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Journal of Exceptional People

Institute of Special Education Studies

Faculty of Education – Palacký University Olomouc

Journal of Exceptional People

Content

Introduction

Dear readers,

You are once again opening our Journal of Exceptional People, which is focused on special pedagogical topics related to the broad issue of people with certain disabilities, i.e. exceptional people. In recent years, we have published not only contributions by Czech authors, but we have also received many foreign contributions. We managed to maintain this state even during the recent very unfavourable pandemic situation associated with Covid 19.

At the moment, we are again contacting special educators, psychologists and other experts of the so-called helping processions, whose contributions would help us maintain the reputation of our magazine, which has been published twice a year for the eleventh year.

In the current autumn issue, you will first get to know the issue of inclusion of children with a hearing disability. The Slovak author Ľ. Kročanová focused her contribution on a group of these children in preschool age and will introduce us to the research that was carried out, which dealt with the quality of their education and inclusion. Another contribution was also sent to us by Slovak authors A. Hortová and P. Janoško. In their article, these authors also deal with the quality of inclusion of disabled children, this time in primary schools.V. Růžičková, V. Vachalová and A. Vondráková called their next contribution Audio-tactile maps as a means to increase competence in spatial orientation of people with visual impairment, and they explain in an interesting way the difficulties that usually accompany children and adults with a visual handicap. K. Tománková deals with the development of motor skills in children with hearing impairment in her article. This contribution will certainly attract the attention of the professional and non-professional public, as this author presents a lot of interesting and lesser-known information here.

Another contribution, which we decided to publish, is a scientific paper sent to the editorial office by M. Rylková and L. Kytnarová. Their article will be of particular interest to those concerned with bilingualism in the context of developmental aphasia. In their contribution, the authors report in detail about the conducted research which compared the condition of bilingual and monolingual patients who had suffered a stroke. The following article by Czech authors A. Šudřichová, L. Mikurčíková, J. Kantor notes the role of school documentation in the context of a student with severe special needs. Last overviewed essay by Slovak authors P. Mitašíková and P. Farbar is focused on the strategies of the therapeutic educator in early stimulation of children according to the principles of Maria Montessori.

We close the autumn edition of our magazine with three reviews of interesting books. The Chinese author L. Lin presents us with the book Studies on deafness in an ecological system context. This will be followed by an invitation to read a book about game therapy in a sandbox. It is recommended to be read by J. Kameník, and this part of our magazine is closed with a review by P. Koska who describes the content of the book focused on play therapy and play therapists.

We wish you a pleasant reading and we believe that you will definitely choose an article or articles according to your interest.

Pavel Svoboda, Jan Chrastina, executive editors of JEP

Inclusion of children with hearing impairment in preschool age in education

(scientific paper)

Ľubica Kročanová

Abstract: *We currently understand the inclusion process as a natural element in the field of education of disabled and socially disadvantaged individuals. Its essence lies in solving relationships intact in the majority position towards the handicapped in the position of minority. It is an ongoing process, and it draws attention to the existing barriers that children or adults with disabilities encounter in inclusive direction. We consider speech abilities, communication skills and social competences with the possibility of naturally developing them in an intact environment as a key factor for the success of including preschool children with hearing impairment among the majority population in regular kindergartens.*

Keywords: *preschool age, inclusion in the kindergarten, child with hearing impairment, speech abilities, communication skills, social competences*

1 Introduction

Moving towards social inclusion of children and pupils with specific needs, resulting from various types of disabilities or social disadvantages, is also one of the primary goals of education in our country. This process is carried out under more or less favourable circumstances in preschool and school facilities thanks to experts working in the field, and thanks to the interest, as well as the active support, of these children's parents. The vision of inclusion is to eliminate misconceptions about "otherness" and stigmatization of individuals as "different". The aim of the inclusive perception of children and pupils with disabilities in the current educational environment is to accept "difference" as normal, to recognize and accept "otherness" without prejudice and rejection, instead of only tolerating or enduring it (Kováčová, 2010). This results

in an emphasis on equal access to knowledge for all children and pupils in regular preschool and school facilities.

Each child (including a child with a disability) progresses intensively, especially at an early and a preschool age when his/her initial social habits and skills are formed. He/she needs a positive identity and participation in interactions and other social activities in his/her environment. In this age, an ability to take on a social role and to accept authority manifest, along with the need to integrate and forge social ties with other children, even though still volatile and superficial. In peer relationships, the child imitates, compares, but also cooperates, which is very beneficial for him/her. These socio-psychological processes affect the level of their acceptance and socio-metric status in the social group to which the children primarily belong. According to Meadow-Orlans (2003), it is especially important for a child with a disability to know the level of his or her social maturity, which is closely linked to a competent, age-appropriate and appropriate behaviour in a given social situation. For children with hearing impairment, the level of speech skills, communication skills and social competencies is crucial, in order to be able to integrate successfully into the majority population of peers in regular school facilities (Kročanová, 2004).

2 Theoretical background

2.1 Early inclusion of children with disabilities in regular kindergartens

When we talk about early inclusion, we think of children in an early and preschool age, with different types of physical, sensory or mental disabilities, or socio-emotional peculiarities in the development that require supportive care of professionals (special educators, speech therapists, psychologists, therapists, psychologists, social workers, and so on), in order to be able to coexist successfully with the intact population in regular educational institutions.

Experts characterize the developmental period before training as pro-inclusive with an emphasis on "the involvement of every child with all children and all children with every child" (Kováčová, 2010, p. 12). Inclusion in the preschool age is a good starting point for the integration of a child with a disability into the majority environment. It is based on these principles:
- effective participation of all children in the peer group,
- identification of strategies to facilitate inclusion,
- preschool curriculum on the possibility of educating every child,
- cooperation between the family, an educational institution (kindergarten) and counselling services of experts in the field of special pedagogical and psychological child care (Kováčová, 2010).

Kindergarten teachers can convey "otherness" to children in a natural way. Using children's playfulness and spontaneity, they can positively shape the perception of "difference" ("although we are all the same, we are also different"). This can be implemented in several ways and through various strategies (such as games, cooperative activities, meetings, and events). Along with the receptive support of inclusion (educational programs, books, newspapers, magazines, films, and theatre), interactive and expressive-experiential activities in which the children themselves are actors seem appropriate. It is clear that the implementation of these activities in preschool age has a positive effect on the coexistence of intact children and children with disabilities. Teachers are required to have the experience, pedagogical skills, empathy, and acceptance of the needs of all children present in the peer group.

Although even young children are aware of the differences among themselves, based on shared experiences, these are blurred and "otherness" becomes normal. Through illustrative activities and direct experience with the topic of difference, pre-schoolers have the opportunity to understand the meaning of this concept. This results in the effect of positive thinking, as well as in actions in favour of "otherness". Children from an inclusive environment are more open and responsive to the inclusion of children with "differences", compared to segregated peers. They show a higher degree of positive interaction in the game or other activity, they get a sense of acceptance, equivalence, security and they learn to work together. At the same time, these situations prevent them from prejudices against "otherness" in old age and serve as an opportunity to form prosocial manifestations in their behaviour (Kročanová, 2009, Kováčová, 2010).

2.2 Prerequisites for successful inclusion of preschool children with disabilities

The early integration of children with disabilities into the regular social environment proves the experience obtained by plurennial practice. Professional support and childcare from an early age are among the decisive supporting factors that work in favour of inclusion. The quality of inclusion is also affected by the readiness of the environment in which we integrate the child. The system of services must be functional, of good quality and sufficiently adapted to consider specific requirements and needs, required by the presence of a child with a disability in a normal environment. These are in particular:

- supportive special pedagogical and psychological service directly in the kindergarten, staffed for the needs of inclusive diagnostics (Klein, Šilonová, 2019), or provided in special pedagogical counselling facilities,
- activities of a teacher with a child with a disability within an intact children's group,

- attitudes of people involved in the inclusion, namely, parents, professionals, teachers, intact peers in preschool facilities, and parents of children without disabilities.

If the conditions for inclusion are not ensured, the child remains dependent on his or her own abilities and a high level of parental assistance. Among the objective factors that primarily determine early inclusion, we list:
- type and degree of disability,
- age of the child at the time of definitive confirmation of the disability,
- the period in which the child began to receive professional intervention (special pedagogical, psychological, social, therapeutic, etc.),
- age of the child at the time of entering regular preschool facility,
- regularity of child's attendance at kindergarten,
- systematic and long-term professional care,
- effective model of cooperation: kindergarten – professional intervention – family.

2.3 Benefits of early inclusion for children with hearing impairment

In a sensitive preschool period, intact children more easily and immediately accept peers who are different from them. They can accept them and do not compare each other to perceive these differences. Children with "differences" at this age react spontaneously, act naturally towards healthy children, and are able to assert themselves among them (Kročanová, 2002).

If a child with a disability is included with intact children in a regular preschool facility, he/she must have regular professional help and support. For a child with hearing impairment, it is mainly a speech therapy intervention, in which it is necessary to develop speech and hearing education, comprehension of spoken speech, responding to questions related to the use of everyday objects, viewing, ability to use a hearing aid, respectively, cochlear implant, etc. A deaf child does not need to have a clear speech in order to function in a normal environment, but he/she should have sufficient active and passive vocabulary, which he/she can also use in practice. The main goal of inclusion of children with hearing impairment is, in addition to the acquisition of basic skills, the gradual acquisition of speech and communication skills and related social competencies. It is possible to fulfil this intention only if they go to kindergarten as regularly as possible, so that they can be systematically worked with, and their contact with peers can be maintained smoothly. Healthy peers can also help deaf children to integrate with their social experience, receptivity, intuition, and verbal skills. The benefit of an inclusive environment for children with a hearing impairment is that it enables them to:

- develop a personal potential through stimulation from hearing peers who provide more differentiated stimuli with respect to children with hearing impairments,
- acquire experience and social skills through relationships and interactions with ordinary children in cooperative activities and play,
- manage the demands on one's own performance in the formation of elementary skills and habit,
- learn to overcome the requirements and demands arising from inclusion (speech barrier in social contact, attitudes and reactions of the environment to their own disability, acceptance by peers, etc.),
- take common forms of behaviour from natural social situations,
- receive and imitate positive speech patterns from hearing peers, improve his/her own verbal skills, learn to understand speech, especially common speech stereotypes associated with the use of everyday objects and common activities, try to communicate with his surroundings, develop communication skills, expand active and passive vocabulary, acquire the first speech competencies,
- naturally acquire cognitive abilities and desirable personal qualities, which increases their social preferences among peers, changes their social position and personal status in a normal peer environment, improves social orientation in the child group, and improves interests,
- acquire certain social and communication competencies before training,
- remain in the family – the proximity of parents and siblings is invaluable to the emotional development of each child. The stimulus of the family environment significantly affects the development of intellect and speech, which is even more true for a child with the hearing loss. Parents usually find it difficult to cope with the separation and stay of a young child in a special boarding school, and therefore welcome inclusion in a regular nursery school located in or near their place of residence.

2.4 Experience with the inclusion of children with hearing impairment in regular kindergartens

Based on several years of our experience with the inclusion of children with hearing impairment in an early and preschool age (Kročanová, 2002, 2007, 2009, 2011, 2015), we consider social skills to be a key factor in determining the success of their inclusion among hearing peers population. The level of social skills children have obviously influences how they are received by their peers, how they are treated and respected. The communication deficiencies accompanying hearing impairment have a restrictive effect on the child's adequate integration into games and other activities, and at the same time, hinder the further development of his or her social skills. Deaf children communicate less with other children, which deprives them of the oppor-

tunity to cooperate with them and form peer relationships. Such social behaviour is typical for children with hearing impairments. Due to their age, their social maturity is at a lower level, which is negatively reflected within the group of intact peers to which they belong after entering inclusion.

Marlow (2006) says that children with hearing impairments and poor social skills educated with the majority population tend to be rejected by their peers, cannot make friends, and are problematic in their behaviour and personality traits. According to some studies (Guralnick, 2000, Buford, Stegelin, 2003, Marlow, 2006, etc.), the frequency of interactions between hearing-impaired children and hearing peers increases after the second year of their co-education. They note that a specific type of intervention (e.g. group activities) can qualitatively improve the course of inclusion. They also point out that these children participate more intensively in activities together with the audience if they have been included in a group of peers in which friendly, pro-socially oriented and coherent relationships are established.

Teachers in regular kindergarten classes who have practical experience with the social skills of pre-schoolers with hearing impairment evaluate them as children with:
- low level of personal initiative in social situations,
- passive contact with peers during the game,
- inability to initiate, and in particular maintain, communication,
- weak participation in positive interactions with other children,
- lack of effective social strategies,
- problems in completing orders,
- difficulties when working in a group,
- weaker social experience,
- inability to work independently,
- problems in making friends with intact children,
- increased tendency towards an aggressive way of resolving conflicts,
- higher incidence of personality problems and problematic manifestations in behaviour.

It is clear from our practice that sensitive and empathetic teachers in the inclusive environment of kindergartens support the interactions of children with hearing impairment with intact peers and help to develop them. They make it easier for these children to participate in joint games and other activities by appropriately involving mimic, pantomime, body, hand and other movements. They also use themed games, non-verbal techniques, and interactive creative techniques, which undoubtedly improves the possibilities of integrating children with hearing impairments into mainstream kindergartens.

3 The results of qualitative assessment of the level of integration of children with hearing impairment into the inclusive environment of regular kindergarten

3.1 Subject and goal of research

In line with research findings (Guralnick, 2000), we state that in an inclusive environment, it is particularly important to specifically support social interaction. It consists of certain defined units of behaviour, which can be used to detect its decreasing or increasing level. It is proven that social interaction is not only one of the important measures of the success of inclusion, but also its means. From a developmental point of view, this is especially true of the mutual interactions between preschool children. Among good strategies for the development of social interaction that can be induced in kindergartens are cooperative activities and games of children.

In our research probe, we focused on assessing the inclusion of children with hearing impairment among peers without disabilities in the real environment of an inclusive kindergarten, using selected indicators of social interaction. We focused on identifying the interactions between a child with a hearing impairment and intact children, as well as between him and a teacher within a regular kindergarten class. We proceeded from the statement that these are the determining factors of the inclusive process, which are important especially in the preschool period.

3.2 Research method and research questions

With regard to the aim of the research, we focused on some selected units of social interaction between children with hearing impairment in natural contact with intact children within the inclusive class of a regular kindergarten. We recorded these for our research needs through the administrator, using the method of direct observation and an observation scheme. In constructing it, we proceeded from the assumption that we would observe some narrowly defined manifestations of the social interaction. We focused on the mutual contact between the observed children (from the position of a child with a hearing impairment) in terms of establishing and re-initiating the initiative (initiative of a deaf child repeated by another child). We also recorded the initiative of a deaf child without re-enactment (repeated attempt to interact) and the deaf child's response to someone else's interaction. We also tracked the rejection and ignoring the interaction attempt. We considered the repeated interaction and the response to the interaction to be the actual realized interaction. We also assessed partner's preference for the interaction and the content of the activity during the observed interaction. We observed all observed behavioural units in terms of the interaction of a child with hearing impairment with a healthy child and with an adult

(teacher). In the observation, we could also monitor the interaction of intact children with children with hearing impairment and draw some conclusions from these data.

The total duration of the observation was thirty minutes. These were evenly distributed between two situations. We recorded both situations for fifteen minutes during two observation days. One child with hearing impairment was observed in each of them in a direct contact with and in a direct interaction with non-disabled peers. The first situation was structured and represented as a cooperative activity in the form of a joint solution of a task of an artistic nature with the active participation of the teacher. In the second situation, it was a free game without the direct involvement of the teacher, where the children had the opportunity to choose the activity, partners, method, and place of implementation of the chosen activity. Given the subjectivity of the evaluation of the observed units of social interaction by the administrator, we are aware of all the disadvantages associated with the application of the methodology used. Therefore, we do not consider the presented statements and evaluation conclusions to be easily transferable and generalizable to all children with hearing impairment of preschool age included in the normal environment of kindergarten. For some monitored characteristics, we also consider the interaction of other factors, e.g. the child's personal equipment, the teacher's pedagogical skills, etc.

