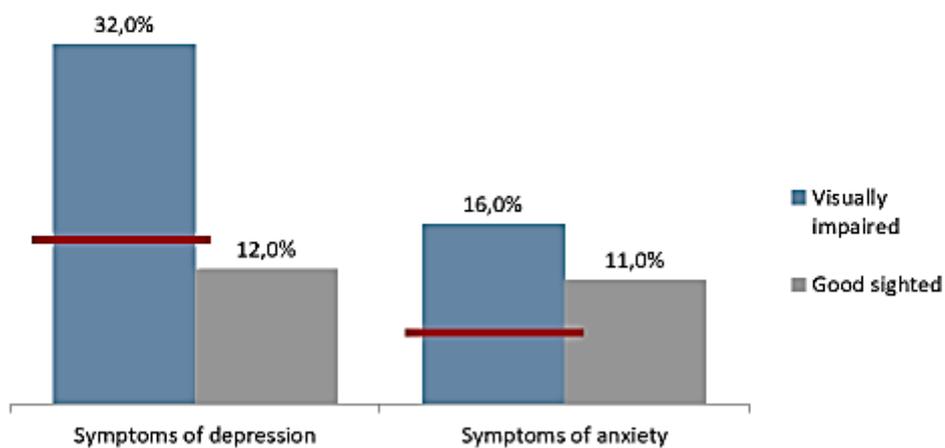


Prevalence



van der Aa HP, et al. Major depressive and anxiety disorders in visually impaired older adults. *Invest Ophthalmol Vis Sci.* 2015

Prevalence



van der Aa HP, et al. Why visually impaired older adults often do not receive mental health services: the patient's perspective. *Qual Life Res.* 2015 *Vis Sci.* 2015

Study design



Explore **barriers** and **facilitators** recognizing and discussing depression and anxiety from the clients' perspective

Study design

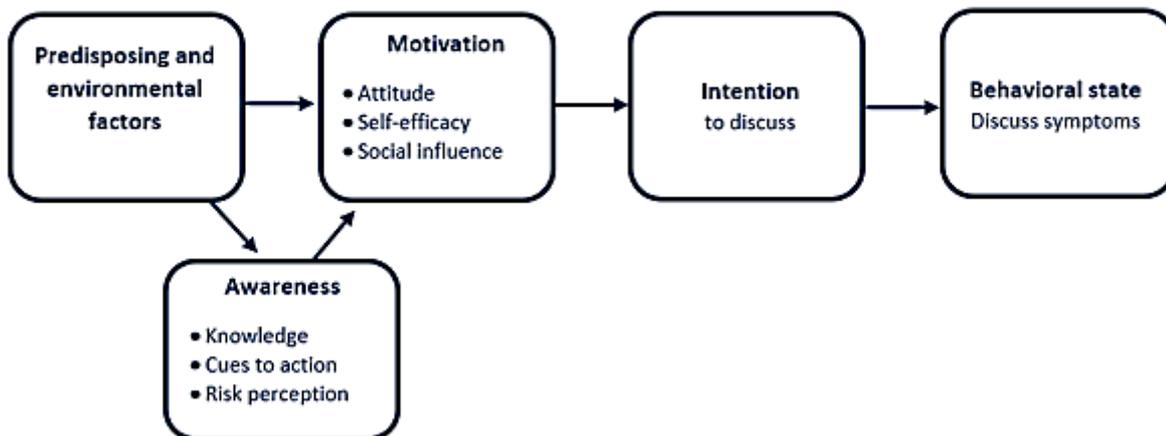


- Semi-structured interviews in 16 low vision service users



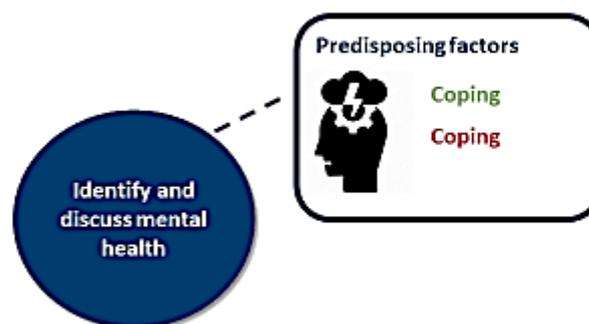
- Current or previous (subthreshold) depression or anxiety
- Male (43.7%)
- 33 to 91 years old
- Comorbidities

Theoretical framework: I-Change model

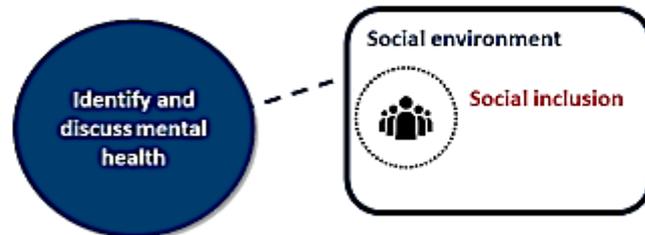


de Vries H, et al. *The European Smoking Prevention Framework Approach (EFSA): an example of integral prevention.* Health Educ Behav. 2003

Results: barriers and facilitators



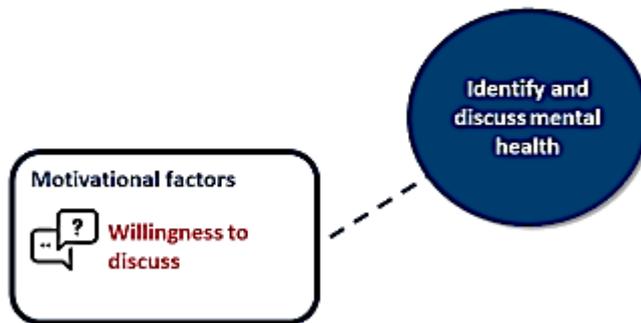
Results: **barriers** and **facilitators**



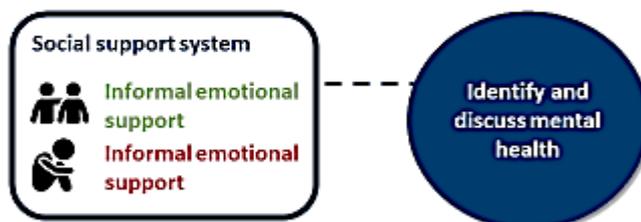
Results: **barriers** and **facilitators**



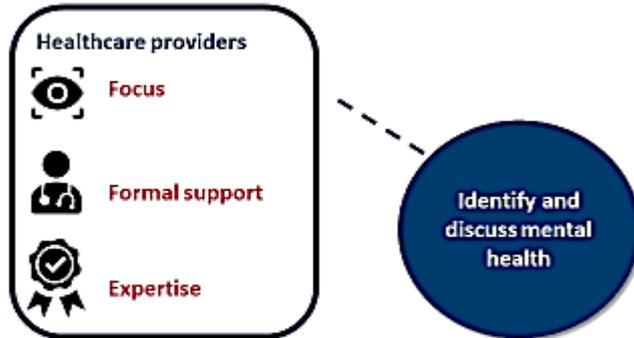
Results: **barriers** and **facilitators**



Results: **barriers** and **facilitators**



Results: barriers and facilitators



Results



Discussion

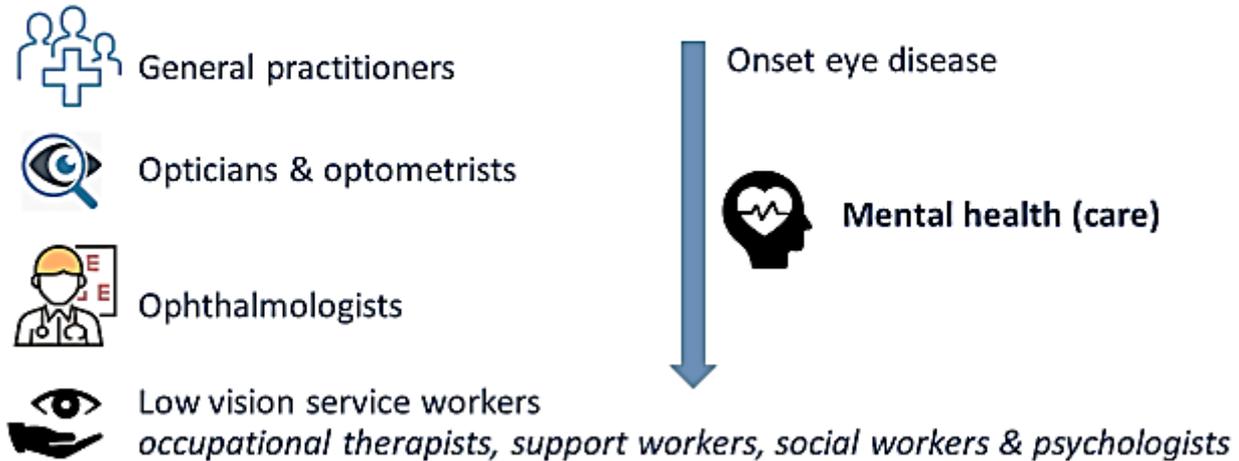


Implications for clinical practice

- Reduce stigma
- Increase health literacy
- Psychoeducation about depression and anxiety related to VI
- Know-how healthcare providers about communication clients with VI
- Multidisciplinary care (include both VI and mental health care)



Conclusion



Current and future projects

- Low vision service professional's perspective on discussing mental health
- Perspective of eye care practitioners and low vision service professionals on discussing depression (Dutch, Welsch and Australian professionals)
- Implementation of the Patient Health Questionnaire (PHQ)-4 in low vision service organizations
- Development of a educational programme for general practitioners, eye care practitioners and low vision service professionals

van Munster EPJ, van der Aa HPA, Verstraten P, van Nispen RMA. Barriers and facilitators to recognize and discuss depression and anxiety experienced by adults with vision impairment and blindness: a qualitative study (accepted)



Edine van Munster
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The impact of visual impairment and comorbid mental disorders on functioning in essential life domains: outcomes of a qualitative Delphi study

Hilde P.A. van der Aa, Robert Coppes Foundation, Vught, The Netherlands
and Amsterdam UMC, Amsterdam, The Netherlands



Content

- Background
- Aims of the study
- Methods Delphi design
- Outcomes on impact on daily functioning
- Practical implications
- Conclusions and recommendations



Background

- 2-3% of people with VI also have a MD
(+/- 8500 people, based on prevalence estimates
from the general population)
- VI, according to criteria from the WHO
- MD, according to the criteria of the DSM-V



Background

Relationship can be explained in various ways:

- VI MD*
- Shared underlying mechanism (e.g. ageing)
- VI and MD separately, big impact on daily functioning
- Combined, cumulative impact on daily functioning

1+1=3!



Very little is known from the literature



Robert Coppes Stichting

Aims

1. To determine the impact of VI and comorbid MD on functioning in essential life domains
2. To gain insight into best-practices to support people with this combination of impairments
3. To determine strategies to optimize care that is provided for them



Robert Coppes Stichting

Delphi study

Developmental disorder

- autism spectrum disorder: persons persistently experience challenges in social interaction, communication, and restricted/repetitive behaviours

Personality disorders

- antisocial personality disorder: persons consistently show no regard for right and wrong and ignore the rights and feelings of others
- borderline personality disorder: persons show a long-term pattern of unstable relationships, strong emotional reactions and a distorted sense of self
- dependent personality disorder: persons show pervasive psychological dependence on others, characterized by fear and anxiety

Anxiety disorder

- obsessive-compulsive disorder: persons experience uncontrollable, reoccurring thoughts (obsessions) and/or feel the need to repeatedly perform certain behaviours (compulsions)

Psychotic disorders

- schizophrenia, delusional disorder psychotic disorder: a group of MDs that cause abnormal thinking and perceptions, in which people experience delusions and hallucinations



Delphi study

Experts (n=31, 35% counsellors, 35% psychologists)



1. Telephone interview

2. Online survey (after 4 weeks)

2. Online survey (after 4 weeks)

Provide summary of results

4. Online survey (after 16 weeks)



Delphi study

Self-Sufficiency Matrices (SSM) to map people's functioning in essential domains of life:

Psychological impact:	mental health
Physical impact:	physical health, addiction
Social impact:	relations, social network, community involvement
Environmental impact:	household, work and education, income, activities of daily living, legal implications



Practical implications

Tailored support from experienced professionals needed:

- Multidisciplinary care (i.e. GP, low vision services, mental health care, addiction care)
- Taking transdiagnostic factors into account
- Using evidence-based psychological treatment options
- Building trust
- Showing patience and empathy
- Involving the informal network
- Stimulating empowerment
- Building on positive experiences during treatment.



Conclusion & recommendations

- Severely physically and mentally disabled target group
- Major impact on people's daily functioning on a mental, physical, social and environmental level
- Future research needed on tailored diagnostic approaches, treatment options and including the client's perspective



Thanks!