We set out a few questions that we wished to obtain answers to. We expected that in a structured situation and with the joint activity of healthy children and children with hearing impairment (also due to the intervention of the teacher) there will be a faster increase in interactions between them, compared to the situation in which a free play dominated.

We also assumed that deaf children, to participate in cooperative activities and to be accepted, would manifest the initiating attempts at verbal interaction through gestures or simple speech forms.

We were interested in whether deaf children would prefer such non-verbal strategies in interaction during free play as watching their partner in the game, imitating or touching at the expense of speech.

We also dealt with how a child with a hearing impairment perceives and responds to acceptance or rejection (overlooking, ignoring) during free play and during teacher-induced joint activity.

Our next expectation was whether healthy children have a tendency and interest to participate in a joint activity with a deaf child or if they prefer to interact with each other during play. For this reason, we also focused on interactions from the perspective of healthy children in both observed situations.

3.3 The research sample

The research sample consisted of fifteen individually included children with hearing impairment in regular classes in five kindergartens in Bratislava, Trnava and Nitra regions. These were pre-schoolers, aged at the time of research from 5–6 years to 6–7 years, with pre-lingual, bilateral, perceptual mild, moderate (hearing loss) to severe hearing loss, which were successfully compensated by well-adjusted 1–2 hearing aids. They communicated exclusively orally without supporting means of communication (sign language, etc.). Other relevant data on respondents from anamneses, interviews and standard psychological examinations of deaf children were also useful for the needs of the research. According to the results from them (the WISC III test battery was applied), we expected a better-developed performance component of the intellect in the cognitive abilities of these children. Success in non-verbal types of tasks was manifested mainly in subtests (such as cubes, composing pictures, mazes), based on which we judge good spatial imagination, the presence of logical and analytical-synthetic elements of thinking, good visual perception or visual-motor coordination of deaf children. Within the verbal component of the intellect, we find priority problems in understanding concepts and logical connections between them, in categorization, in the ability to abstract, in short-term memory-indulgence, and in some in a reduced concentration of attention. We consider the recorded lack of social experience to be tolerable due to the age of the observed children.

3.4 The research results

In the next part of our paper, we will interpret the collected observational data. These allowed us to characterize (in qualitative indicators) some selected units of social interaction between children with hearing impairment and healthy children in two defined situations. We chose the given method of data evaluation due to the low number of files and due to significant individual differences within it.

From both observed situations, it was clear that individual children with hearing impairment reacted very individually. They differed from each other in the total number of units of social interaction recorded, as well as in how they responded differently. Although they were children of the same level of development, their inter-individual variability in social manifestations was considerable. In some of the observed deaf children, the manifestations of social interaction had a decreasing tendency, whereas in some cases they had a slightly increasing trend, in others the distribution of social interactions was irregular and uneven. Decreased social interaction in children could be caused by fatigue, decreased attention, declining interest in interaction, etc.

Our observation showed that the course of interactive behaviour in both observed situations (during joint activity, as well as during the free play) showed a very similar

trend, i.e. the number of recorded mutual interaction units was lower during the cooperative activity than in the free play. This means that our expectations have not been confirmed. To explain why we did not notice a probable increase in interactions in a situation of the cooperative activity, we can look for several factors, e.g. whether the teacher's input (her instructions, warnings, etc.) had a positive or negative effect on the interactions between the children during the solution of the common task. It is also possible that in this situation, the interactions that are common in free play have decreased and only interactions that were important for achieving the goal of cooperative activity have taken place. Contrary to our findings, some research (Malloy, Mc Murray, 2011) confirms the importance of educators in promoting interactions within a child group. They state that interactions between children increase during the joint activity in his presence.

Another finding in both observed situations was that attempts by deaf children to interact with another child were not spontaneous and frequent, they also appeared to be ineffective, sometimes inadequate, which obviously limited their participation in joint activities and games. They found it more difficult to engage in or participate in ongoing joint activities with healthy children, resulting in minimal effects from interactions. In this context, we perceive that the natural contact of deaf children and the creation of positive interactions with another child were limited by underdeveloped speech and communication skills.

They used strategies for self-enforcement that they usually did not find a response in children without disabilities. It turned out that boys with hearing impairment were more likely to find themselves in conflict situations where they chose non-verbal opposition strategies (e.g. pushing, kicking, grabbing or hiding an object, preventing another child from active or moving, etc.) that did not help resolve and eliminate conflict with other children. They were usually not "winners" in conflicts. They escaped the conflicting interactions by ignoring the situation and other children present, which was usually the cause of further misunderstandings and rifts. Acquiring an item during play has proven to be the most common source of conflicting interactions between children. The importance of the teacher's role has been shown in suppressing the interactions that have led to conflicts.

Girls with hearing impairment seemed more passive in establishing interactions and applied rather the non-verbal strategies we expected, in sequence – observing the partner in the interaction, directing activity towards him, touching and attempting verbal interaction. Again, it is likely that they did so due to less developed verbal skills. In a situation of free activity, both girls and boys with hearing impairments tended to have a parallel type of game at the expense of those that require cooperation. They tended to play alone or fixed on one permanent friend or so-called "outsider" in the group, or to another child with a different type of disability, if present in the group. They were easier to understand, so they spent most of their time together.

In interaction with them, they more easily promoted their own way of playing, they did not have to adapt to children playing mainly in groups. They avoided giving way to intact children, which significantly hindered the development of mutual interactions.

Children with hearing impairment, regardless of gender, more often initiated an interaction with an adult (teacher, special pedagogue), who also worked with them individually as part of developing activities. Teachers also responded more frequently to deaf children, either to help them to interact with other children or to reduce aggression and eliminate conflicting interactions. The reason for the teachers' interference in interactions between children was also that they interpreted the intentions of children with hearing impairment within a certain activity due to impaired speech skills. Teachers also significantly entered into adverse manifestations in interactions to support prosocial elements in behaviour in children (adaptation, empathy, help, support, etc.), which was also reflected in intact children, especially in situations with cooperative activity, in which could identify with children who are among them and have a hearing impairment.

Within the inclusive group of pre-schoolers, children without disabilities showed evident higher responsiveness to incoming stimuli, as well as cooperation in both observed activities. We observed that when intact children were proactive in engaging in interactions, deaf children appeared more motivated to return their initiative, seeking verbal ways of communication.

Intact children obviously did not assert themselves in an aggressive way towards a child with a hearing impairment. They also successfully used strategies to eliminate the source of the conflict, which was probably also a consequence of the intervention and guidance from the teacher. We noticed that they purposefully repeated the initiative of deaf peers, which was especially true in a situation of free play. Nevertheless, they tended to interact more with healthy children. We consider it positive that children without disabilities did not ignore their peers with disabilities, even though they were not among their favourite friends. They did not search for them spontaneously, resp. they did not choose them as partners for the game, but at the same time, they did not exclude them from among themselves and accepted their presence. Based on this, we can describe the position and status of children with hearing impairment among hearing peers within the inclusion group as "partially accepted", "tolerated", but not "rejected".

4 Summary

Knowing that all children want to experience inclusion among their peers and participate in joint activities and games is very important. Every child is sensitive to neglect, rejection or exclusion from the child community. He/She expects mutual

closeness, joint activities, building relationships, communication, etc. He/She can express these needs in several ways, from passive and indirect means through various social expressions, communication forms, symbolic behaviour, and other means.

Even children with hearing impairments have a real opportunity to enter relationships, form positive bonds and successfully interact with peers. It is clear that in an inclusive group, interactions between hearing-impaired children and healthy children do not only result from their co-location. This can only be successful if healthy children are involved in incorporating deaf children into their activities and in building relationships or understanding each other. Social experience with a child, which is something else, is invaluable to them. It helps children to enter into everyday interactions through common interests, when they are easier and more successful, and they contribute to the development of social skills.

The advantage of integrating deaf children into the mainstream social environment is that it provides these children with the opportunity to develop speech skills, social competencies, cognitive and personal potential, as well as the area of interest, even before training. At the same time, they have expanded educational opportunities and opportunities for personal advancement desirable for employment in the majority society.

5 Discussion and conclusion

The issue of the inclusion of children with hearing impairment among general peer population has long been the subject of research interest and professional discussions, as well as a topic for lay considerations, mostly with different to conflicting views. Many experts talk about the lack of training of teachers and the lack of experience in working with children with hearing impairment, which can be reflected in negative attitudes towards them. The group of teachers with an unfavourable opinion on inclusion also includes some teachers from special school facilities, who see it as an existential threat. Negative motivation for the inclusion of children with hearing impairment can also be found in teachers in regular schools. It is easier for them to work with children without disabilities, especially in a situation where they are not financially motivated. For psychologists, inclusion represents a work challenge in respect to theoretical elaboration of this issue, as well as in respect to its solution and application in practice. Parents of children with hearing impairments see in inclusion the possibility of a better life and work perspective for their children, as well as a means to better manage and cope with the disability.

According to our experience from research, diagnostic and counselling practice, we state that the early inclusion of children with hearing impairment in regular kindergartens (Kročanová, 2002, 2007, 2009, 2011, 2015) is relatively favourable. However,

we encounter shortcomings, which relate mainly to the socio-psychological aspects of the inclusion of children with hearing impairment among the majority population of peers. We consider the following manifestations of unsuccessful inclusion:

- poor quality conditions for inclusion and their negative impact on the developmental potential of a deaf child,
- poorly functioning teamwork between professionals, insufficient interconnection of support services and teachers in care for the education and training of children/pupils with hearing impairments in inclusive conditions,
- persistently low tolerance of the majority society to accept the presence of a carrier of a hearing impairment among themselves,
- insufficient cooperation with adults with hearing impairments and their professional organizations.

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Summary: *Preschool age can be characterized as a pro-inclusive developmental period. Early inclusion is a good starting point for the social integration of a child with a disability into the normal environment in elderly age. In this paper, we deal with the possibilities of social inclusion of children with hearing impairment in a regular kindergarten. We consider social skills, speech and communication skills, which are the basis of creating mutual interactions and social ties between children within an inclusive microsocial group of peers (intact children and children with disabilities), as a key factor determining the success of their inclusion among hearing peer population.*

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Value orientation and character education as a key atribute of inclusive education in primary schools

(overview essay)

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Abstract: *The purpose of the present review is to contribute to discussions on inclusive education and school development with an emphasis on systematic values and character education in primary schools. The study summarizes some patterns of moral and character development of pupils and points to the significant role of schools in their next development. It highlights the in-depth transformation of educational priorities and the school culture, based on the concept of character education in the holistic view of Jubilee Center (2017) and prof. Berkowitz (2020). It specifically draws attention to the personal dimension of values and character education, in terms of an educational impact of a favourite teacher. It highlights that a teacher worth following can notably influence character and values orientation of his pupils. The study deals with some of his characteristics that occur in the literature. The study further describes the contribution of values and character education for promotion of health and flourishing life of all people involved in education. In the context of the salutogenic concept of health (Antonovsky, 1996), the study shows values as salutary factors (factors actively supporting health). Reflects on their key characteristics, the meaningfulness available to deliver meaning, and their willingness to support the resistance of pupils. The study draws a wider relevance of values in the context of an inclusive school that it supports by linking the theoretical basis of salutogenesis with those of values and character education.*

Keywords: *value orientation, values education, character education, teacher's role, inclusion, salutary factors*

1 Introduction

The transition to inclusive education (O'Brien, Forest, 1989; Booth and Ainscow, 2019) has brought new demands on primary schools. Their task is to create condi-

tions for the creation of supportive relationships and cooperation between all actors in the educational process. An important role in this process is played by the holistic perception of each subject (whether pupil, parent, teacher) in its bio-psycho-socio-spiritual unity and the implementation of this approach in specifying and preparing educational plans and priorities of a particular school.

Naming barriers to communication and cooperation between members of the learning community, increasing teachers' competencies and readiness for inclusive forms of education, and focusing more on value education and character education are important tasks for the development of any school. This area has been addressed so far in the context of Slovak schools mainly through various preventive projects or initiatives, which often had a rather random and singular character, they lacked system and ambition of a profound transformation of educational priorities toward holistic human development, including their orientation and value character (Brestovanský, 2013; 2019). The values of the school, realized by the systematic practice of value education and character education, with their potential to influence the quality of education and training, climate, relations, and overall image of the school, can be considered a remarkable research area in terms of school development in the direction of inclusion.

2 Value Education and Value Orientation

Values can be understood as certain implicit or explicit concepts of the desired characteristic of the individual or group, which influence the choice of forms, means, and goals of its action (Kluckhohn, 1951, according to Brestovanský, 2019). According to the pedagogical dictionary, value orientation is a value system or hierarchically arranged set of values that reflects the importance of the values of a certain group of the population in a certain period (Průcha et al., 2013). In humans, it is individually modifiable over time, influenced by age, personality, degree of adaptation to the social environment, as well as social factors such as cultural environment or education (Barnova et al., 2019). Thus, a person's value orientation can be perceived as a personal direction to a certain system of values, which he considers important and to which he relates, acquires, re-evaluates and adjusts them. It is a reflection of what is really important to him, what values he personally prefers and how this preference is reflected in his future actions.

In understanding values as potential resources for man and society, it is natural that society seeks to protect, pass on, develop, and teach certain values how to live in harmony with them. This happens at different levels of the environment (family, school, community) and age. Potočárová (2019) distinguishes two approaches in value and attitude education in the family and school. The proponents of the first approach promote the provision of specific cultural content and ideas to the children,

the best that has been gathered in it, and based on this, the educators have modified their own values in the best possible form. The second approach emphasizes the ability to evaluate, instead of specific content, focusing on the process of evaluating and creating one's own values, as well as making and prioritizing choices in accordance with those values, whatever they may be.

However, it would probably not be possible to make conscious choices based on personal values without assessing the value without a certain basic cognitive disposition. It gradually becomes more and more obvious with age. Among the processes involved in the creation of value orientation, the development of evaluation thinking and character maturation, resp. moral development (see, e.g., Kohlberg, 1981, according to Colby et al., 1983) and character development (Arthur et al., 2017; Kristjánsson, 2014; Sokol, Hammond, and Berkowitz, 2010).

As Kohlberg's theory of moral development shows, the way of thinking about moral dilemmas from early inability to evaluate, through taking over the evaluation criteria of the environment to evaluation according to one's own internal starting points, is largely conditioned by age or maturity. In the process of internalization and, so to speak, awareness of our own value orientation, we move at the level of the so-called postconventional moral reasoning, where a young person should be able to autonomously reconsider what they are following in life (Kohlberg, 1981, according to Colby et al., 1983). However, the fact that such a disposition is categorically categorized into the period after the twelveth year of life does not necessarily mean that age corresponds to optimal maturity. For truly authentic decisions about values, one often has to mature through life experiences and acquire the necessary strengths, respectively virtues.

Developmental psychologists Sokol, Hammond, and Berkowitz (2010) present the definition of character as a set of psychological characteristics that motivate the individual and allow him to function as a moral actor. According to Berkowitz and Bier (2004), this set includes seven psychological aspects of character: moral deed, moral values, moral personality, moral emotions, moral reasoning, moral identity, and basic characteristics. Each of these aspects develops throughout life and in a special way in childhood and adolescence (Damon, 1998; Berkowitz and Bier, 2004). Mareš (2008) refers to an interesting theory that says it seems more difficult to acquire some of them in a certain period due to age specifics. Peterson and Seligman (2004, according to Mareš, 2008) in the analysis of results. The VIA – Youth Questionnaire on the Strengths of Children and Adolescents states that, e.g., for the value of "humanity" the children had significantly higher and for the value of "moderation" significantly lower scores than other variables. In most variables, girls scored higher than boys. With increasing age, the values of the variables in general increased in proportion to age, with only respondents aged around 15 and 16 showing a slight decrease in the values of 'memory' and 'spiritual spirituality' (Peterson and Seligman, 2004; Park,

Peterson, 2010, according to Mareš, 2008). As this is information that would reveal the specifics of child acquisition, it is still a matter of further research. In any case, it can be stated that the character is not entirely innate but can be shaped and shaped. The family has a decisive influence here, of course (Berkowitz, Bier, 2005; Potočárová, 1996), but schools also have a strong field of action and the potential to have an impact on pupils' character development (e.g., Seider, 2015; Brestovanský, 2019).