11.5 Andrea Hathazi, Carmen Costea-Barlutiu, Assessing the needs of families with children with MDVI regarding early intervention

Assessing the needs of families with children with MDVI regarding early intervention

Andrea Hathazi,
Carmen Costea- Bărluțiu
Vassilis Argyropoulos

PPS
Departamentul de
Psihopedagogie Specială
at Universităţii "Babeş-Bolyai" Cluj-Napoca



UNIVERSITATEA
BABEŞ-BOLYAI



Early
Intervention
Services for
Families with Children with
Vision
Impairment and
Additional Disabilities



Erasmus+

- Early intervention needs to be considered the centerpiece in our society's efforts on behalf of children at risk and their families.
- A coherent system of evidence-based interventions has to emerge in response to the needs of young vulnerable children and their families.
- Highly intensive interventions that need to be regulated by national policies and they need to be of sufficient duration to extend over various transition points in the children's lives.



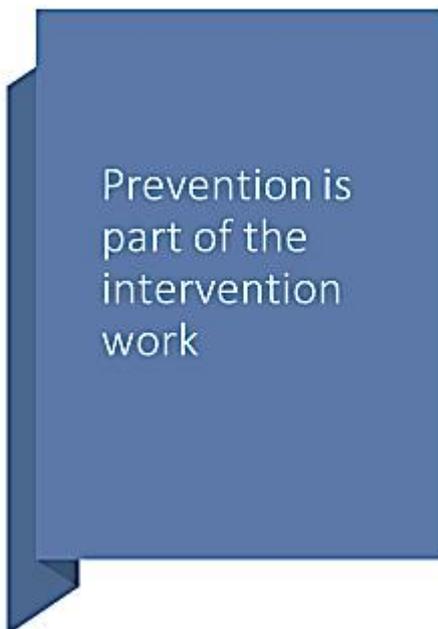
Individual Family Service Plans are more effective when they prioritize the needs of the beneficiaries and their family context.

Assessing needs of families and children with MDVI regarding the early intervention Individualized intervention programs that address children and families confronted with MDVI are more effective when they are adapted to the needs of the beneficiaries.

ECEC (Early Childhood Education and Care) acknowledges the crucial importance of going beyond the earlier conceptualizations of children's services purely as child care for working parents and promotes the importance of integrating care and education and addressing children's needs holistically



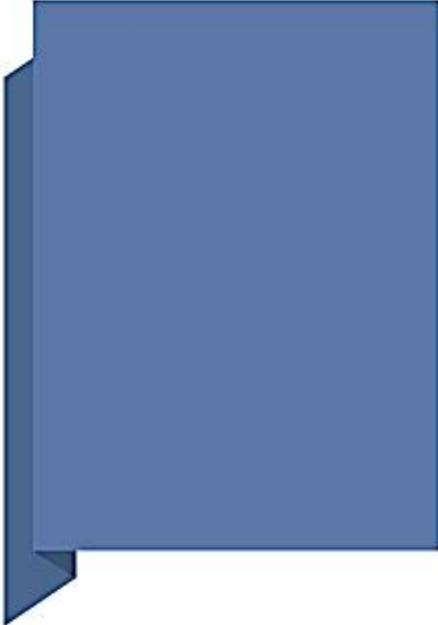
ECEC - Early Childhood Education and Care is a composite of services/provision for very young children and their families, provided at their request at a certain time in a child's life, covering any action undertaken when a child needs special support to ensure and enhance her/his personal development; strengthen the family's own competences, and promote the social inclusion of the family and the child.



Prevention is part of the intervention work

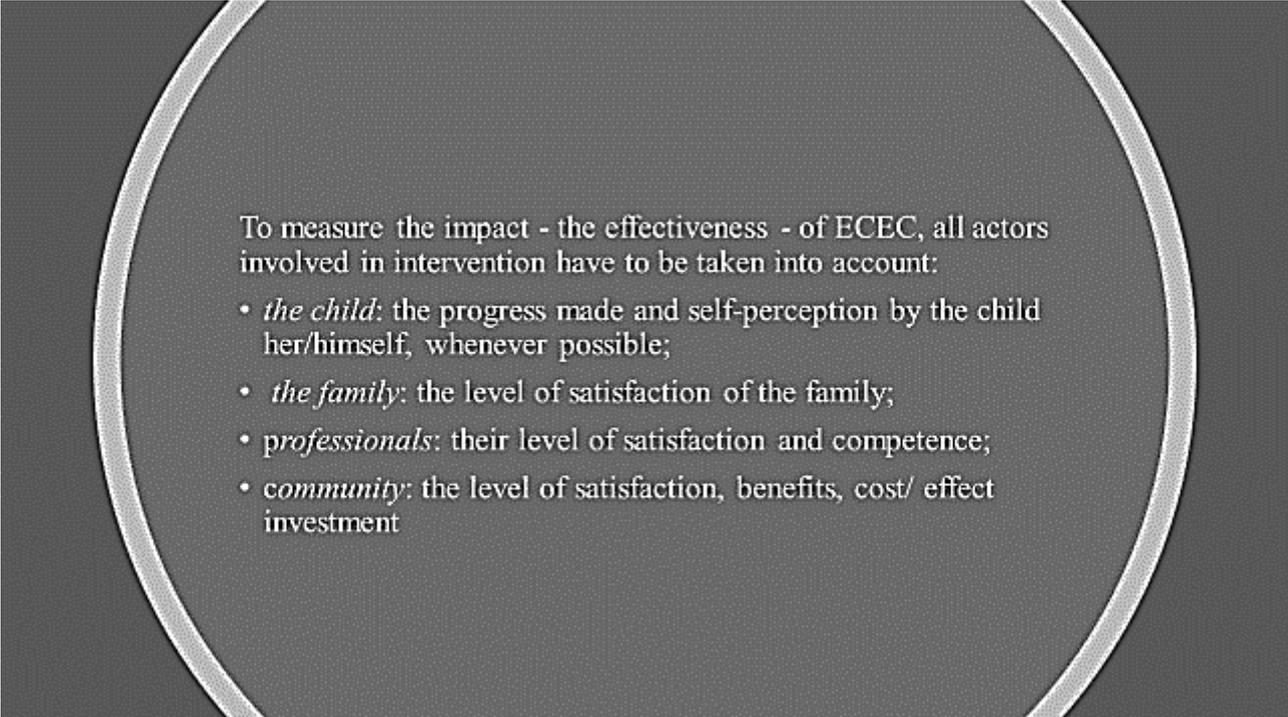
Primary prevention aims to reduce the number of new cases of an identified condition or problem in the population

Primary prevention includes measures preventing disorders or circumstances that might lead to disability (WHO, 1980).



Secondary prevention aims to reduce the number of existing cases of an identified problem by acting after the onset of the problem, but before it is fully developed (prevalence).

Tertiary prevention aims to reduce the complications associated with an identified problem or condition, to limit or to reduce the effects of a disorder or disability by acting when these are already present.



To measure the impact - the effectiveness - of ECEC, all actors involved in intervention have to be taken into account:

- *the child*: the progress made and self-perception by the child her/himself, whenever possible;
- *the family*: the level of satisfaction of the family;
- *professionals*: their level of satisfaction and competence;
- *community*: the level of satisfaction, benefits, cost/ effect investment

Child-centered education is tailored to the child's needs and skills and acknowledges the right of each child to benefit from intervention outside the family.

The child-centered approach is individualized, due to the high diversity of children with multiple disabilities.

Family-centered interventions focus on the family and the professional teaches the family certain skills that they can use with their child.

Family-centered approach is employed in early intervention programs and home-based programs.

A family-friendly approach is one that attempts to put the student's needs first while considering the needs of the family as a whole

Needs and challenges

Limited professional resources (financial, expertise, time) to plan and implement programs

Limited number of people specialised in early intervention

Barriers of system, policies and practices that limit evidence-based professional development

Erisfavia project study

The present study is focused on the needs of families who have children with MDVI.

It highlights the steps made in the construction of the instrument, as well as the structure and psychometric properties of the measure.

Relevant data were obtained through a questionnaire which was developed by the authors and is based on relevant literature review and similar case studies

The utility of the instrument for both research and practice in the field of early intervention is discussed and further improvements are being underlined.

Several steps were taken in the development of the questionnaire:

1. Identification of the specific themes, from literature and practice in the field of early intervention. The themes were subsequently grouped in several categories.
2. The design of specific items, that operationalize the specified themes.



The aim is to identify these needs as early as possible is essential.

The measures can be used with professionals and parents of young children with disabilities.

The list can be improved by the respondents with various needs that were not listed.

The questionnaire for parents consisted of 33 items and aimed to describe various needs of children with disabilities in early childhood and their families' needs.

The items of the questionnaire were structured in the following subscales: information referring to the development of child and his or her disability, child-centred interventions, family centred- interventions and support and therapies for parents.

Each item is assessed on a Likert-type scale, from 1 (no need for assistance/ support/ help in the field) to 3 (great need of assistance/ support/ help in the field).

At the end of the 33 items, the respondents have the opportunity to complete the items with their own opinions on other needs that were not provided in the questionnaires.

All of the four subscales have acceptable to good internal consistencies.

- Information on child development and disability (6 items): 1, 5, 7, 8, 13, 15, alpha: .751
- Child-centered interventions (7 items): 9, 11, 24, 25, 26, 27, 33, alpha: .696
- Family-centered interventions (9 items): 3, 6, 12, 18, 19, 28, 29, 30, 32, alpha: .619
- Parental support and therapy (11 items): 2, 4, 10, 14, 16, 17, 20, 21, 22, 23, 31, alpha: .852

Example of items

1. to receive information on the child's disability/ developmental risks.
2. to receive support in order to feel good about themselves.
3. to receive help in their child's care.
4. to receive support in order to find effective ways to cope with stress.
5. to have access to special equipment, according to their child's needs.
6. to have access to various services, according to their own and their child's needs.
7. to receive information on their child's developmental level.
8. to receive information on their child's behavioral problems.
9. to receive information on programs that can be helpful for their child.
10. to benefit from counselling in order to cope with their own difficulties.

Example of
items

16. to receive counselling for family difficulties.
17. to receive counselling for difficulties in the relationships with relatives, extended family.
18. to receive home-based services for themselves and their children.
19. to be in contact with competent professionals, who can attend to their own and their child's needs.
20. to receive counselling for their problems with their friends.
21. to receive psychotherapy for the difficulties they have in their relationship with their child.
22. to benefit from counselling for the difficulties in their couple relationship.
23. to benefit from counselling for their emotional problems.
24. to benefit from developmental assessment of their child's language and communication.
25. to benefit from developmental assessment of their child's cognitive skills.
26. to benefit from developmental assessment of their child's social-emotional abilities.
27. to benefit from developmental assessment of their child's sensory (visual, auditory) skills.

The findings indicated that the needs in question are nested in being informed, services, infrastructure, support, and professionals' training.

The list of needs that were identified can be improved by the respondents with various needs they propose and the measures can be used with professionals and parents of young children with disabilities.

Results

The need for information is overwhelming, they need to know the impact of the disability on the development of the child, on the risks that disability implies and the therapeutical programs that are available.

The need for various therapies for children including care

Therapies that approach parental distress

Counselling and psychotherapy

The need for child's assessment not so important as access to therapies

The need for support

The need to work in multidisciplinary teams



Conclusions

- An adequate intervention in early intervention should start with a complex assessment of the needs of the families
- Individuals and family contexts need to be understood and respected
- Proper support should address the needs that are prioritized

THANK YOU!!!

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11.6 Carmen Costea-Barluti, Andrea Hathazi, A comparative analysis of the needs of professionals and parents of children with MDVI regarding early intervention

A comparative analysis of the needs of professionals and parents of children with MDVI regarding early intervention

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UNIVERSITATEA
BABEŞ-BOLYAI



Early
Intervention
Services for
Families with Children with
Vision
Impairment and
Additional Disabilities



Erasmus+

Introduction

0-5 years – critical period in the development of the foundation of cognition, language, communication, social-emotional, regulatory mechanisms

Early intervention – priority of support services for children with disabilities and their families

- Complex assessment of children
- Development and implementation of intervention programs
- Parental counselling
- Holistic, multidisciplinary approach

Training of specialists is key to service efficacy

Cooperation and communication between parents and specialists

Access to early identification, complex assessment, inclusion in programs, monitoring of development and effects of the support

Transdisciplinary model – includes the parents, intervention as part of the family routines: effectiveness, clarity, diminished intrusion in the family, coherence, personal development

Bakken, Brown, & Downing, 2017, Twardzik, Coto-Negrón, & MacDonald, 2017, Fowler, Yates, & Ostrosky, 2011

Family centered model of EI

Families are a real support in assessment and intervention, the resources and skills are considered

Cooperation and communication between parents and specialists are essential

Active participation in decision making, valuing the family, cultural and social resources are part of high-quality services

Families learn to use strategies, to integrate into their daily routines evidence-based practices

Specialists need to support parents to acquire the skills needed to help their children learn and develop

Families may encounter deficits in positive relationships, family dysfunctions, lack of social support, some may have an effective functioning – EI programs need to include parental counselling (implications of disability on development, communication, learning, acknowledgement of resources, acceptance of disability, cooperation with practitioners) – importance of assessment of needs and expectations

Dunst, 2007, Dakous et al., 2017, Stalmer et al., 2017, Sapiez, Totaka, & Hastings, 2020, Tskidaki, 2020, Kolby, Radulescu, & Anghel, 2009

Impact of disability on families

Parents can experience complex feelings: disappointment, frustration, helplessness, social isolation, major distress, interfering with family functioning and child development