3 School as a Formation Factor for Students and Society

The school has a duty to educate and cannot do that. The question is what to raise and how. Kučerová (1996, p. 115) describes humanity as the *"goal and chance" of education.* In its understanding, humanity is manifested by authenticity, creativity, freedom, responsibility, completeness (versatility), and wholeness. Horňáková (2019, p. 6) similarly characterizes education as a personal and interactive process, which is based on possibilities, from a perspective, happens all the time and is *"holistic, focused on development and self-employment"*. She adds that learning and changing for the better is also related to inner balance, for which meaning and values are very important. Brestovanský emphasizes that *'a person with a morally mature character should be a priority topic and the general aim of any educational endeavor'*, which, according to the author, was built by Socrates through many practitioners from antiquity to modern times (Brestovanský, 2013, p. 76). The author adds that *"[t]he moral character leads a person to a full quality life,"* which is supported by research by current personalities in the field of psychology or character education (Berkowitz, Covey, Mareš, and others) in terms of prevention of stress, trauma, destructive conflicts, and *"in the proactive enrichment of life, in the creation of credible, stable relationships, resilience, and strength of family co-existence, complex prosocial projects, and finally the awareness of the meaning of one's own being",* Brestovanský (2019, pp. 230–231) adds, referring to Viktor Frankl and others.

In connection with the school's value education, its strategies and successes were in Slovakia and the Czech Republic conducted several researches in the Republic, such as value education in the first stage of primary school (Mazalová, 2012), comparing the value orientation of students of different universities (Kohoutová, 2010), or the study of subjective interpretations and the meaning of some values in students (Klčovanská, 2004; Krásna, 2014). School culture, relations, and climate as a process of implementation, as well as an indicator of values in the school, were the subject of in-depth research in three Slovak elementary schools, carried out by Brestovanský (2019). One of them was characterized by an exceptional value culture. The needs of the children were at the heart of her vision and educational design. Teachers were encouraged and systematically guided to take responsibility proactively, cooperate in integrated learning, share didactic procedures, etc. According to Brestovanský

(2019, p. 65), the students behaved highly characteristically, were able to concentrate above average and did not need supervision during breaks, due to the fact that *"the school managed to create a climate of respect and internalized discipline in students."*

Character education as a comprehensive systematic school base is a big topic especially in Great Britain and the United States (Arthur, Berkowitz, Lickona, and others), but in various forms and scope it also finds a place in Slovak publications and practice (Brestovanský, Burian, Forum of Proactive Schools, the Narnia and others school network). The numerous materials of the Jubilee Center for Character and Virtues at the University of Birmingham. The Jubilee Center (2017), which focuses on research and mentoring of character education in schools with the support of philosophical, psychological, and pedagogical studies, presents the belief that first and foremost students and school actors, but also school education itself benefits from a deliberate and planned approach to character development. I understand human prosperity (human flourishing) as a widely recognized life goal. To prosper, to flourish is not only to experience happiness, but also to fulfil one's potential. It is also the main goal of character education in the neo-Aristotelian approach of the Jubilee Center. Character education teaches the acquisition and strengthening of virtues, traits that maintain and comprehensively develop the life of man and a prosperous society (Jubilee Center, 2017). Character education, as defined by the Jubilee Center (2017), includes all explicit and implicit educational and upbringing activities that help children and young people develop positive character traits, called virtues. It helps students understand what is ethically important in life situations and how to act on the right motives, thus developing in students the potential for greater autonomy and reflection in character practice. Character education aims to help students develop practical wisdom (good sense), i.e. the ability to make sensible choices between different options in real life (Jubilee Center, 2017). Character education takes place through two processes – character taught and character caught (Harrison, Arthur, and Burn, 2016). The Jubilee Center (2017) explains these concurrent processes as follows. The process of explicit character learning includes in-class and out-of-class educational situations that equip students with language, knowledge, understanding, skills, attributes that support and enable character development (eg ethics lessons, conversations about moral dilemmas, experimental learning in real conditions, reflection of oneself, others, etc.). The learning process in character education takes place on the basis that the school community, both pupils and staff, provide role models, culture, and inspiring influence through a positive ethos, which supports and motivates character development (Jubilee Center, 2017). Berkowitz and Hoppe (2009) defined slightly more general character education as deliberate strategies in schools to strengthen children's capacities and motivations to act as moral actors. In the West, character education is of great interest and is becoming a priority of national

education policies. The concepts of character education are different, from a holistic bio-psycho-socio-cultural-spiritual point of view the concept of Jubilee Center is close to medical pedagogy (field of study in SR / EU, note), because it recognizes the "principle of holistic educational character" defined by Berkowitz and Bierová in the PRIMED model (prepared) (Brestovanský, 2019, p. 251). Professor Berkowitz (2020) expressed the belief that character education is about the holistic development of a young person, so it must be based on a holistic transformation of school. These are not just some added character-building interventions, special lessons, or extra-curricular activities. Transformation of adult culture, school climate as a whole, role-modeling, and networks of relationships between learning partners, including school assistants and parents, must take place. He described his PRIMED model of comprehensive effective school reform, based on character, as follows (Berkowitz, Bier, 2014, according to Brestovanský, 2019; Berkowitz, 2020; Brestovanský, 2019):

- P – Prioritization of character development, the character of students must be the top priority of the school around which everything else is built;
- R – Relationships are in the spotlight, they should be strengthened between anyone and everyone – classmates, teachers, older and younger students, etc., and this includes targeted creation of opportunities to strengthen them;
- I – Intrinsic motivation becomes purposefully supported, students are guided to understand that personal inner satisfaction results from achieving goals and appropriate behavior, and the importance of external motivation decreases;
- M – Models, patterns of behavior, relationships, and character are teachers who, by personal expression of character, multiply their influence on the development of students' character. Berkowitz (2020) recalls Ralph W. Emerson's famous statement in this regard: Your actions scream so loudly that I cannot hear what you are saying;
- E – For the development of skills, a certain degree of autonomy is needed, which the school should strengthen in students (empowerment). Pupils should be encouraged to make their own decisions and solve common problems, rather than having the school do it for them. They have to be encouraged to try it themselves, which helps them acquire decision-making skills;
- D – understanding that character development is a process. It is not just about changing behavior or learning some facts that we would report "here and now." It is about what kind of person our student will be for the rest of their life. Berkowitz (2020) adds that pedagogy focused on development, i.e., process, is often different from pedagogy that is concerned with learning itself, controlling behavior, or changing it.

A practical illustration of the successful practice of character education was presented by a developmental psychologist and education expert, Seider (2015). Over the course

of one year, he conducted in-depth research at three highly successful charter schools in Boston that exhibited strong and productive cultures from three different character backgrounds. These schools were attended primarily by pupils from suburbs, often from disadvantaged backgrounds, from low-income communities. The author researched the practice of character education in schools and confirmed its impact on students, their behavior, and academic achievement.

4 Teacher as a role model

Many children have their favourite teachers with whom they admire a feature and try to imitate it. From the point of view of character education and the transfer of values, the value and character dimension of the teacher, in which he is a role model for children, seems to be particularly interesting.

In his review of the academic literature on the perception of a "good teacher", Cooke (2013) states that most papers address the topic of competencies, rather than character assumptions. The subject of interest is the measurable and performative aspects of the profession, rather than the personal strengths. Lumpkin (2008, according to Cooke, 2013) states that teachers, regardless of the different roles assigned to them and judged by them, are always in the classroom and role models of integrity by deciding to act correctly even when when "no one is watching". This is just one aspect of the character that manifests itself daily as a teacher. In her contributions, the Jubilee Center (2017) presents that in order for someone to be a good teacher, their character and integrity are more important than personal style in the classroom and at least as important as mastering the content of the curriculum and teaching techniques. According to them, good teaching is supported by ethos and related language, which permeates all subjects, in addition to the transmission of knowledge. Through his commitment and dedication, the teacher is a model for understanding the value of learning and working on what is good and personally meaningful (Jubilee Center, 2017). Ďurič and Štefanovič (1977, according to Pasternáková and Laca, 2011) state that a teacher's educational influence consists of his behavior, knowledge, abilities, and personality traits. They add that the teacher is *"a they try to be like him an example that students imitate. What a personality a teacher is from that the scope and nature of his educational activities depend"* (Ibid., p. 262).

In the Jubilee Center survey, as many as 84% of the 1001 parents involved agreed that the teacher's role was to promote good manners and values in students (Cooke, 2013, p. 3). Moreover, if it is true that the teacher has not only a mandate, but also, by the nature of his profession, an inseparable influence on the upbringing and character of children, we, as a society, are interested in supporting the personal aspects of the teacher.

But what should the "good" teacher be like? Empirical experiences with teachers during education, or general statements about good people, provide a certain framework for a person. An interesting observation in the context of English society is a certain dominant perception of a good teacher over time, while in the 1980s he was a charismatic type of teacher, educating in the early 1990s, coaching type in the late 1990s, and pragmatic in the next decade (Cooke, 2013). It would be beneficial to look at a similar model in the context of the Slovak society. In any case, general societal changes suggest that, in addition to knowledge, children need support for the development of their navigational capacities and inspiration for their own ability to navigate the world of values, even in a relentless influx of information of various natures and truths. A good teacher should also constantly think about what enters his interaction with children. It can also weigh a detail, a trifle on the level of non-verbal communication, which the child will support or not. It requires a great deal of his self-reflection (Vodičková, 2020). As Tóth (2013) surveyed among university students, on the issue of the strongest positive and negative impact of a teacher on primary school personality, personal interest and openness for children can be an inspiring model that resonates in students even in adulthood. According to Moore (2004, according to Cook, 2013), the model of an inspiring teacher who is interested in a student is what again demands more social attention and support.

In the literature, there are several characteristics of a teacher who seems to follow in terms of value education and character education. Mitašíková (2021) describes the position of a teacher as a "guide" who follows, accompanies, and supports the child on his unique journey and does not set the ceiling of his possibilities in advance. Chmelárová (2019) adds that a necessary condition for a positive educational influence on students are positive character traits such as honesty, principledness, truthfulness, justice and impartiality, conscientiousness, and more. According to her, character is the very essence of a good and responsible relationship with the teaching profession. According to the author, flexibility, empathy, and self-esteem significantly contribute to the interaction between teacher and student. According to Horňáková (2017), a good teacher is also characterized by a certain 'childhood'. Such a teacher is not only in the position of an adult with authority, but honestly knows how to give space to the joy of discovering, creating, playing, and stimulating hunger for knowledge. Jubilee Center in its Research Project on Virtues and Values in the Occupations) *Virtues and Values in the Professions (VPP) project*, among other things, explored the place of the strong character pages in the teaching profession. The survey was conducted using a questionnaire method among recent graduates of teacher training who had to select six important character strengths that they think the teacher should have. The project was based on the classification of strengths according to Peterson and Seligman (2004). It turned out that the respondents most often referred to as the most important strengths of the teacher are impartiality

(fairness), creativity, honesty, and love of learning (Cooke, 2013). In addition, in conversations with them, there was an appreciation of enthusiasm, an interesting and engaging curriculum, the ability exhibit fun, but at the same time stimulating lessons, with a certain demand on students. The students last but not least, teachers demonstrate good character in how they behave outside the hours, in the corridors, in the school yard, etc. (Cooke, 2013).

Schwartz (2014) emphasizes the role of practical wisdom (in the Aristotelian ethics of virtues gr. fronésis), a virtue that helps to distinguish what is the "right choice" in a particular situation and allows us to use our other virtues (honesty, kindness, courage, humility, perseverance, etc.) at the right time and in the right way. Specifically, practical wisdom manifests itself in life, e.g. the ability to discern wisely when an exceptional situation requires exceptions to the rules or improvisation in changed conditions. In the field of teaching, according to the author, it is associated with understanding the perspectives of others and using its work for the real good of those to whom man serves in his mission. Finally, according to Schwartz (2014), a wise teacher is an experienced teacher, because with the capacity to be wise, we are all born, but wisdom is trained and acquired in life experiences.

5 The importance of values for health

Salutogenetic model of health for its belief that values are key to growth. In this model, the values represent potential salutators – factors that actively promote health.

Aaron Both Antonovsky and Viktor Emanuel Frankl also examined the question of how it is possible that some people were able to mobilize their inner strengths after surviving the horrors of the Holocaust and to live healthily and fully again. Frankl logotherapy emphasized the area of human freedom, his ability, and ability to decide to "say yes in spite of all his life" (Frankl, 1998). Antonovský in the salutogenetic model corresponded to a sense of coherence (SOC – sense of coherence), respectively. integrity (Kebza, 2005, according to Horňáková, 2010). It could also be called *"life orientation"*, which helps a person to live, cope with challenges, and facilitate a person's development for health (Jensen, Dür, and Buijs, 2017, p. 225). Antonovský (1996) was convinced that a strong SOC is an important factor in the development of health and the way a person will respond to stress and stressful situations. SOC is based on three variables, which Antonovský (1996) and other authors (Jensen, Dür, and Buijs, 2017; Lindström, Eriksson, 2005) describe as follows:

- **Comprehensibility**, such as the ability of a person to evaluate and understand the situation in which he finds himself, and his belief that he understood the given challenge. It is reflected in the way people are confronted with how the information that cognitively makes sense is organized, consistent, structured,

and clear. The high score in this component predicts that in the future one will perceive other stimuli as predictable, organized, and readable. Comprehensibility is considered a *cognitive component of SOC*;

- **Meaningfulness** corresponds to the extent to which one experiences emotionally, that life makes sense and that it is worth investing energy, devotion, and activity in facing challenges and problems. It also means finding meaning and motivation to move in a direction that promotes health. Meaningfulness is considered a motivational component of SOC;
- **Manageability** is the degree to which one perceives one's capacity to cope with the demands of the stimuli that meet him and who believes in his resources for coping with the burden and is able to use them. Manageability is considered an instrumental/behavioral component of SOC.

The three components of SOC are factors that allow a person to perceive the world (on a continuum) as understandable, manageable, and meaningful (Antonovský, 1996). Therefore, they open a person to active participation in a fulfilling life. One of the factors of SOC, meaningfulness, seems particularly remarkable in this context. When one builds and manages life in accordance with one's values, one opens up opportunities for one's constant development and the strengthening of a sense of coherence.

In a broader context, salutogenesis has brought a radically new view of health and the human as its bearer. He works with the knowledge that *"we find a lot of healthy people in the sick and, conversely, in a person who feels healthy, there may be some facts that are quite ill"* (Horňáková, 2010, p. 31). Becker et al. (2010) published a study revising the American approach to health 30 years after Antonovsky's introduction of the salutogenesis model. The article began with the statement of Mother Teresa that she would never take part in the march against the war, but if a peace meeting were held, she would add. The statement is a concise illustration of what salutogenesis represents in the approach to health. In our metaphor, the march against the war represents a contrasting approach, pathogenesis.