Families need support in order to insure a supportive environment, a safe and stimulative context for child development, that can help the rehabilitation process and the prevention of complications

A functional family is needed in order to enhance the effectiveness of EI services

Bean et al., 2005, Trivette, Dunst, & Hamby, 2010

The role of professionals

- Competencies in assessment of eligibility, child development, individualized program development, implementation of programs, monitoring, team work, mediation and consultancy, professional development
- Knowledge of policies
- Implementation of early intervention in the form of home visiting, family centered practices, counselling, routine-based interventions, coordination of assessment and intervention services, transition preparation
- Attention to routines, daily interactions in families, during which structured learning opportunities occur
- Yazici (2020): parents expect from professionals a good organization of activities, the ability to help in the training of language and communication, social skills, adaptive behavior, approach of difficult behaviors for children, as well as help in accepting the diagnosis, information on implications of disabilities, their involvement in intervention and help in distress management

McConachie & Diggle, 2007; Fowler, Yates & Ostrosky, 2011; McWilliam, 2016

The importance of needs assessment

- Given the complexity of the EI field, as well as the heterogeneity of the population to which they are destined, it is important to investigate the needs that those involved have, in order to set priorities in intervention and eventually the objectives of personalized intervention plans
- In our national context, in which policies are unclear and insufficient, it is even more important to adapt to the intervention to the specific needs of the child and families
- The current study has as objectives:
 - 1. the investigation of the opinions that professionals working with children with disabilities and their families have on the needs specific to EI, in terms of services, infrastructure, support, training
 - 2. the investigation of the opinions that parents of children with disabilities have regarding the needs of families within EI

Participants

73 professionals working with children with disabilities in Cluj-Napoca, Romania

- Age range 21-56 years, 38.17(\pm 9.59) years
- 98.6% female gender
- 83.3% familiar with EI, 28.8% worked in EI (average 5.07 years)
- Experience in special education 13.52 years average
- 81.7% worked in a special institution
- Experience in working with visual, auditory, motor disabilities, learning difficulties, behavior disorders, Down syndrome

11 parents of children with disabilities

- Age range 34-49 years, 42.1(\pm 5.04) years
- All female gender
- 6 children were boys
- All children with complex disabilities (MDVI)
- 9 benefited from EI

Instruments and procedure



A questionnaire for professionals, one for parents were developed for the purpose of the current study, investigating the opinions that they had on services, infrastructure, support, training etc. necessary for EI



33 items assessed on a 3 point Likert scale



Good internal consistency

Results

Professionals need in order to work with infants and young children (0-3 years):	1	2	3
1. to receive information about the impact of the disability/risks in the development of the children.	8.2%	17.8%	74%
2. to receive support in order to feel good about themselves.	20.5%	35.6%	43.8%
3. to receive information on children care.	5.5%	27.4%	67.1%
4. to receive support in finding the best coping strategies for stress.	8.2%	31.5%	60.3%
5. to have access to special equipment related to the children's needs.	1.4%	4.1%	94.5%
6. to have access to professional training so they can offer diverse services according to the needs of the parents and of the children.	0%	5.6%	94.4%
7. to receive information regarding infant's and small children's development.	5.5%	28.8%	65.8%
8. to receive information on approaching children's behavioural problems.	2.7%	21.9%	75.3%
9. to have trainings of specific programs that can be helpful for the child.	0%	6.8%	93.2%
10. to receive counselling so they can cope with current problems.	5.6%	41.7%	52.6%
11. to be able to offer different therapy services (i.e. speech therapy, sensorial stimulation, counselling etc.) that are useful for the child and their family.	2.7%	17.8%	79.5%
12. to have access, as specialists, to care and therapy institutions (Day Care Centres, private practice, etc) that are aimed especially to young children with disabilities.	2.7%	12.3%	84.9%
13. to receive information about the physical development and health of the children	2.8%	29.2%	68.1%
14. to have access to support groups where they meet other professionals who work with infants and small children with disabilities.	1.4%	19.2%	79.5%
15. to receive information about nutrition or eating.	8.2%	43.8%	47.9%

Professionals need in order to work with infants and young children (0-3 years):	1	2	3
16. to get counselling on stress related problems.	4.1%	42.5%	53.4%
17. to get counselling for the problems with the families of the children they are working with.	1.4%	27.4%	71.2%
18. to be able to offer home services for small children and their families.	4.1%	39.7%	56.2%
19. to have a good professional training which would help them address the needs of the families and their children.	1.4%	2.8%	95.8%
20. to be able to offer counselling services for family and parenting related issues.	4.1%	20.5%	75.3%
21. to be able to offer psychotherapy services for the parent-child relationship.	12.3%	17.8%	69.9%
22. to be able to offer counselling for couple related issues in the families that have a small child with disabilities.	13.7%	28.8%	57.5%
23. to be able to offer counselling for parents' emotional issues	8.2%	38.4%	53.4%
24. to achieve assessment abilities of the child's level of development in language and communication as well as intervention for approaching the difficulties at this level.	2.7%	16.4%	80.8%
25. to achieve assessment abilities of the child's cognitive level of development as well as intervention for approaching the difficulties at this level.	5.5%	9.6%	84.9%
26. to achieve assessment abilities of the child's social and emotional level of development as well as intervention for approaching the difficulties at this level.	4.1%	12.3%	83.6%
27. to achieve assessment abilities of the child's sensory level of development (visual and hearing) as well as intervention for approaching the difficulties at this level.	4.1%	11%	84.9%
28. to achieve assessment abilities of the parent-child relationship as well as intervention for approaching the difficulties at this level.	5.5%	17.8%	76.7%
29. to have access to professional training to learn how to respond to the small child's signals.	2.7%	8.2%	89%
30. to be part of a professional network in the field of early intervention.	0%	12.3%	87.7%
31. to receive policies that support early intervention on a national level.	0%	12.3%	87.7%
32. to have access to a data base with services from the early intervention field that they can recommend to the families.	0%	12.3%	87.7%
33. to collaborate with the families for selecting the most suitable services of therapy intervention for children and their families.	1.4%	8.2%	90.4%

Results: professionals

- all the needs that were provided in the questionnaire were assessed as important
- the respondents considered that the professionals in the field of early intervention mostly need information on child-centered assessment and interventions, and less on family-centered interventions
- the need for programs that approach the professional stress, self-awareness of the professionals, personal therapy and counselling is less important
- important the need for the professionals to receive information on the impact of disability on the development and functioning of the child, but not information on child development
- professionals need more practical trainings, focused on how to do early intervention and less theoretical information that they might already have
- the higher need for training on cognitive and sensory-motor areas stimulation than social-emotional, physical and psychological wellbeing of children
- other needs identified: a good material base and infrastructure to support the early intervention, cooperation within multidisciplinary teams, good training on assessment and intervention on specific disabilities, good practice examples and case studies, parental support, training and therapy, good legal support