Pathogenesis, developed in America by Williamson and Pearse as a theoretical framework for access to health, is an investigation into the origin and causes of disease. Its starting point is a disease or disorder, and it is proceeding retrospectively to identify how its people can avoid, manage, or eliminate it. Salutogenesis (Metaphorical Assembly for Peace), on the other hand, deals with the origins and causes of health; its starting point is human health and looks forward to how to create, promote, and improve physical, mental, and social health and well-being. Becker et al. (2010) further compare pathogenesis and salutogenesis as follows:

Table 1: *Comparison of pathogenetic and salutogenetic perspectives (Becker et al., 2010, p. 8, adapted)*

Pathogenetic perspective	Salutogenetic perspective
Starting point: disease, problem	Starting point: health, potential
How to avoid the disease	How to fulfil the potential
Reactive – treatment of the disease	Proactive – generating better health
Idealistic – to be naturally healthy	Realistic – striving for health
Against pain or loss	For profit or growth
Preparing man for life	Discover how to live to the fullest
Avoid deterioration	Continuous improvement
Objective: to minimize problems	The goal, resp. Progress: potential optimization, profit

Salutogenesis is thus a model that builds on and develops a holistic approach to health. Antonovský (1996) called him a partner of medicine focused on treatment and prevention in the 1990s. The model described three principles:

1. Focus on all the people in the system (not just at risk);
2. Address and promote "salutes", factors that actively promote health (not just reduce risk factors);
3. To draw attention to the whole person (and not only to individual diseases) (Antonovský, 1996).

The salutogenetic understanding of human integrity as movement on the axis, continuum, in a health-promoting or nonhealth-promoting direction is presented above. Antonovsky (1996) further asked the question "How can we explain the movement of people on the continuum in the direction of health?". He was not satisfied with the answer that it would only be for a small number of risk factors to which they are exposed. He introduced a new concept of salutor factors). He defined them as factors that actively promote health. Their active nature is very important in his understanding of health promotion (Antonovský, 1996).

Value orientation can act as a salutator, because the values that a person perceives as important and form his value orientation help him to find meaning, develop, and act freely even in difficult living conditions. The motivating component of a sense of coherence is just meaningfulness. If values are a source of meaning, then there must be great potential for health promotion. Of course, they also have meaning in themselves – values such as love, truth, and humanity are rare even without us looking at them as means, as Kučerová (1996) points out. But in the deep complexity of the human person, in the sense of the bio-psycho-social-cultural-spiritual understanding of man, they have an irreplaceable place in his complex development and prosperity.

Even thanks to values such as love, the common good, honesty, or friendship, one can often withstand a great burden. It helps him, e.g. the knowledge that it forms a world in which these values prevail. Or he realizes that despite the limitations of some options (such as illness or a change in life circumstances), he can still realize other values that are important to him. This thesis is also supported by the well-known statement of an important representative of humanistic psychology, Abraham Maslow (2000), who explicitly argued that values are essential to human health in life. *"We find that being without a value system is psychopathogenic. Human being needs a value framework, a philosophy of life, religion, or a substitute for religion, according to which she would live and understand things, just as she needs the sun, calcium, or love. I call it the 'cognitive need to understand.' Value diseases that come from worthlessness, they are called different – anhedonia, anomie, apathy, immorality, hopelessness, cynicism, etc., and they can also somatize"* (Maslow, 2000, p. 200). Maslow thus appealed, in his terminology, to the need for man to manage his life with a belief in meaning, consciously and in relation to values that transcend him. The formulation of this need is closely linked to Antonovsky's concepts of intelligibility and meaningfulness: The consciousness of meaningfulness, characteristic of both Frankl's and Antonovsky's and Maslow's approach, is closely linked to the values one recognizes, recognizes, adopts, and creates.

A holistic approach to human health can therefore count on the area of values as an important resource. As a result, organizations, including schools that want their culture to be actively focused on values that support human growth, development, and well-being, have the potential to promote health.

6 Conclusions

The purpose of this review study was to explain why values and value orientation are important to a person and what role character education plays in the school environment. Also, we approach the understanding of values as potential salutators, thanks to their key characteristics, meaningfulness, disposition of supply of meaning and their importance for supporting students' resilience in the context of their development and health. The educational and socio-pedagogical views of the human mind (medical, pedagogical, socio-pedagogical) have much in common with visions of character education. Supporting clients, students, and people to live a healthy, prosperous life (so – called flourishing life), in which a person discovers and realizes his potential in healthy and mutually enriching relationships with other people, is the mission and ambition of pedagogical disciplines. From the point of view of character education, the relationship is again a space of learning, modelling, pattern, where we learn from each other about the good life and grow. At the same time, the relationship, the presence of authentic trust and security, is the result of their continuous building. This

requires perseverance, dedication, sincerity, generosity, and other virtues, which are the focus of character education. Building a climate of security and trust is a matter of honestly determined people working for themselves and in an environment that benefits others.

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Audio-tactile maps as a means to increase competence in spatial orientation of people with visual impairment

(overview essay)

Veronika Růžičková, Veronika Vachalová, Alena Vondráková

Abstract: *The following post aims to introduce a project supported by the Technology Agency of the Czech Republic, which dealt with the production and testing of audio-tactile maps. These maps are used to help people with severe visual impairment explore space. The project focused on the 3D printing of map bases and their connection to tablets through conductive map parts. This resulted in aids that were not only based on touch but also on hearing. These aids continue to serve not only adults with visual impairments but also pupils with visual impairments and are intended to convey the space in a particular location and orientation within it.*

Keywords: *audio – tactile maps, spatial orientation, mobility, people with visual impairment*

1 Introduction

The independent movement of people with visual impairments is influenced by many variables, including not only the personality of the individual, but also the compensatory aids and the educational process the person has undergone or is undergoing. In the project TAČR TL01000507 Development of independent movement through tactile-auditive means, we have tried to show that modern technologies help not only to increase the feeling of independence when moving on the trail, but also to increase other literacy of the target group.

The aim of the project was to adapt people with visual impairments to modern technologies and make these technologies accessible through newly developed teaching aids and didactic methods. The project focused on the development of 3D tactile maps created with modern 3D printing tools, the development of a software tool to connect the maps with a tablet and the subsequent training in working with

3D tactile-auditive maps. The connection between the 3D maps and the tablet was made possible by 3D printing technology where the technology used connected the tablet with the conductive part of the map.

At the beginning of the project, an extensive expert research was carried out, which was necessary for the effective implementation of the project, where the current scientific knowledge and approaches have to be used. Both the Institute of Special Education Studies of Palacky University and the Department of Geoinformatics of Palacky University carried out the expert research for their respective areas. The output of this partial objective are conference papers and related publications. The results of the analysis of the state of the problem and the proposal for further progress of the work could be discussed with the general public, where a number of expert opinions helped the next progress of the work. The comments of the special educators were very helpful in terms of the proposed didactic approaches. The comments from geoinformaticians and cartographers were beneficial for the design and implementation of the tactile maps.

2 TouchIt3D Technology and 3D Haptic Mapping

Based on the obtained knowledge and with the knowledge of TouchIt3D technology developed at the Department of Geoinformatics of Palacky University, an initial draft of tactile maps was created for user testing in 2018. The issue of appropriate methods of typhlography and typhlocartographic semiology was tested on samples with differences between layer heights, line thicknesses, point feature sizes, line structures, textures of area map features, etc.

Figure 1: *Tactile maps 1st generation including one of the templates*

The process of manufacturing tactile maps and their technological solution was optimized several times during 2019. The various settings and nozzle sizes were tested, and the character key was modified based on the findings from the user testing. The main aim was to reach such a high level of detail that the individual 3D structures could be distinguished tactilely in the form of point marks that serve as activation points for the audio component. According to the obtained knowledge, new prototypes of the tactile map were continuously created for user testing and used for working with the target group during training of movement in space. For the second generation of tactile maps, the signs for pavements and streets have been extended to a minimum width of 5 mm, and instead of different layouts of interactive signs, the categories of marked points of interest have been differentiated by the style of the surface of these signs (peaked, sloping, flat).
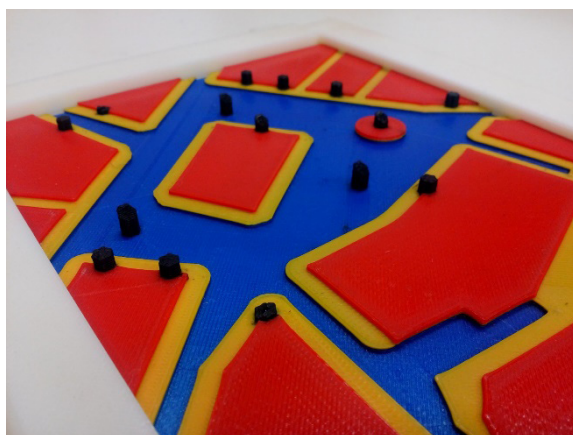
Figure 2: *Detail of one of the 2ⁿᵈ generation tactile maps with a different character key*

The functionality of tactile map was also extended during 2020. Following new findings, the yellow colour has been replaced by white, which offers better contrast and increases the readability of the maps. At the same time, all pedestrian crossings were tangibly depicted. This led to the creation of the 3ʳᵈ generation tactile maps with the addition of buttons for switching the modes of voice accompaniment. All original maps of the 2ⁿᵈ generation were updated with them.

The different Figure 3a and 3b: *Colour and technological equipment of 3rd generation tactile maps and their production*

All interactive maps were accompanied by partial non-interactive maps depicting only one of the mapped topics. This was appreciated by users as a suitable teaching tool for learning how to work with tactile maps. The 3rd generation tactile maps set included tactile maps of Prague, Brno, Olomouc, Ostrava, Opava (each in 3 versions – interactive, sidewalks only, buildings only) and a fictional map with a legend, all in several pieces. The functionality of tactile maps has also been extended with modes allowing short description of characters, long description, task and route description between two points. The required functions were simultaneously implemented in the software application.
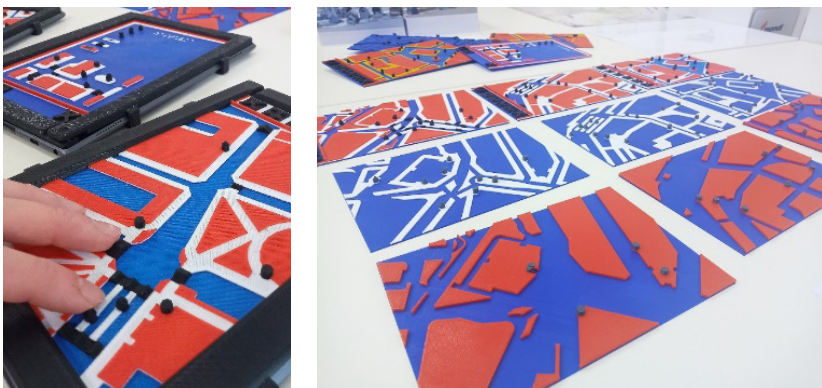
Figure 4a and 4b: *Detail of height-resolved pedestrian crossings and partial non-interactive tactile maps*

A set to explain the differences in the different scales was also produced, ranging from the interior of the building to the campus, the city, the Czech Republic, Europe, the World and the Solar System. This set was produced in the form of fuser maps on microcapsule papers, as well as in the form of 3D printing in the form of non-interactive and interactive TouchIt3D maps. Also, the web configurator was programmed for easy creation of documents for the TactileMapTalk mobile application.

Figure 5a and 5b: *A set of maps for understanding scale: different levels on the left, different versions of one level on the right*
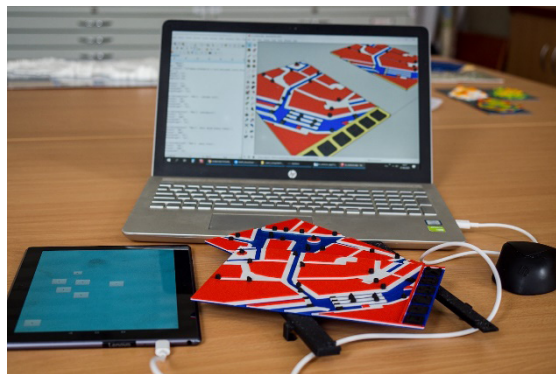
Figure 6: *Tactile maps modelling and compilation of the basis for the mobile application*

3 Web Configurator and Software Tool

Based on the obtained knowledge and specification of the necessary functionality, a beta version of the TactileMapTalk mobile application for Android devices was created in 2018. For this test version of the application, templates containing the layout of the controls of the first trio of tactile map of 1st generation were subsequently

created by measuring individual interactive features. Then the application was used for user testing. In the application it is possible to define buttons under appropriate interactive characters containing parameters about their position, dimension and text, which is then converted by the application into spoken word by the TTS function. Each template designed for one tactile map is then accompanied by an optional name and identification parameters. The manually written (in code) templates in JSON format could be added and deleted to the application according to the current needs of user testing.

The TactileMapTalk mobile app was significantly updated in 2019. The possibility of using different modes was introduced, which was subsequently used in the new generation of tactile maps. A function has also been added to evaluate the sequential pressing of a pair of buttons to call up a route description between two points. There was also work on the creation of a web configurator that will allow easy and user-friendly creation of valid JSON templates for the new tactile map application.

http://hmatovemapy.upol.cz/service/tactilemaptalk/. The web configurator is available at: The TactIleMapTalk application is available at: http://hmatovemapy.upol.cz/konfigurator.
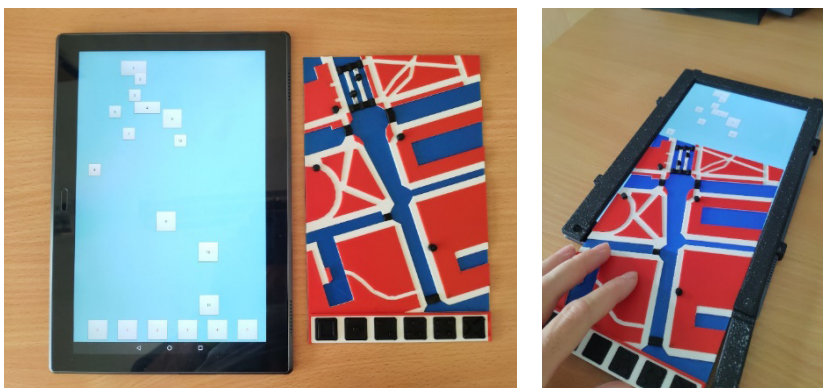
Figure 7: *TactileMapTalk application template environment with its corresponding 3rd generation tactile map*
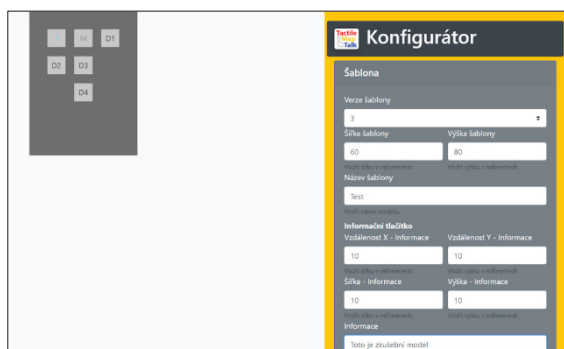
Figure 8: *The window of the web configurator*

4 User Testing

User testing with representatives of the target group is necessary to validate all proposed procedures. This testing was conducted with the participation of the staff of the Institute of Special Education Studies as well as the staff of the Department of Geoinformatics, students of doctoral programs in special education and other geoinformatics programs. Throughout the project, the aim was to gain insights into the proposed didactic approaches and the design of appropriate teaching materials, as well as insights into the proposed technologies and the associated templates, layers and appearance of maps and plans.

User testing was divided into several logical successive stages, which were supplemented in the last testing stage by Kateřina Bečicová, a student.

This testing took place both in the individual centres of the application partner and in primary and secondary schools for pupils with visual impairment, as well as in SONS branches.

In the first phase, only templates and maps representing each thematic layer were tested with several respondents from Olomouc and Kafira branches. The aim was to adapt to the needs of users without having to work with a completely new concept of audio-tactile maps. The results of the user testing were favourable and only the colour scheme was modified to a blue-yellow-red composition. The design of the signs otherwise suited the majority of respondents with individual reservations. Immediately after this testing phase, the testing phase of TouchIt3D tactile maps followed with minor modifications. For each of the three selected test sites, interactive map features were modelled into the map. These include a graphic scale indicating a length of 50 m (height of 4.5 mm from the base, line width of 5 mm), pedestrian crossings (at a height corresponding to the base layer of pavements and streets, i.e. with a height of 2 mm or 1 mm), the start and end point of the crossing (circle

with a diameter of 10 mm, height of 5.5 mm) and public transport stops (square with an edge length of 8 mm, height of 5.5 mm).