Professionals: summary

- The need for information: on the impact of disability, on early development, behavioral problems, less on physical and nutritional health
- The need for training: on various services, therapeutic programs for children, assessment of developmental level
- The need for access to equipment
- The need for policies to support EI
- The need for access to data base with services in order to recommend them to families
- The tendency to emphasize the technical side of the approach in EI
- A lower need for support on the establishment of a relationship with the child and family, support for the immersion of professional in the child's environment

Results: parents

	1	2	3
1. to receive information on the child's disability/ developmental risks.	0	0	11
2. to receive support in order to feel good about themselves.	0	0	11
3. to receive help in their child's care.	1	1	9
4. to receive support in order to find effective ways to cope with stress.	0	1	10
5. to have access to special equipment, according to their child's needs.	0	0	11
6. to have access to various services, according to their own and their child's needs.	0	0	11
7. to receive information on their child's developmental level.	0	0	11
8. to receive information on their child's behavioral problems.	0	0	11
9. to receive information on programs that can be helpful for their child.	0	0	11
10. to benefit from counselling in order to cope with their own difficulties.	0	1	10
11. to have access to therapeutic services (ex., speech therapy, sensory stimulation, physical therapy etc.), useful for their child.	0	0	11
12. to receive help in caring for their child during the day, so that they could go back to work.	1	1	9
13. to receive information regarding their child's health and physical development.	0	0	11
14. to access support groups, in which they can meet other parents of children with disabilities.	0	3	8
15. to receive information on child feeding and nutrition.	0	5	6

Results: parents

16. to receive counselling for family difficulties.	0	3	7
17. to receive counselling for difficulties in the relationships with relatives, extended family.	3	2	6
18. to receive home-based services for themselves and their children.	0	3	8
19. to be in contact with competent professionals, who can attend to their own and their child's needs.	0	0	11
20. to receive counselling for their problems with their friends.	0	3	8
21. to receive psychotherapy for the difficulties they have in their relationship with their child.	0	1	10
22. to benefit from counselling for the difficulties in their couple relationship.	3	1	7
23. to benefit from counselling for their emotional problems.	3	0	8
24. to benefit from developmental assessment of their child's language and communication.	0	3	8
25. to benefit from developmental assessment of their child's cognitive skills.	0	3	8
26. to benefit from developmental assessment of their child's social-emotional abilities.	0	3	8
27. to benefit from developmental assessment of their child's sensory (visual, auditory) skills.	0	3	8
28. to benefit from the assessment of their relationship with their child.	1	3	7
29. to access services that teach them how to respond to their child's signals.	0	2	9
30. to be part of a support network at the community level.	0	3	8
31. to have national policies that support the early intervention.	0	2	9
32. to receive guidance from professionals to access services dedicated to themselves and their children.	0	1	10
33. to have the freedom to choose what is suitable for their child in terms of therapeutic interventions.	0	0	11

Summary: parents

- The need for information on impact of disability on child development, the risks involved
- The need for therapeutic programs on the benefit of children (speech therapy, sensory stimulation, physical therapy etc.)
- The need for intervention destined for parents: approach of parental distress, negative self image, less counselling and psychotherapy for themselves and families
- The need for proper assessment on various aspects not as important as therapeutic approaches – a reluctance in the face of possible negative results?
- Team-work with professionals, cooperation as a need
- The need for child inclusion, psychological support for parents, social support

- Obvious need for support for parents, families

Results: parents

- increased needs of support on almost all the fields that we included in the questionnaire
- support from professionals to insure a secure environment for their child, fit for the stimulation of the child's development
- the need for information on the impact of disability on the child's development and functioning is not as high
- an important need that parents have in early intervention is the need for parental support (therapies, counselling, stress management, support groups, networking etc.)
- the need for family-centered interventions, home-based programs not as high

Some of the other needs that the parents added to our list

- Support in the management of family relations, including the relationships between siblings;
- Help for parents in their child's education and inclusion in society;
- Qualified medical assistance, assessment services and therapies;
- Financial support;
- Moral support from communities;
- Good legal support.



Conclusions

- Families represent the secure base of children and each event that occurs in the family modifies the family balance. Early intervention services target the whole family and not just the child, in order to approach the mixed feelings and attitudes that parents have in relation to the child's disabilities. The approach of parental needs help the improvement of parent-child relationship and the acceptance of the child's disabilities and needs by the family members.
- The effective approach of children with disabilities in early intervention requires more than technical skills. It implies empathic rapport, healthy relationships between family and professionals and a deep understanding of both child and family functioning. Therefore, it is not enough to offer the professionals good information, skills to approach the child, because the need to develop communication skills with families, as well as the establishment of proper relationships with them are equally important.
- Surprisingly, professionals are not very aware of the high need to include the family in the intervention, especially at the early age that early intervention takes place. Parents, on the other hand, scored very high when it came to assessing the needs for support given to parents and families. ErISFAVIA Project is focused on families and the inclusion of families in early intervention, as part of the complex assessment and intervention of children with MDVI. Thus, the project is in agreement with the needs expressed especially by parents, but it targets the increase of awareness among professionals for cooperation with the family when they work with very young children with disabilities.

Conclusions



- Our respondents considered that the professionals need information referring to child development, child centered assessment, child-centered intervention
- Not as important for professionals: programs for the management of professional distress, self-awareness and professional development, personal counselling and psychotherapy
- EI in the family can help the improvement of parent-child relationship, the approach of children's challenges by parents, stimulation of development, prevention of additional problems that can prevent inclusion

Similarities and differences between parents and professionals

- Professionals tended to diminish the importance of professional distress and burden on wellbeing and performance, tended to emphasize the need to access techniques, trainings, information
- Although professionals acknowledge the need to cooperate with families, they tend to under-evaluate the need to consider the parents' emotional and psychological vulnerabilities (distress, negative emotionality, difficulties in accepting the diagnosis, marital discords etc.)
- Professionals find important to belong to professional support groups
- Parents tend to emphasize the need for child and family support for inclusion

Limitations



- Our measure investigates opinions, cannot be an indicator of the actual work in the field
- A larger and more diverse sample would be appropriate

Thank you!