On the base of the information acquired, a second prototype was created to meet the set objectives and requirements. All sub-products were consulted with representatives of the application partner, who provides services for the target group and is therefore very familiar with their needs, with experts on the subject and with selected representatives of the target group. Based on the specification of the required features, a beta version of the TactileMapTalk mobile app for Android tablets was also created. For this test version of the application, templates containing the layout of the controls for all three areas of interest (tactile map) were then created by measuring the individual interactive features. This application was then used for user testing of the created tactile map set. For the application, the buttons can be defined under appropriate interactive characters containing parameters about their position, dimensions and text, which is then converted by the application into spoken word thanks to the TTS function. Each template designed for one tactile map is then accompanied by an optional name and identification parameters. Templates in JSON format can be added and deleted in the application according to the current needs of user testing. Almost the entire group of researchers took part in the second phase of testing – Dr. Růžičková for the Institute of Special Education Studies, Dr. Brus for the Department of Geoinformatics, Dr. Barvíř and Dr. Vondráková, PhD candidates from the Institute of Special Education Studies, and for the application guarantor, the Kafira Public Benefit Society, employees of individual branches. Since these were individual consultations and testing with representatives of the target group of users, testing took place throughout 2019.

The findings were evaluated and incorporated into the design of the final tactile map. Despite taking into account the results from the first phase of testing, the colour scheme was changed to blue-white-red to suit more respondents. Different signs were also tested in terms of their vertical shape design (tip, sloping surface, horizontal surface), correct conductivity (touch point triggering), user friendliness and user evaluation within the Map Use concept. Testing results included, for example, defining a new parameter setting for the width of the pavements to a minimum of 5 mm for proper tangibility and understanding of the presented layer. The application can be installed on any Android device. However, the size of the maps should be adapted to the size of the display. This proved to be essential, although in the first phase of testing a minority of respondents commented on this issue. As testing progressed, the final designs were then tested with the new colour scheme. Here it was confirmed that the changes made led to better working of the respondents with the tested tactile maps.

During the testing, it was very useful to gradually introduce the concept of the map, the individual "layer maps" and only afterwards the TouchIt3D map, where the

user already knew which points would be touchable and that he should expect an audio response. From an educational perspective, a proven concept were the multiple modes for a single map, which was proposed in the second half of 2019 and this functionality was fully implemented and tested in 2020. In terms of using audio-tactile map content, the plan for multiple ways to trigger the audio track (tapping, long hold, etc.) was dropped based on user testing. One long hold for the whole map proved to be the suitable trigger, which was understood by the users easily.

The testing also clearly showed that a slight difference in surface texture is not enough and, given the printing technology, the texture of the individual layers is not very desirable. It was also found that all conductive parts of the map must be raised, ideally with their own characteristic features, otherwise the user finds them very clumsily on the map and the audio tracks are triggered by touch when viewing the map without the user wanting them to be.

In the first two phases, testing was carried out by adults, while in the second phase, primary and secondary school pupils were also involved in the testing. For them, tactile map kits were created for geography lessons (details in the next chapter). The testing of the final version of the maps, including the accompanying materials (on the creation of the maps and on the didactic procedure for their use), was planned for the first quarter of 2020, but due to the global pandemic of Covid-19, this phase was extended until July 2020, when the modified maps, the final form of the configurator and the TactileMapTalk application, and last but not least the aforementioned sets of maps for teaching in primary schools were tested.

The project also included the creation of a set of tactile maps for teaching geography. Under the guidance of Dr. Alena Vondráková from the Department of Geo-informatics, student Kateřina Bečicová wrote her bachelor thesis on the topic of Creating Tactile Maps for Teaching Geography. The motivation for this thesis was based on the observation that respondents from the user testing who had previous experience with tactile maps of different types were able to understand TouchIt3D tactile maps very quickly and work effectively with them much earlier than respondents without such experience. It is therefore important that geography teaching aids reach schools specifically targeting pupils with visual impairments. More than anywhere else, this was the case when this modern technology was attractive to the target group of users.

5 Conclusion

The project "Development of Independent Movement through Tactile-Auditive Means", which was funded by the Technology Agency of the Czech Republic, has been successfully completed and all its outputs and other information are available on the project website. The most important results are:

- Sets of tactile-auditory maps;
- Didactic set – teaching materials;
- TactileMapTalk – SW;
- Project web portal (http://hmatovemapy.upol.cz/en/about-the-project/);
- 2 Monographs (Růžičková, V.; Kroupová, K. (2020). Typography: relief graphics and its role in the lives of people with visual impairment. Olomouc: Palacký University. ISBN 978-80-244-5732-1; Vondráková, A. (ed.) (2020). Tyflomapy–Tyflografika–Tyflokartografie: Percepce prostoru prostřednictvím 3D audio-taktilních map. Olomouc: Univerzita Palackého. ISBN 978-80-244-5788-8).

In addition to the above documented outcomes, however, as a team we see the achievement of the goals of the work as the main outcome of the project. These were the adaptation of people with visual impairments to the new 3D maps, working with the new teaching aid and also, and above all, working with the map. The work with the map and map materials then leads to a better grasp of space and spatial relationships and thus increased independence in orientation.

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(reviewed twice)

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Motor skills in children with hearing impairment

(overview essay)

Kristína Tománková

Abstract: *The overview essay presents a narrative literary review of the facts about the motor skills in association with hearing impairments in children from current studies in the period after 2010. This contribution presents various knowledge and selected research surveys in issue. Motor skills and motor development in children with hearing impairment is expected to be different from that in typically developing children in many ways. The aim of the contribution is to summarize appropriate end essential studies that show experiences with problem of motor skills, in a broader context, in child individuals with hearing impairment.*

Keywords: *hearing, impairment, deafness, hearing loss, movement, motor skills, motor function, motor development*

1 Introduction

Motor development is a continuous process throughout life. Hearing impairment in childhood may have significant effects on motor development (Veiskarami, Roozbahani, Saedi & Ghadampour, 2022). Many studies describe the relationship between hearing impairment and motor development and motor skills, while hearing impairment can affect their physical, emotional, motor, and cognitive development (Sahli, 2019; Veiskarami & Roozbahani, 2020; Masuda & Kaga, 2014). Vidranski & Farkaš (2015) present that hearing impairment is a major limitation in communication, and it can obstruct psychological development, development of social skills and motor development. Hearing impairment is the third most common contemporary chronic health condition, and it has become a public health problem. The effectiveness of problem solving in everyday life and in emergency situations depends greatly on the amount and quality of the motor programs. Therefore, it is evident that the normal

motor development in persons with hearing impairment is essential for everyday life. Singh, Raynor, Lee, et al. (2021) describe the impact of vestibular dysfunction on gross motor development in children with hearing loss. Developmental evaluation of deaf children before cochlear implantation has not been given enough attention (Li, Zhang, Yang, et al., 2021). Ganc, Kobosko, Jędrzejczak, & Skarżyński (2022) stated that due to the profound bilateral sensorineural hearing impairment, children with cochlear implant may experience delayed or discordant psychomotor development. Suaret et al. (2017) studied relationship between gait performance and hearing input during childhood assessed in pre-lingual cochlear implant deaf users.

Children with hearing impairments have a higher risk for deficits in balance and gross motor skills compared with children who are developing typically. As balance is a fundamental ability for the motor development of children, a valid and reliable assessment to identify weaknesses in balance is crucial (De Kegel et al., 2010). Children with hearing impairment have balance and motor deficits primarily due to concomitant damage to the vestibular structures. Although early intervention focused on the development of communication skills, investigations of intervention for the amelioration of balance deficits in children with hearing loss have been minimal and inconclusive (Majlesi, Farahpour, Azadian & Amini, 2014).

Selected studies to investigate the effect of motor training intervention on motors skills and balancing in hearing impaired children (Rajendran, Roy & Jeevanantham, 2013; Soori, Heyrani & Rafie, 2019), as well as Vongpaisal, Caruso & Yuan (2016) investigate the training tasks that engage active music listening through dance might enhance the song identification skills of deaf children.

Children with hearing impairment have balance and motor deficits primarily due to concomitant damage to the vestibular structures. Psycho-intellectual and social developmental disorders, as well as elimination of social activities and participation may diminish health-related quality of life in these children. Despite the documentation, assessment of balance, motor deficits, and health-related quality of life of these children are not included in the educational program, unless obvious neurological or orthopedic disorders are diagnosed (Rajendran, Roy & Jeevanantham, 2012). The review of Van Hecke et al. (2019) was performed to investigate the characteristics of vestibular dysfunctions in children with neurodevelopmental disorders. Many of the included studies reported central and/or peripheral vestibular aberrations in a subset of these children. These alterations may result in symptoms of distorted motor coordination or postural instability and might explain some of the balance problems observed in this population.

Balance is a critical component of daily living because it affects all movements and the ability to function independently (Haibach & Lieberman, 2013). Children with hearing impairment may have a potential risk for vestibular dysfunctions. They may undergo a sensory redistribution process whereby visual and somatosensory

information becomes more essential for postural control (Said, 2013). Kaga, Kimura & Minami (2019) to investigated the developmental changes of vestibular ocular reflex and acquisition of postural control in infants with common cavity deformity. Also, children with CHARGE syndrome have sensory and motor impairments that could negatively affect their balance and postural control (Haibach & Lieberman, 2013). Early intervention after confirmation that a child is deaf or hard of hearing is necessary, as well as strict principles and guidelines for this intervention (Yoshinaga-Itano, 2014).

2 Overview of research findings to the solved topic

Veiskarami, Roozbahani, Saedi & Ghadampour (2022) researched a total of 149 children aged six to eighteen months. Children were selected and divided into three groups: normal-hearing children (55 girls and 65 boys) selected by convenient sampling strategy, non-rehabilitated hearing-impaired children group (11 girls and 13 boys) selected by purposive method, and rehabilitated hearing-impaired children group (3 girls and 2 boys) selected by the census method in cross-sectional study. The Denver developmental screening test 2 (DDST-II) was used to assess motor development. The fine motor development of the normal hearing children (9.63 ±28.83) was significantly greater than the rehabilitated hearing-impaired children (−18 ±26.83) and non-rehabilitated hearing-impaired children (−21.25 ±30.26) groups, but there was no significant difference between the rehabilitated hearing-impaired children and non-rehabilitated hearing-impaired children's groups. In gross motor development, the non-rehabilitated hearing-impaired children (−32.71 ±41.26) group had a more significant delay compared to the normal-hearing children (13.38 ±37.73) and rehabilitated hearing-impaired children (0 ±21.21) groups, but there was no significant difference between normal-hearing children and rehabilitated hearing-impaired children's groups. Hearing rehabilitation can partially compensate for the developmental delay in gross skills, but this compensation has not occurred for fine motor skills. The development of fine motor skills requires a precise synergy of small muscles and the nervous system. In the study of Sahli (2019) a total of 169 children with bilateral sensorineural hearing loss, who have the chronological average age of 26.4 months, have been examined. All children are unilateral cochlear implant users and have no known additional impairments and/or diseases other than their hearing loss. The development of children with hearing loss, divided into three groups according to age of diagnosis, amplification, and training has been identified using the DDST-II, and then, general development and sub-development results of these age characteristics have been compared accordingly. As a result of the study, 105 (62.1%) out of 169 children identified with DDST-II have been found to be normal, 48 (28.4%) of them suspicious, and 16 (9.5%) children are found to be abnormal. It appears that

the children who have been diagnosed before age of 6 months, instrumented between 3 and 6 months, and started to auditory-verbal training are revealed to have normal skills in their personal–social, language, fine, and gross motor field capabilities. As the age of diagnosis and intervention is delayed, the rate of delay in the development domains seems to be increasing, which is statistically significant ($p < 0.001$). Children with hearing loss develop similar outcomes in comparison with their normal auditory peers once they are diagnosed before age of 6 months and benefit from early intervention services. The study of Veiskarami & Roozbahani (2020) reviews the recent studies conducted on motor development of deaf children based on Gallahue's model. Few studies have been conducted on deaf children's motor development stages, reflexive, rhythmic, rudimentary, and specialized movement. However, many studies investigated the fundamental movement stage with an emphasis on balance. They mostly reported the deaf children's delay in developing gait velocity (during walking), postural control, static balance, dynamic balance, spatial-temporal coordination, gross motor skills, fine motor skills, and motor skills learning, compared with their healthy peers. Delay in motor development in deaf children is not necessarily the result of deafness or vestibular problems, but individual, environmental, and exercise factors are also involved. Providing appropriate educational opportunities for these children, training specialized teachers and parents, and holding training courses for hearing specialists can help promote motor development in these children. Singh, Raynor, Lee, et al. (2021) described the impact of vestibular dysfunction on gross motor development in children with hearing loss. A systematic review was reported that the articles on children with hearing loss who underwent at least 1 instrumented measure of vestibular function and had gross motor milestones assessed were included. Eleven articles were included in the systematic review. Three articles stratified quantitative results of gross motor milestone acquisition by severity of vestibular impairment. Over half of studies were case series published within the last 5 years. This systematic review showed that children with hearing loss and severe, bilateral vestibular dysfunction demonstrate delayed gross motor milestones. However, it was difficult to draw conclusions on whether milder forms of vestibular dysfunction significantly affect gross motor milestone acquisition in children with hearing loss. The reason is that most studies were of low to moderate quality, used different assessment methods, and contained results that were descriptive in nature. This emerging area would benefit from future research, such as higher-quality studies to assess vestibular function and gross motor milestones. This would allow for better characterization of the impacts of vestibular impairment, especially milder forms, in children with hearing loss. Masuda & Kaga (2014) examined the relationship between acquisition of motor function and vestibular function in children with bilateral severe hearing loss. A total of 97 children under 4 years old with hearing loss defined as a hearing threshold of both ears greater than 80 dB were included in this study. For

evaluation of vestibular function, a damped-rotational chair test was performed, and the horizontal nystagmus was recorded using electronystagmography. Head control and independent walking were delayed in 28 of 97 children with severe hearing loss. Reduced response to the rotational chair test was observed in 16 of 97 children (16.5%), with 11 of these children having inner ear anomalies and reduced vestibular function. Of the 10 children who were followed up by the rotational chair test, 2 children with idiopathic congenital hearing loss without inner ear anomalies (100%) and 6 of 8 children with bilateral inner ear anomalies (75%) showed more obvious nystagmus during rotation compared with the initial examination. When vestibular function is reduced in the rotational chair test in children with severe hearing loss, the vestibular function may be acquired later due to maturing vestibular sensory cells and vestibular nerve of the inner ear along with physical growth. Rajendran, Roy & Jeevanantham (2012) in objective review systematically analyzed the available information in the literatures regarding the postural control, motor skills, and health-related quality of life in children with hearing impairment. The results of this review suggest that children with hearing impairment exhibit suboptimal levels of function in postural control, motor skill performance, and health-related quality of life. Said (2013) assessed the balance ability in children with sensorineural hearing loss compared with normal-hearing controls using clinical balance subset tests. Next, they determined the prognostic value of some etiological, audiological, and demographic (age and sex) factors in predicting a possibility for vestibular impairment for the early identification of children with vestibular deficits. Thirty children with normal hearing (17 girls and 13 boys) and 50 children with bilateral sensorineural hearing loss of varying degree, aged between 5 and 15 years. All of them were subjected to the following: basic audiological evaluation (pure tone, speech audiometry), immittancemetry and auditory brainstem responses, clinical balance subset tests of the standardized Bruininks-Oseretsky Test of motor proficiency (BOT-2), modified Clinical Test of Sensory Interaction for Balance (mCTSIB), one-leg stand (OLS), and tandem stand. Hearing-impaired children showed bilateral sensorineural hearing loss of varying degree, ranging from moderate to profound hearing loss (moderately severe 32%, severe 18%, and profound 50%) and of different etiologies (heredofamilial 46%, acquired 38%, not known 16%). Balance abilities as measured in this study were significantly poorer in hearing-impaired children compared with normal-hearing children. Hearing-impaired children with acquired cause and profound degree of sensorineural hearing loss had the highest abnormal score in these clinical tests compared children with other etiologies and degrees of sensorineural hearing loss (although this difference did not reach statistical significance). In most clinical balance tests that were done in this study, the youngest children in the hearing-impaired group achieved scores that were almost lower than the scores obtained by the older age groups; the most significant difference was observed for

tests performed with eyes closed. Balance dysfunction occurs in a significant percentage of hearing-impaired children and may have significant detrimental effects on motor development mainly in very young children. Therefore, information on the identification and treatment of these balance dysfunctions is crucial. Kaga, Kimura & Minami (2019) investigated the developmental changes of vestibular ocular reflex and acquisition of postural control in infants with common cavity deformity. Eight infants who were congenitally deaf complicated by common cavity deformity were studied. The damped rotational chair test was carried out to evaluate vestibular ocular reflex. Acquisition of head control and independent walking in these infants was compared with that in normal infant's milestones of gross motor development. All the eight infants with common cavity deformity did not show per-rotatory nystagmus in the damped rotational chair test around the first year of life. However, a normal number of beats and a longer duration of per-rotatory nystagmus for their age were recorded at around three or four years of age. In the eight infants with common cavity deformity, vestibular ocular reflex was not present around the first year of life but appeared after three or four years probably because of some vestibular sensory cells. Head control and independent walking were delayed but eventually acquired by the central vestibular compensation. Based on this study, we present two hypotheses regarding appearance of vestibular ocular reflex and acquisition of gross motor development in infants with common cavity deformity with development and growth: (1) the vestibular ocular reflex may develop after the maturity of some vestibular sensory cells stimulated by endolymphatic flow in the common cavity deformity, (2) the central vestibular compensating mechanism could accelerate gross motor development and balance function (3). This study suggests that some vestibular sensory cells may be present in the common cavity deformity because the vestibular ocular reflex begins to function after three or four years of age and gross motor function is acquired when the vestibular ocular reflex appears and by the central vestibular compensating mechanism in the brain.

The study of the Haibach & Lieberman (2013) was to assess the balance and self-efficacy of balance of children with CHARGE syndrome. Twenty-one children with CHARGE syndrome aged 6–12 and 31 age- and gender-matched sighted control participants without CHARGE syndrome completed the study. The Pediatric Balance Scale results revealed that the participants in the control group performed significantly better than did those with CHARGE syndrome (p = 0.05), with 57% of those with CHARGE syndrome at a medium to high risk of falls but all those in the control group at a low risk. Most children with CHARGE syndrome also had low Activities-Specific Balance Confidence Scale scores, and these scores were moderately correlated with the Pediatric Balance Scale scores (r = 0.56) but were not significantly associated with gender (r = 0.065) or age (r = –0.169). Relationship was found between the balance self-efficacy of the children with CHARGE syndrome

and their objectively measured balance. Self-efficacy of balance has been correlated with an increased risk of falls and with decreased participation in physical activities. Increased physical activity with a focus on balance and movement would likely improve these children's balance and self-efficacy of balance. Practitioners should understand that children with CHARGE syndrome will likely have poorer balance and lower confidence in their balance. Balance confidence and capabilities have implications for the development of motor milestones, such as walking, and the ability to perform functional activities. Future research should examine interventions to improve both balance and confidence in balance in these children. Van Hecke et al. (2019) was performed to investigate the characteristics of vestibular dysfunctions in children with neurodevelopmental disorders. Normal functioning vestibular system is thought to be critical in a child's development on many levels. In case of a vestibular dysfunction motor, cognitive, psychosocial, and educational symptoms may occur which tend to overlap with those found in patients with neurodevelopmental disorders. Moreover, in nearly all neurodevelopmental disorders it is known that postural instability, balance, gross and fine motor disturbances are frequently occurring in a subset of patients, which may assume a possible association between vestibular function and neurodevelopmental disorders. Although one cannot assume that a vestibular dysfunction is solely responsible for the wide range of symptoms observed in these children, the hypothesis of the possible connection has been supported by most of the included studies. To get a representative overview and to better understand the potential association and characteristics (i.e., the cause, origin, symptoms, whether there is a partial/complete, bi-/unilateral, or central/peripheral problem) of a (concomitant) vestibular dysfunction in children with various neurodevelopmental disorders, more research with more scientific rigor and an extensive vestibular test battery is required. Nevertheless, since comparable symptoms may occur in both children with neurodevelopmental disorders and vestibular-impaired patients, the authors of this systematic review would like to encourage clinicians to be aware of these similarities when determining the vestibular or neurodevelopmental disorder diagnosis.

The aim of the research of Vidranski & Farkaš (2015) is to analyze the available information pertaining to motor skills of hearing-impaired children both with and without a cochlear implant and to analyze possibilities of influencing their motor skills. The relevant studies on motor skills of hearing-impaired children both with and without a cochlear implant were obtained by an extensive computer search of various databases using special keywords and extraction with respect to certain criteria, resulting in 22 studies. The overall results of this systematic review indicate that the children with hearing impairment exhibit suboptimal levels of motor skills especially balance. Very few studies compared children with hearing impairment with a cochlear implant unit and without a cochlear implant unit and the results

of those studies are quite contradictory. Numerous studies have confirmed that the regular and appropriate physical exercise can improve motor skills of children with hearing impairment, especially balance. The fact that the development of motor skills is crucial for the child's interaction with the outside world, action, perception and acquisition of academic skills and other skills necessary for life shows the importance of motor skills development for children with hearing impairment. Li, Zhang, Yang, et al. (2021) in study was designed to evaluate the comprehensive developmental performance of deaf children who are cochlear implant candidates. The medical records of pediatric candidates for cochlear implant were reviewed. Five hundred children (287 boys; median age: 21.00 months; range: 6–72 months) with a diagnosis of severe-to profound hearing loss were included. Preoperative developmental evaluation, including gross motor, fine motor, adaptability, language, and social skill were retrieved. Comprehensive developmental performances including verbal and nonverbal skill were assessed. Compared with normal developmental metrics, deaf children had developmental delay (p < 0.001), which occurred in not only the verbal but also nonverbal skill (all p < 0.05). Of the 500 deaf children, 50 (10%) had normal performance; the majority (51.6%) had mild neurological dysfunction. Of all the sub-developments, language developed worst (normal rate: 4.2%) and gross motor developed best (normal rate: 42%). Age of intervention was a risk factor for the developmental level of deaf children (b ¼ 0.340, p < 0.05). Pediatric candidates for cochlear implantation had both verbal and nonverbal developmental delay. Age of intervention was a risk factor for the developmental level. Comprehensive developmental evaluation of deaf children before cochlear implantation should be paid enough attention. Early intervention for improving hearing was of significance. The aim of the study of Ganc, Kobosko, Jędrzejczak, & Skarżyński (2022) was to assess the psychomotor development of children after 2 to 3 years from the time of acquiring a cochlear implant. 24 children with bilateral profound sensorineural hearing loss aged 36 to 52 months who received a cochlear implant between 8 and 30 months of age participated in the study. Psychomotor Development Assessment Cards (KORP) were used in the study, which are a tool providing the assessment of psychomotor development in the areas of: motor, fine motor and lateralization, visual perception and visual-motor coordination, communication and speech, emotions and social relations, behavioral functions and pre-school or school skills (depending on the child's age). The testing using KORP was carried out between 23 and 33 months after a cochlear implant activation. Approximately 75% of the children from the study group had the level of development in the field of motor sphere and fine motor and lateralization similar when compared to a group of hearing peers from the normative group. In the field of visual perception and eye-hand coordination it was around 70%. Half of the surveyed group of children showed a low level of functioning in the sphere of communication and speech, and about 60% of the

diagnosed children achieved a low level in the field of emotional and social development, behavioral functions as well as knowledge and learning skills. The obtained results indicated that deaf children who are a cochlear implant users show discordant development. Suaret et al. (2017) studied sensorimotor interaction in deaf children. Relationship between gait performance and hearing input during childhood were assessed in pre-lingual cochlear implant users. Gait velocity, using a 10-meter test, was measured by means of three inertial sensors in 10 pre-lingual cochlear implant users (10–16 years old) in three sensory conditions: (1) cochlear implant turned on with environmental noise, (2) cochlear implant turned on with environmental noise and with cognitive dual task, and (3) cochlear implant turned off. Gait velocity with environmental noise and dual task was assessed in a normal hearing control group (n = 14). In results, gait velocity in control group was lower in dual task than with environmental noise (p = 0.019); gait velocity was faster in control group with environmental noise compared with the three conditions in cochlear implant users (environmental noise, p = 0.006; dual task, p = 0.0001; cochlear implant turned off, p = 0.03); and cochlear implant users had slower gait velocity walking with environmental noise (p = 0.037). The results suggest that auditory input is not neutral in motor skills and the complex interaction between them is generated in the earlier stages of childhood development. The assessment of gait performance in pre-lingual deaf children with cochlear implant and with dual task (p = 0.022). Dividing the cochlear implant users' sample by age, the acoustic information generates a slower gait for those implanted after 3 years old.

De Kegel et al. (2010) compared children with hearing impairments with children who are developing typically. The purpose of this study was to investigate the construct validity of posturography and clinical balance tests in children with hearing impairments and in children who are developing typically. The study involved 53 children with typical development and 23 children with hearing impairments who were between 6 and 12 years of age and without neuromotor or orthopedic disorders. All participants completed 3 posturography tests (modified Clinical Test of Sensory Interaction of Balance [mCTSIB], unilateral stance, and tandem stance) and 4 clinical balance tests (one-leg stance with eyes open and with eyes closed, balance beam walking, and one-leg hopping). Three conditions of the mCTSIB, unilateral stance, and 2 clinical balance tests were able to distinguish significantly between the 2 groups. Children with hearing impairments showed more difficulties in balance tasks compared with children who were developing typically when 1 or 2 types of sensory information were eliminated or disturbed. The study showed only low to moderate correlations among the different methods of evaluating balance. The study of Majlesi, Farahpour, Azadian & Amini (2014) investigated the effect of a 12-session exercise balance program based on proprioception training on balance and gait in deaf as compared with hearing schoolchildren. The subjects, 10 deaf and 10 typically

developing children were assigned to an experimental and a control group respectively. Taking up the initial differences between the groups through a pretest under different conditions, the participants in the experimental group went through a 12-session intervention program including static and dynamic training with emphasis on proprioceptive system. After this, the participants were tested again. The data obtained was analyzed using repeated measure. A comparison between the control and experimental groups revealed that the intervention program had not significantly increased gait velocity while it had significantly decreased the amount of sway. Thus, it was concluded that an exercise program that enhances somatosensory ability can result in improved balance in deaf children. Rajendran, Roy & Jeevanantham (2013) in study determined the effectiveness of vestibular-specific neuromuscular training on motor skills, balance, and health-related quality of life in hearing impaired children. The results revealed that 6 weeks of vestibular-specific neuromuscular training improved the postural control, motor skills and quality of life in hearing impaired children. This indicates that this 6-week intervention can bring about a statistically significant difference. Soori, Heyrani & Rafie (2019) aimed to investigate the effect of 8 weeks of perceptual-motor training on bimanual coordination performance and static and dynamic balancing in students with hearing impairment aged 8–11 years in Kermanshah. 20 girls with hearing impairment with a mean age of 9.35 ±1.42 were randomly selected and divided into control and experimental groups. The used tools in this study were continuous bimanual coordination test device, stork balance test, and Y dynamic balance test. First, all participants performed bimanual coordination task, and static and dynamic balance tests as pretest. Then, the experimental group performed the exercise training (such as static and dynamic balancing, throwing, and catching a ball, running between obstacles) for 8 weeks, 3 sessions per week, and 60 min per session and finally posttest was applied for both groups. According to the obtained results, it can be concluded that exercise training was effective in improving motor skills, as well as the use of these trainings is recommended to increase the level of motor performance. Vongpaisal, Caruso & Yuan (2016) examined whether training tasks that engage active music listening through dance might enhance the song identification skills of deaf children with cochlear implants. Nine cochlear implants children learned new songs in two training conditions: (a) listening only (auditory learning), and (2) listening and dancing (auditory-motor learning). They examined children's ability to identify original song excerpts, as well as mistuned, and piano versions from a closed-set task. While cochlear implant children were less accurate than their normal hearing peers, they showed greater song identification accuracies in versions that preserved the original instrumental beats following learning that engaged active listening with dance. The observed performance advantage is further qualified by a medium effect size, indicating that the gains afforded by auditory-motor learning are practically meaningful. Furthermore, kinematic analyses of body movements

showed that cochlear implants children synchronized to temporal structures in music in a manner that was comparable to normal hearing age-matched peers. Our findings are the first to indicate that input from cochlear implants devices enables good auditory-motor integration of timing cues in child cochlear implants users for the purposes of listening and dancing to music. Beyond the heightened arousal from active engagement with music, our findings indicate that a more robust representation or memory of musical timing features was made possible by multimodal processing. Methods that encourage cochlear implants children to entrain, or track musical timing with body movements, may be particularly effective in consolidating musical knowledge than methods that engage listening only.

Yoshinaga-Itano (2014) in document called: "Principles and Guidelines for Early Intervention After Confirmation That a Child Is Deaf or Hard of Hearing". This document is a supplement to the year 2007 position statement of the Joint Committee on Infant Hearing and provides comprehensive guidelines for establishing strong early intervention systems with appropriate expertise to meet the needs of children who are deaf or hard of hearing. Optimal outcomes can only be achieved when there is high quality to the universal newborn hearing screening programs, the audiologic diagnostic process of confirmation that a child is deaf or hard of hearing and fitting of amplification, and the provision of appropriate, individualized, targeted, and high-quality early intervention services. There are 12 best practice guidelines for early intervention programs that include the provision of timely referral to early intervention services with providers who have knowledge and skills in early childhood deafness and hearing loss, infusion within the system of partnerships with parents as well as professionals who are deaf or hard of hearing, longitudinal developmental assessments for monitoring the child's development, data management systems that include developmental outcomes, a process to monitor the fidelity of the intervention, and appropriate services for children with additional disabilities, those from non-English speaking families, and those from special populations, including unilateral hearing loss and auditory neuropathy/ dyssynchrony.

3 Conclusion

The development of motor skills requires a precise cooperation of the muscles and the nervous system. The adequate motor development is key for the child's interaction with environment and people, for everyday full life and successful future. Early diagnosis of hearing impairment, especial before age of 6 months, is very important. Delay in motor development in children with hearing impairment is not always from due of deafness or vestibular problems, but individual factors are considered. Is not excluded that, vestibular function may be acquired later in maturation of vestibular sensory cells and vestibular nerve of the inner ear along with physical

growth. Symptoms of vestibular dysfunction may be very similar with symptoms of neurodevelopmental disorders (postural instability, balance, gross and fine motor disturbances) and some researchers encourage clinicians to be aware of these similarities when determining the vestibular or neurodevelopmental disorder diagnosis. Current studies indicate that children with hearing impairment show lower level of motor skills, especially balance. A few studies researched effect of the cochlear implantation on motor skills, but results are ambiguous. Evaluation of the development of hearing-impaired children before cochlear implantation has not been given enough attention, concurrently some results indicated that cochlear implant users show discordant development. Numerous studies have confirmed that the regular and appropriate physical exercise can improve motor skills of children with hearing impairment, especially balance. Exercise intervention program, often in the usual length of 6 weeks, enhances somatosensory ability can result in improved balance in deaf children. Age of intervention is a risk factor for next motor developmental level. There are 12 best practice guidelines ("Principles and Guidelines for Early Intervention After Confirmation That a Child Is Deaf or Hard of Hearing" as a statement of the Joint Committee on Infant Hearing) for early intervention programs that include the provision of timely referral to early intervention services with providers who have knowledge and skills in early childhood deafness and hearing loss, infusion within the system of partnerships with parents as well as professionals who are deaf or hard of hearing, longitudinal developmental assessments for monitoring the child's development, data management systems that include developmental outcomes, a process to monitor the fidelity of the intervention, and appropriate services for children with additional disabilities, those from non-English speaking families, and those from special populations, including unilateral hearing loss and auditory neuropathy/dyssynchrony.