12 POSTER PRESENTATION

12.1 Helena Štrofová, A device for use by special educational needs teachers for the early detection of vision disorders of the ocular apparatus



VISION PRAGUE 2021 ONLINE
8th ECPVI European Conference
Psychology and Visual Impairment
"Real life (In)dependence"
1 – 2 July, 2021

A device for use by special educational needs teachers for the early detection of vision disorders of the ocular apparatus

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I. INTRODUCTION

Unfortunately, examinations of children's eyes by an ophthalmologist are not yet mandatory in the Czech Republic. Not even in children with special educational needs! Vision screening using the Plusoptix device, which is used for detecting high refractive errors (and especially amblyopia and anisometropia) and heterotropia, is not compulsory in our country, only recommended. Therefore it is not usually covered by the public health insurance. However, not even the Plusoptix can detect a latent strabismus - heterophoria, convergence insufficiencies or simple binocular vision disorders (SBV). In the Czech Republic, the compulsory examination only tests visual acuity. This examination is performed by paediatricians in children aged 3 and 5, and every two years after that.

Certain studies and a number of monographs have dealt with the importance of vision, visual perception, SBV disorders, refractive errors, convergence insufficiencies in, for example, specific learning disorders (Larvala, et al., 1994; Pokorná, 2010; Handler and Fierston, 2011; Billard, et al., 2013; Quid, Simpson, 2013; Collins, et al., 2017; Cheng, et al., 2018; Hussaindeen, et al., 2018; Krejčová, 2019), in impairments of visual (Wright, 2007; Wahlberg-Ramsay, 2012) or auditory perception (Ostadi Moghaddam, et al., 2015), ADHD (Kurtz, 2006; Granet, 2014; Granet, et al., 2005) and behavioural disorders (Sauer, et al., 2018). The importance of SBV and convergence is described in various other studies. Convergence insufficiency has been linked to reading disorders and poor study results (Phillips, 2017). Poor readers often have a SBV disorder (Palomo-Alvarez and Puell, 2010). SBV evaluation is also recommended for speech disorders (Hamplová, 2009), although more detailed studies about the incidence of these disorders have not been found.

So who detects refractive errors, especially SBV disorders, heterophoria and convergence insufficiencies in preschool and young school children?
Many children deal with all kinds of problems while tackling trivial tasks, only for their disorders to be properly identified when they show problems during their education. On this basis, most parents contact a special educational needs teacher (SEN teacher). This teacher is the first to detect a cognitive deficit (perception - especially visual, auditory perception, thinking, memory, fantasy, including attention and speech) and may also detect errors in the ocular apparatus, including SBV, convergence and so on. That is why we designed a device that can lead to the early detection of vision disorders of the ocular apparatus.

II. OBJECTIVES

Objective: To design and verify the reliability of a device for the early detection of vision disorders of the ocular apparatus by SEN teachers - to identify children requiring eye and orthoptic examinations.

Partial objectives:

1. To detect the coincidence between vision disorder and cognitive deficit.
2. Comparison of individual stereotests.
3. Evaluation of the practical use of the device by SEN teachers (qualitatively).

III. METHODOLOGY

Selected sample: Two-stage.

First stage: SEN teacher. SEN teachers are also part of the team.
Method/type of selection: Non-probability sampling, intentional.
Criteria:
Place: Prague, Central Bohemian Region.
Volume of the selected sample: 6 Educational Counselling Facilities (2 Pedagogical-Psychological Counselling Centres in Prague (PPCC), 1 private PPCC, 1 Special Education Centres (SEC) for visually impaired in Prague, 1 PPCC in the Central Bohemian Region, 1 private speech therapist).

Second stage: Main target group: children, pupils.
Method/type of selection: Non-probability sampling, intentional.
Volume of the selected sample: 150 (the determination of the volume was supported by articles by Soukup, Kočvarová).
Criteria:
Children, pupils with a cognitive deficit (cognitive deficit is characterized as a perception disorder – especially visual, auditory, thinking, speech, memory and attention).
Children/pupils in the care of a SEN teacher (first visit or long-term)
Age: 5 - 10 years
Place: Prague and Central Bohemian Region

Study design: MIXED METHODS RESEARCH

Quantitative part of the research:
Research questions (RQ):
RQ1: How effective is the designed device in the hands of a SEN teacher compared to a comprehensive eye examination (including orthoptic) in the detection of vision disorders of the ocular apparatus in children with cognitive deficits?

RQ2: Which tests should be added to the device?
RQ3: What is the most frequent eye disorder in children with cognitive deficits in our sample?
RQ4: What will be the percentage rate for crossed hand-eye laterality and will there be a more frequent coincidence with a vision disorder?
RQ5: What is the match rate for the individual stereotests?

Quantitative devices for data collection:
CLINICAL TESTING

1. The designed device is intended for use by SEN teachers and should serve as a "screening" test for the detection of vision disorders - particularly refractive errors and SBV disorders. We proceeded according to available examination procedures and practices. Therefore a 5 + 1 test was designed:

1. Visual acuity test - for distance vision - lea symbols for distance, for near vision - lea symbols for near vision
2. Convergence test - convergent eye movement
3. Cover test at distance and near
4. Worth test at distance and near
5. Stereopsis test - Titmus test

EXTRA + 1 test: Hand - eye laterality test



2. Comprehensive eye examination complemented by an orthoptic examination.

All the children subsequently undergo a clinical examination by a pediatric ophthalmologist and orthoptist.

Suggested method for data processing, including the suggested statistical data analysis:
Data are continuously recorded in a Microsoft Excel sheet. The following statistical values will be used: mean (standard deviation – SD, e.g. for age), percentage rate (gender, positive family history, cognitive deficit, stage of school, eye diagnoses, hand-eye laterality). We will compare a comprehensive eye and orthoptic examination with the results of the newly created device and calculate the match rate for the evaluation.

Qualitative part of the research:
Research questions (RQ): Main RQ: What is the opinion of the SEN teachers about the designed device for the early detection of eye disorders?
RQ1 - How do SEN teachers work the application of this device into their practice?
RQ2 - How do SEN teachers rate the designed device for the early detection of eye disorders in terms of practical use?

Qualitative devices for data collection:
OBSERVATION AND SEMI-STRUCTURED INTERVIEW with the SEN teachers

Proposed method for data processing:
Observation records to be processed on the observation sheet. The plan is to perform 6 to 9 observations at the beginning of the research and the same amount at the end of the research. Coding and subsequent data analysis performed. The interviews are transcribed, followed by the coding and data analysis. The plan is to perform 6 to 9 observations at the beginning of the research and the same number at the end of the research. The coding is processed in the MAXQDA2020 software for interviews and observations.

IV. CONCLUSION

Intermediate results:
To 29 May 2021, 53 children and pupils were comprehensively examined; 31 boys and 22 girls. The average age was 7 years and 1 month. Out of 53 findings, 46 had a positive screening, 7 negative, with only 3 false positives and no false negatives. The match rate between the designed device and the comprehensive eye examination has so far been 94.3%.