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The effect of bilingualism on the severity
of aphasia in people after stroke
in the acute stage

(overview essay)

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Abstract: *If an individual premorbidly controls one of the languages better, one would expect that this difference would be reflected in the degree of impairment of these languages. We call this pattern parallel healing, and it works this way for many patients. For this reason, it was determined that the aim of the research is to describe the influence of bilingualism, diglossia of the "Po nashymu" dialect on the degree (severity) of aphasia after a stroke (CVA) in patients in the acute stage.*

Material and method: *The research is quantitative in nature. The standardized MASTcz screening test was used for data collection, which is freely available for download on the Brno University Hospital website (Aphasia Screening: MASTcz – Brno University Hospital, 2008). The research sample consists of 22 people who are in the acute stage after a stroke. 8 people are bilingual, 14 people are monolingual.*

Results: *Bilinguals do not achieve a higher average score in the total language index (CJI) of the MASTcz test than the control group. Bilinguals show a higher average age (76.5) at the onset of CVA than monolinguals (69.14), but this difference is not statistically significant. MAST performance decreases with increasing age, correlation is weak, negative, statistically significant difference not confirmed due to small sample size.*

Discussion: *The research was inspired by the study of Paplikar (2019), which is based on the assumption that bilingualism results in better cognitive outcomes in patients after CVA. He hypothesizes that this protective effect is due to lifelong use of two languages and switching between them, suppressing the potential competition of another language during production. The results of our research did not statistically significantly show that less severe degrees of aphasia develop in bilingual people in the acute stage after CVA than in monolingual people, but bilingual people showed a higher average age at the onset of CVA than monolingual people. The results were greatly influenced by the insufficient number of probands and also by their disproportionate distribution.*

1 Introduction

According to Grosjean (2019, p. 15), bilingualism is defined as "the use of two or more languages (or dialects) in everyday life". Since linguists are not able to completely differentiate dialect and language, we estimate that there are roughly 6000–7000 languages in the world (Lachout, 2017). Experts are mainly interested in individual bilingualism, when an individual uses another language in addition to the language of the majority society (Morgensternová, 2011). The opposite of individual bilingualism is social or collective bilingualism, which is defined by Lachout (2017) as a phenomenon where a speaker in a certain society and in one area is constantly interacting with multiple languages. Morgensternová (2011) states that the term diglossia is also used for social bilingualism, which originally refers to two forms of the same language. Today it is also used in the meaning of two languages used in society for a different function. According to her, an example can be, for example, Welsh, which is used in a family environment and a circle of friends, but in formal contacts English is preferred. According to Kropáčová (2006), an example of diglossia in our country is the "Po nashymu" dialect, which some residents even consider their mother tongue (Bogoczova, 1993), for example written Czech and colloquial Czech are not considered bilingual. For this reason, diglossia "Po nashymu" became the subject of our research.

1.1 Bilingualism and the aging process

Studies hypothesize that, due to the cognitive benefit, bilingualism provides a delay in the onset of dementia in old age. In connection with this phenomenon, there is talk of the so-called cognitive reserve (Bialystoková, Baracová 2019), which represents the plastic properties of the brain at the molecular, cellular or network level, which are activated in response to the stressors of aging or pathology, while preserving cognition (McQuail, 2021). Bialystok (2007) investigated the effect of lifelong bilingualism on maintaining cognitive functions and delaying the onset of dementia symptoms in old age. The bilingual group showed symptoms of dementia up to 4 years later on average, in contrast to the monolingual individuals. Borsa (2018) and his colleagues investigated that a greater amount of (daily) exposure to a second language will naturally lead to a more frequent requirement to control potential interference from competing languages, thereby increasing the performance of cognitive control. The more we switch between languages, the more likely we are to mitigate the effects of classical aging.

1.2 Bilingualism and aphasia

If an individual premorbidly has a better command of one of the languages, one would expect that this difference would also be reflected in the degree of impairment of these languages. We call such a formula parallel healing and it works in this way for a number of patients (Kuzmina, 2019). However, it is not the only formula for recovery. Albert Pitres (1896, in Fabbro, 2001a) described, first in his publication on bilingualism and aphasia, the following recovery patterns:

- **parallel**, where both languages recover simultaneously;
- **selective**, when both languages are affected, but only one returns to its original state;
- **gradual**, where the first language improves before the second, and gradual, where the second language improves before the first. This diversity stems from the complex structure of the multilingual language system, which is shaped by a complex interplay of influencing factors such as age of language acquisition, frequency of language use, premorbid knowledge, and linguistic similarity between languages (Kuzmina, 2019).

There are also other types, such as antagonistic recovery, where at first only one language is available, but after the other begins to recover, the first gradually disappears. This process can be repeated several times within 24 hours and is then referred to as alternating antagonism (Paradis, 2004). There is also a mixed recovery. It mixes elements from different languages within one sentence and individuals also resort to pathological switching (Fabbro, 2001b). Word mixing occurs mainly to avoid word retrieval difficulties for multilingual people with aphasia (Goral, 2019). Pitres' gradual recovery could be likened to differential, where one language recovers much better than the other relative to premorbid fluency. Either the language that was used the least before the injury recovers best or recovers to a greater extent than expected (Paradis, 2004). According to a meta-analysis by Kuzmin (2019), there are significant differences between early and late bilinguals. Specifically, late bilinguals who acquired their second language after the age of seven showed significantly better overall performance in the L1 than in the later acquired language. In contrast, early bilinguals who acquired their languages before the age of seven showed comparable results in both languages. Furthermore, this study confirmed more frequent, significantly better preservation of L1 compared to L2.

2 Research objectives

The aim of the research is to describe the influence of bilingualism (diglossia of the "Po nashymu" dialect) on the degree (severity) of aphasia in people after a stroke in the acute stage.

As part of the research objective, the main hypothesis was established: In bilingual persons in the acute stage after CVA, less severe degrees of aphasia develop than in monolingual persons.

After studying the theoretical starting points and based on the goal of the research, hypotheses were drawn up.

Hypotheses:
H1: Bilingual persons with aphasia achieve better results on the total language index of the MAST test than monolingual persons with aphasia.
H2: Bilingual persons with aphasia have a higher average age at onset of CVA than monolingual persons with aphasia.
H3: The age of the proband affects the overall language index in the MASTcz test in the acute stage.

3 Material and methods

The research is quantitative in nature. The standardized MASTcz screening test was used for data collection, which is freely available for download on the Brno University Hospital website (Aphasia Screening: MASTcz – Brno University Hospital, 2008). The Mississippi Aphasia Screening Test (its Czech version) is used to examine disorders of phatic functions. It was primarily developed as a rapid diagnostic tool in the acute stage of the disease, the administration of which should take between five and ten minutes (Obereignerů, 2017). This test detects aphasia, alexia and agraphia already in the initial phase of the disease. Before the actual testing, we must find out and fill in anamnestic data such as name, surname, year of birth, education, date of onset of the disorder, health restrictions that can distort the examination, etc. (Cséfalvay, Košťálová, 2013).

3.1 Research set

The research group consists of a group of bilingual persons with aphasia and one control group of monolingual persons with aphasia in the acute stage. A total of 9 women and 13 men with a total average age of 71.82 years and an average length of education of 11.31 years participated in the survey (see table 1). The aim of the research was to describe the extent to which bilingualism and other variables (gender, age and education) influence aphasia arising in persons after CVA. Only people with

CVA as the cause of aphasia were selected. Furthermore, the maximum duration of the presence of the fault was determined, i.e. that only persons with aphasia in the acute stage were selected, i.e. in an intensive care unit or inpatient ward of a hospital. Outpatients were excluded. Another exclusion criterion was a history of neurodegenerative disease in persons with aphasia. The geographical area of data collection was defined on the Czech-Polish border, specifically the regional area of Těšín. Bilingual persons were defined as individuals who use the Czech language and another language in their family environment or when speaking with a close circle of people. In the area defined by us, it is most often Polish and the dialect "Po nashymu". In order to avoid disputes about diglossia in the case of dialect, it was ascertained whether the proband attended, for example, a school with Polish as the teaching language.

Table 1: *Charakteristics of Research set*

	Number (men/women)	Age Φ/x̃ (min – max)	Number of years of education	CJI Φ/x̃ (min – max)
Set	22	71.82 / 71.5	11.31 / 12	44.36 / 48
	13 / 9	(42–90)		(2–98)

3.1.1 Research set of bilingual persons

The research sample consists of 8 people, of which there are 4 men and 4 women, with an average age of 76.5 years, with a minimum age of 63 and a maximum of 90 (see table no. 2). The average duration of education was 10.87 years, when 8 persons had completed primary education, of which 1 person completed their education in secondary school without a high school diploma and 4 people with a high school diploma. As a second language, the probands indicated the dialect "Po nashymu" (they completed their basic education at a Polish elementary school).

Table 2: *Charakteristics of the biligual set*

	Number (men/women)	Age Φ/x̃ (min – max)	Number of years of education
Set	8	76.5 / 79	10.87 / 10.5
	4 / 4	(63–90)	

3.1.2 Control set

The control group consists of a total of 14 monolingual persons with aphasia, of which 9 are men and 5 are women (see table no. 3). The average age of these probands is 69.14 years, with a minimum age of 42 years and a maximum of 87 years. The average

duration of education was 11.92 years, when 3 people completed only primary education, 8 people completed secondary education without a school diploma, 3 people completed secondary school with a school diploma, and of this number, 1 person with a university education.

Table 3: *Charakteristics of the Control set*

	Number (men/women)	Age Φ/ x̃ (min – max)	Number of years of education
Set	14	69.14 / 69	10.57 / 12
	9 / 5	(42–87)	

3.2 Organization and course of research

The research was carried out in the period from the beginning of May 2021 until January 2022 at the Třinec Hospital (funded organization), and Karvinská mining hospital (Join-stock company) in the neurological ICU department, the neurological department and the rehabilitation department. The testing always took place in the form of an examination with the MASTcz test under the guidance of clinical speech therapists. The implementation of the research took place in the researcher's free time or during the semester practice, which was carried out at the research site. Testing time for both monolinguals and bilinguals took approximately 10–15 minutes. Data collection was affected by government measures due to the Covid-19 pandemic, which prevented testing in some hospital wards and thus limited the research sample.

3.3 Data evaluation methods

The resulting values from the MASTcz test were entered into an Excel table and then evaluated in the statistical program RStudio. Non-parametric tests (Mann-Whitney test, Kruskal-Wallis test, Spearman rank correlation coefficient) and descriptive statistics were used to evaluate the data.

3.4 Ethical aspects of research

The research took place at the Třinec Hospital, f.o. and Karvinská hornické hospital, j.s.c., where the approvals of hospital management were requested in advance to permit and enable research. In this research, the protection of all processed personal data was ensured.

4 Results

Since the data do not follow a normal distribution, non-parametric tests are used. The level of statistical significance was set at 0.05.

4.1 Testing of hypothesis

H1: Bilingual persons with aphasia achieve better results in the overall language index of the MASTcz test than monolingual persons with aphasia.

By the degree of variability, we monitor the similarity and difference between the two monitored groups, which is described in graph no. 1. Group 1 refers to monolingual persons with aphasia and group 2 refers to bilingual persons with aphasia. According to numerical table no. 4, we see that the average and median CJI scores of both groups are different and speak rather in favour of monolingual people.

Graph 1: *CJI score values of the bilingual and monolingual group*
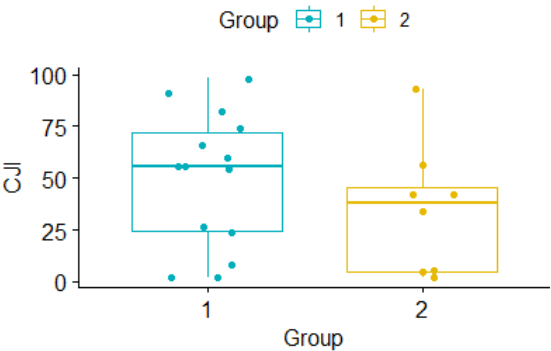
Table 4: *Hodnoty CJI skóre*

	Minimum	Maximum	Median	Average	Standard deviation
CJI monolingual persons	2.00	98.00	55.50	49.86	32.39
CJI bilingual persons	2.00	93.00	38.00	34.75	31.29
CJI whole group	2.00	98.00	48.00	44.36	

To verify the hypothesis H1, we used the Mann-Whitney U-test, when the values $U = 71.5$, $Z = -1.0255$ and the probability value p-value $= 0.3051$, which means that it is greater than 0.05 and there is no significant statistical difference between the tested groups in overall performance in the MASTcz test.

H2: Bilingual persons with aphasia have a higher average age at onset of CVA than monolingual persons with aphasia.

In graph no. 2 and in table no. 5 we can observe the distribution of age values of both groups, where group 1 again represents monolingual individuals and group 2 bilingual individuals.

Graph 2: *Age of bilingual and monolingual persons*
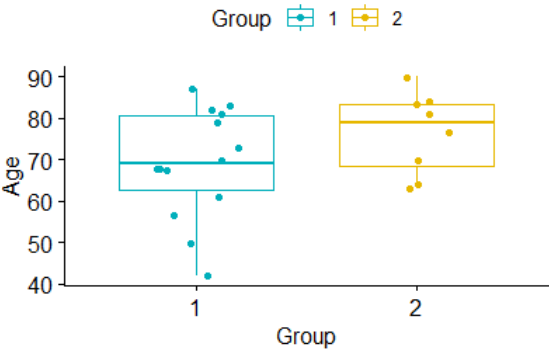
Table 5: *Age values of the bilingual and monolingual group*

	Minimum	Maximum	Median	Average	Standard deviation
Monolingual group	42	87	69	69.14	13.1
Bilingual group	63	90	79	76.5	12.37

We used non-parametric U-test methods for testing and the following values were found: U = 37.5 and Z = 1.2299. From this result we can conclude that the probability value p-value = 0.2187 and is therefore greater than 0.05 – the level of significance. It means that we cannot reject the null hypothesis or confirm the alternative hypothesis because the difference between the two groups in the mean age is not statistically significantly different.

H3: The age of the proband affects the overall language index in the MASTcz test in the acute stage.

When testing this hypothesis, we used the non-parametric test Spearman's rank correlation coefficient. From the calculations, we found the value of the coefficient rsp = -0.16 and the probability value p-value = 0.4754. We can speak of a negative or even downward weaker correlation between the two variables. On dot graph No. 3,

we can observe this very small decrease in performance with increasing age, which is not statistically significant, however.