The main benefit: is a device designed for use by special education needs teachers caring for children with cognitive deficits, which will improve interdisciplinary cooperation, streamline the process of diagnosis, and lead to the adaption of the education programs of children, making it easier for them to adopt basic skills.

References:

This research is supported by the Charles University Grant Agency (GA UK).

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12.2 Kateřina Kroupová, Veronika Růžičková, Development of imagination through tyflografic representations as a facilitating elements in independent movement and spatial orientation



DEVELOPMENT OF IMAGINATION THROUGH TYFLOGRAFIC REPRESENTATIONS

AS A FACILITATING ELEMENT IN INDEPENDENT MOVEMENT AND SPATIAL ORIENTATION

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Conference Vision Prague 2022

IMAGINATION
 Imagination - the ability of mind and their faculty is dimensionally different. It results with various visual representations. Thus, those of the blind individual, especially in the area of cognitive functions, there are not only a smaller number of items, but there are also missing details. Their representations, however, are not devoid of generalization and imagination. These students determine the possible level of going to know the environment and creating a visually depicted world.

INFORMATION PERCEPTION
 The continuous development of the imagination of visually impaired people leads to the basic processing of the use of sensory information from the environment (such as sounds or textures) into the perception of getting knowledge about the surrounding world and its processing into supporting information, including an understanding of the important objects (between the parts and the whole, objects, sensory after effects, on the level of development, information and communication) as an integral part of the imagination.

RELIEF DEPICTIONS
 One of the important aspects for the development of imagination and especially for the creation of a complete picture of the nature of the surrounding environment are various types of relief depictions.

3D VISUALIZATION
 Three-dimensional analysis of relief phenomena can be used to develop especially spatial imagination - for the purpose of supporting the development of spatial orientation, unique audio-tactile maps were created using various types of relief depictions with the support of special software to assist students. Following the user's action (click) of a tactile location, another audio-visual map is created based on the possibility of moving virtual and real-world objects according to an explicit or implicit program. Multiple views of the environment and its representation are possible.

TACTILE MAPS
 Tactile maps are means of making spatial information and supporting information accessible to people with visual impairment, in audio-tactile form, used as an auxiliary tool. They are used to support the development of spatial orientation and navigation. The result is a tactile map or geographic information system (GIS) for people with visual impairment. The program also provides a variety of supporting information such as sounds or textures. The user can also use the map to support the development of the environment and its representation.

TouchIt3D TECHNOLOGY
 The TouchIt3D technology is a good method to create a comprehensive 3D model of the environment for people with visual impairment.

ACKNOWLEDGEMENTS
 The authors would like to thank all the people who have supported this project, especially the staff of the Institute of Special Education Studies, Faculty of Education, Palacký University, Olomouc.

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12.3 Martin Vrabel, Accessibility of Czech primary schools for students with visual impairment

ACCESSIBILITY OF CZECH PRIMARY SCHOOLS FOR STUDENTS WITH VISUAL IMPAIRMENT

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Theoretical background

Methodolog

Descriptive evaluation research at 74 regular primary schools in the Czech Republic. Terrain mapping method. The survey took place in the period 2019 - 2021 at 76 schools in 35 towns and villages in the Czech Republic.

Research question:

Are Czech primary schools accessible to pupils with visual impairment?

Evaluationcriteria

- Accessibility of the school building and the way to the nearest public transport
- Accessible entrance to the building
- Accessible locker rooms
- Accessible stairs
- Accessible toilets
- Accessible classes
- Accessible corridors

Positive examples from school accessibility

Accessibility of the school building and the way to the nearest public transport:

Barrier-free access to the school (contrasting guide lines for blind students, contrasting elements, tactile elements at pedestrian crossings)



Accessible entrance to the building:

Contrasting lines on the glass entrance door. The doorbell control at the front door is accessible for the blind.



Accessible locker rooms:

Marked entrance to the locker room, lockers with contrasting colour, marking of the locker for students with visual impairment.



Accessible stairs:

Contrasting colour signs on the stairs, floor markings, voice output in the elevator.



Accessible toilets:

Tactile and contrasting door entry markings, toilet and sink in contrasting colour.



Accessible classrooms:

Tactile and contrasting door entry markings, mobile tables, folding tables, matt tables, access to electricity.



Accessible corridors:

Corridors with guidelines without obstacles.

Survey results

Literatur

VRUBEL, M., RÖDEROVÁ P., JÁGEROVÁ, N. (2017). *Education, Support and Rehabilitation for People with Visual Impairments*. Brno: Masarykova univerzita. Accessible: <https://munispace.muni.cz/library/catalog/book/1005>

13 CONFERENCE CLOSING

Mariana Čapková, representative of the Prague 's government

Ladies and Gentlemen,

I am extremely honoured to be able to send you a few words at the end of this precious meeting. I am very sorry, I am not able to be personally present, but I was asked to help in a summer camp, organised for children, as a support to the part of Czech Republic affected by tornado in the last days. Big tragedy for the Morava region.

Let me thank all the speakers, organizers and audience on behalf of the Capital City of Prague, that, despite such an unfavourable year, has overcome considerable complications and met, online or personally. I am glad, that such an important topic as the support of children and adults with visual impairments and their families could be heard and that we were able to hear the experience of experts from many countries and fields. Despite the fact, that each country has a slightly different way of networking support, the main challenges and problems remain the same. Behind each post, we could hear the specific fates of people who have their lives associated with visual impairment, as well as the stories of those who help them. We could listen to testimonies of determination, expertise and will to keep finding new ways for a better life for each person. There has also been a great deal of very concrete experience. And sharing experiences, stimuli and mutual inspiration is the way to constantly develop quality of life. For me personally, this conference has been very inspiring indeed, and not only in the field of education that I am engaged in.

I am pleased that, despite the difficult situation, such a professional meeting could take place, full of mutual enrichment and new observations. For me, it is a symbol of hope that common paths and solutions can be found even in difficult times, as well as a symbol that, hopefully, difficult times are in decline and it will be possible to provide everyone with the support they need again.

Thank you for visiting our beautiful City and I hope you will find a reason to come back again. Sincerely.

14 HOMEPAGE

<https://www.visionprague2020.cz>

It was created in a simple and clear design, adapted for the visually impaired. Emphasis was placed on the contrast of background and text and the clarity of topics and links. It was supported by the Blind friendly function for the blind. A special email was created conference@visionprague2020.cz only for the needs of the conference and facilitated communication with participants.

The course of the conference was recorded and individual lectures were presented in a structured way on the conference website.

15 SUPPLEMENT – BACKSTAGE FOTO





Thanks to all those who helped and supported the implementation of the online - Prague Vision 2021 conference.

By providing full-texts and presentations to the ICEVI Newsletter, the authors agree to the publication and publication of photographs.