Graph 3: *Effect of age on the overall language index*
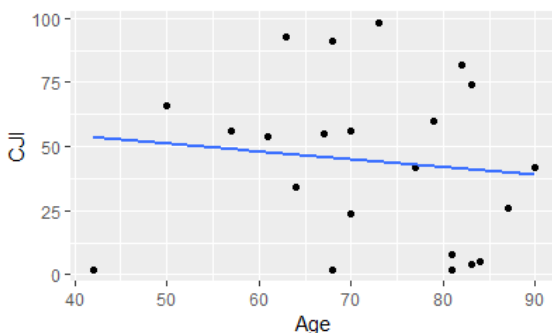
5 Discussion

The topic of the influence of bilingualism on aphasia has been addressed by several studies in the world in recent years. Our work is originally inspired by the Indian research of Paplikar (2019), which is based on the assumption that bilingualism results in better cognitive outcomes in post-CVA patients. He hypothesizes that this protective effect is due to lifelong use of two languages and switching between them, suppressing the potential competition of another language during production. This study differs from previous research in that it does not relate to migration, which may be a confounding factor. In total, 38 bilingual and 27 monolingual patients were tested. They had to meet the requirement that at least 3 months had passed since their CVA (the final average was 11.5 months). Addenbrooke's Cognitive Examination – Revised (ACE-R), validated for use in local languages and for different levels of education, was used to assess the performance of language areas and other cognitive functions. After taking into account confounding variables such as age, gender, education, etc., the results of the two groups were compared. The severity of the ACE-R language subtest score was significantly higher in monolingual patients compared to bilinguals (7.0 vs. 14.4 when the maximum score was 40, p value = 0.008, effect size = –0.691). Bilingual patients also performed significantly better in attention, memory and visuospatial areas. Another study supporting the fact that the severity of aphasia after CVA is less in bilingual persons was presented by Lahiri (2021). It aimed to analyze the effect of bilingualism on recovery from aphasia in the acute stage after CVA. 155 monolingual and 53 bilingual patients with aphasia were selected in the study, of which 120 monolingual and 43 bilingual patients were finally studied. Inclusion criteria were alertness during testing, literacy, age over

18 years, and native Bengali speakers. Furthermore, the absence of dementia, cognitive impairment affecting language assessment, premorbid psychiatric disorders preventing communication, alcohol and drug abuse, and aphasia as a result of an intracranial lesion. Testing was done using the Bengali version of WAB in the acute stage, specifically 90–100 days after CVA. Severity was assessed by calculating the aphasia quotient (AQ). When analyzing the results, it was found that the bilingual group had better results in terms of patient recovery, and this was the case with subcortical and mixed cortico-subcortical CVAs. With respect to gender, the bilingual group also had better results, especially men.

The aim of the research was to try to describe the influence of bilingualism (diglossia of the "Po nashymu" dialect) on the degree (severity) of aphasia in people after a stroke in the acute stage. Based on the obtained results, we cannot unequivocally confirm or refute our main hypothesis, and thus we are unable to claim that bilingualism has an effect on the degree (severity) of aphasia after a stroke in the acute stage in our research. A limitation was the very small sample size in both groups of the research population. **The main findings of the research include:**

- Bilinguals do not achieve a higher average score in the total language index (CJI) of the MASTcz test than the control group.
- **Bilingual persons show a higher average age (76.5) at the onset of CMP than monolingual persons (69.14), but this difference is not statistically significant, but is confirmed by foreign studies.**
- MAST performance decreases with increasing age, correlation is weak, negative, statistically significant difference not confirmed due to small sample size.

6 Conclusion

In the Těšín region, the "Po nashymu" dialect, which combines elements of the Czech, German, Polish, and Slovak languages, is usually used in everyday communication. In connection with the aging of the population and the frequent occurrence of cerebrovascular accidents, the connection of aphasia with bilingualism seems more and more likely. Although not many experts deal with the topic of bilingual aphasia in our country, it is gaining importance. From a scientific point of view, the study of aphasia in bilinguals can help us clarify the distribution and operation of language functions in the brain, and also shed light on the differences between monolingual and multilingual individuals. The results of our research did not statistically significantly show that less severe degrees of aphasia develop in bilingual people in the acute stage than in monolingual people, but bilingual people have a higher average age at the onset of CVA, which is also supported by foreign studies. The results were greatly influenced by the insufficient number of probands and also by their disproportionate

distribution. The question of further research is the expansion of the research set, by which we could obtain more relevant results.

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Educational objectives focused on adaptation of Czech pupils with severe special needs and the role of these objectives in educational documentation

(scientific paper)

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Abstract: Intervention focused on the ability to adapt in pupils with severe special needs ability is an important part of their education. That is, however, not reflected in the Czech curriculum for special primary school – the most basic guideline for educating pupils with special needs in the Czech Republic. The goal of this study is to uncover what adaptation-related issues special needs pupils face and what solutions Czech teachers choose to address them. We obtained data from seven qualitative interviews with teachers who teach pupils with high levels of special needs, and autistic spectrum disorders, and who follow Czech curriculum for special primary schools. Inductive content analysis was used for further data sorting. The data was divided into three categories – description of adaptation-related issues, intervention focused on adaptation, and teacher-parent cooperation. We discovered that adaptation issues in educating pupils with high-level of special needs occur as they enter the school system, as they adapt to new people, schedules, school environments, and group activities, and as they face various perceptual inputs. Based on this analysis we provide examples of how to word educational objectives in each of these areas in the curricular documentation and specific suggestions on how these objectives can be integrated into the Czech curriculum for special primary schools.

Keywords: Special needs, autistic spectrum disorder, sever disability, education, Czech curriculum for special primary schools, curriculum, documentation

1 Introduction

The current reform of Czech curricular documentation that is taking place in the Czech Republic allows space for reflection of these key documents that define and frame the conditions for educating pupils. One of the newest of these documents is

Czech curriculum for special primary schools (VUP, 2008), which regulates education of pupils with severe special needs, especially in its second part. This second part titled "Education of pupils with severe mental disability and multiple disabilities" addresses work with pupils for whom education was not accessible in the past. The Czech department of education only took some legal steps to provide first educational opportunities to these pupils at the end of the 20th century. These established preparatory classes of special schools later so-called rehabilitation classes (Valenta, Müller, 2022). Educating pupils with high level of special educational needs (SEN) was always significantly more challenging and very different from educating pupils with less serious levels of SEN (Kantor, 2015).

These issues also seriously impacted the development of legal documents that outline the educational content for pupils with high levels of SEN. Significant part of the educational programme in so-called rehabilitation classes was almost literally copied from the educational programme for preparatory classes of special schools. This programme's design influences the education of pupils with high levels of SEN to this day. The curriculum is flawed on many levels including the use of outdated and inappropriate terminology and strong focus on developmental skills which is typical for work of younger pupils (Nietupski et al., 1997). Some of the areas of educational objectives that are key for these pupils need more elaboration in the curriculum – for example the objectives oriented towards adaptation of the pupils (Ludíková, 2013).

Adaptation issues are typical for pupils with higher levels of SEN (Hrebeňárová, 2016) and are connected to lower levels of adaptability or "the ability of an individual to adapt to a new environment – social or natural" (Hartl, Hartlová, 2010, s. 12). Of people with high level of SEN pupils diagnosed with autistic spectrum disorder (ASD) face issues with adaptation most commonly. Their issues connected to adaptation can be explained by the neurological disorders that manifest in perceptual and cognitive differences (Boucher, 2017), in sensory processing disorders (Schaaf, Mailloux, 2015) and other symptoms that result in low adaptability in different educational situations. These situations include the pupils' first encounter with the school as well as any more significant change in the educational process. Some psychological theories explain adaptability disorders – for example adaptive and maladaptive coping behaviour model (Schopler, Mesibov, 1997) which connects non-adaptive behaviour with stress or anxiety, lack of effective coping strategies and relatively high levels of the pupils' vulnerability. This vulnerability is, paradoxically, present even when non-adaptive behaviour takes the form of physical aggression.

During their education, pupils with high level of SEN need to learn not only to handle stressful situations in which adaptation issues manifest, but also continuously practise adaptation. Higher tolerance of change is very important for these pupils because it makes it easier for them to lead their lives in everyday settings, increases their opportunities for social interactions and enhances their overall quality of life

(Hall, 2017). Studies also show that adaptation issues are the viewed by the pupils' caregivers and wider social circle as very serious.

Pupils' adaptation to new stimuli can be improved through a number of strategies, including structuring the environment, creating a good classroom climate, practising social skills, problem-solving strategies, developing functional communication, etc. (Hall, 2017; Thorova, 2016). Adaptation objectives are common in some intervention programs used with these pupils. These include, for example, structured learning (Čadilová, Žampachová, 2008), the TEACCH programme (Schopler, Reichler, & Lansig, 2011), or applied behavioural analysis (Mikurčíková & Ivanková, 2018). Many of these strategies are well known in our environment and are used in Czech schools for pupils with SEN. That is why we were interested in how the current curricula, especially the curriculum for special primary schools, conceptualise this issue.

Before starting this study, we conducted a preliminary analysis of the curriculum for primary education and the curriculum for special primary schools. The aim was to trace all statements that relate in any way to pupil adaptation as an educational goal. Through content analysis, we identified statements about adaptation to the water environment and non-specific statements claiming that certain educational areas promote social adaptability, physiological adaptability of the organism, etc. (a detailed list of all statements is provided in Appendix 1). These examples did not relate in any way to the most serious adaptation problems that these pupils faced or were not phrased in an appropriate way, e.g. 'not to be afraid of unpleasant noises' (VUP, 2008, p. 83). This means that the educational goals of adaptation for pupils with severe SEN are not sufficiently conceptualised in the curriculum.

This is one of the key shortcomings of the current curriculum for special primary schools, which prompted this study, the methodology and results of which are presented in the following sections. Our intention was to conceptualize the issue of adaptation inductively, based on the current pedagogical practice of Czech teachers. We set ourselves two objectives, namely, to find out (1) what adaptation problems in the school environment are experienced by pupils who are educated according to the curriculum for special primary schools from the teachers' perspective, (2) what types of strategies and procedures teachers use to cope with these adaptation issues, or to practise pupils' adaptability based on their experience. Although there are intervention studies that have investigated the effectiveness of particular interventions (e.g., Shire, Kasari, 2014; Virues-Ortega, Pastor-Barriuso, 2013; Mohseni et al., 2015; and others), in this study we aimed to understand local pedagogical practice and to determine how Czech teachers use particular strategies in the context of the adaptation issues of particular pupils and educational situations. At the same time, we sought to ensure that the results of the study would have practical use for teachers and could serve as a complementary basis for possible amendments to the curricula

(especially the curriculum for special primary school) to include objectives related to the adaptation needs of pupils.

Moreover, in this study, we purposely limited the scope of severe SEN to pupils diagnosed with ASD. This was guided by the fact that adaptive objectives represent a key area of education for these pupils, and that the most sophisticated intervention strategies are designed for this group of pupils. The results we obtain will, however, be applicable to other pupils with severe levels of SEN.

2 Methodology

Research Questions:
- Which adaptation issues do teachers face when educating pupils with ADS following part II of curriculum for special primary schools?
- What strategies and approaches do teachers use to handle these adaptation issues in pupils with ADS following part II of curriculum for special primary schools?

The research sample in this study consisted of teachers who educate pupils with PAS according to Part II of the curriculum for special primary school (further referred to as research participants). To be included in the research the participant had to have at least 2 years of full-time teaching experience with these pupils. However, teachers with longer experience, working in various schools and in various demographic areas were preferred to obtain a sufficiently heterogeneous sample. To recruit participants, we contacted 24 primary schools for pupils with SEN from different regions in the Czech Republic via email, or a telephone call. All the selected schools educate pupils with high level of SEN. In the end, seven special educators agreed to participate in the research, six women and one man. The experience of these teachers ranged from 2 years to 29 years (average 10 years). They all had a master's degree (in special education) and were from the following demographic areas: the South Moravian Region (2 participants), the Kralovehradecky Region, the Moravian-Silesian Region, the Olomouc Region, the Central Bohemia Region, and the Zlín Region (except for one case, these were towns with populations over 20,000). Participants will be further identified by the letter U and a numerical code.

The objectives of the study were explained to each participant before the interview. We obtained their consent to participate in the study, outlined the conditions of participation, and reminded them of the option to withdraw from the interview at any time. All teachers were also guaranteed anonymity. We agreed on the conditions under which excerpts from the interviews can be published. We did not seek approval of the ethics committee; the implementation of the study was guided by the Declaration of Helsinki. The research took place from January to April 2021.

We collected the data by the method of semi-structured interviews. The structure of the interview included the following topics:

- In what areas do adaptation issues of pupils with PAS manifest?
- What circumstances affect the adaptive ability of pupils with PAS?
- How do teachers deal with specific adaptation issues of pupils with PAS?
- What role do teachers and the classroom environment play in the adaptation of a pupil with PAS?
- What role do parents play in the adaptation of a pupil with PAS?

To get as much insight as possible into the possible perspectives of the pupils themselves (who for logical reasons could not be included in this study), we decided to include descriptions of specific situations related to specific pupils in the interviews. The interviews were conducted in an undisturbed setting (e.g., in classrooms after hours) and lasted around 60 minutes. Because we aimed to gain greater sensitivity to the perceptions of the phenomenon under investigation and the context in which the phenomenon was being studied, the interviews were conducted in most cases after the first author of this paper had been in the pupils' classrooms for several hours.

After the individual interviews were conducted, the data was transcribed into text and prepared for analysis. That way we obtained a text that was further structured by colouring passages of text relating to the same topics (the same colour was always used for a particular topic). The evaluation of these interviews was based on inductive content analysis with an open coding procedure (Strauss and Corbin, 1999). As Švaříček and Šeďová (2014, p. 211) state, "in open coding, the text as a sequence is broken into units, these units are given names, and the researcher then works with the newly named (labelled) text fragments". During the coding process, categories were created by comparing and classifying the units of meaning (codes) and the concepts contained within them, trying to determine whether they related to another similar phenomenon or formed a separate distinguishable unit. By searching for connections in the data and linking parts together to form larger units, codes were grouped into higher-order categories and subcategories. During our work, we were constantly reflecting the content of the data considering the research questions, which influenced the resulting arrangement of categories and subcategories. In the end, three categories were created relating to the characteristics of adaptation problems, interventions aimed at adaptation problems, and collaboration between teaching staff and parents. These categories contained a total of eight subcategories.

3 Results

The analysis results – Table 1 presents categories, subcategories, and characteristics. A narrative description of each category and subcategory follows.

Table 1: *Overview of categories, subcategories and their characteristics*

Category	Subcategory	Characteristics
Adaptation issues characteristics	General characteristics	Adaptation problems are present in most pupils with PAS, they change over time, manifest in different areas and to different degrees; intervention must be individually focused.
	Factors affecting adaptation	Type of ASD, severity of mental disability, adaptability of the pupil, personality of the pupil (his/her character, temperament, etc.), associated disorders, current psychological state, previous experience with pre-school education, upbringing and guidance in the family, quality of cooperation with parents, guidance of the teacher and classroom climate, characteristics of special education support.
	Areas of adaptation issues	Adaptation problems at school entry, issues with adaptation to different people present at school, to the daily schedule, to changes in the school environment, to cooperation in group activities, to various perceptual stimuli.
Intervention focused on adaptation issues	Key guidelines and principles	Structuring, visualization, individualization, illustration, appropriateness and sustainability, success of teaching, stability, consistency
	Teacher's characteristics	Empathy, patience, friendly attitude and interest in the pupil.
	Strategies and approaches	Creating a pleasant climate preventively, adjusting the environment, training for changes, gradually increasing the learning load, working with another teacher, rewards, rewards, withholding a favourite activity, feedback, repeated explanations and reassurances, etc.
Cooperation with parents	Key role	Reasons why parents have such an important role in adaptation – many pupils with ASD are unable to communicate important information, and in many cases the intervention has to be planned and implemented together (typically at school entry).
	Partnership	Partnership characteristics, listening to parents.

Characteristics of students' adaptation problems (category 1)

Adaptation problems occur in many pupils with ASD who are educated according to part II of the curriculum for special primary schools. Sometimes these problems are of severe nature, which significantly disrupts the educational process or even makes it completely impossible. The adaptation objectives of the educational process are therefore important for everyone involved – for the pupils themselves, but also for

teachers, teaching assistants, other staff and, of course, for the parents. Moreover, adaptation problems are very heterogeneous and can be related to a wide variety of stimuli: "Pupils with ASD have individual adaptation difficulties, with the classroom environment, the arrangement of furniture, the daily schedule, their classmates, teaching staff, but also with everyday things" (U3). As stated by U2, problems can start as soon as they enter the school premises: "The very entrance to the building and the collective of children in the classroom is a problem. A boy I have in my class is particularly bothered by the collective of children. He gets angry, cries, stomps. But it's different for everyone."

During the interviews, teachers named various factors that affect the adaptation of pupils with ASD. These included factors related to the diagnosis and special needs, but also to the pupil's personality (e.g. his temperament), his previous experiences (e.g. previous inclusion in pre-school education) and other environmental factors. U4 states that "the situation may change according to the pupil's current state of mind, mood, health, weather…". Already overcome adaptation issues may reappear or increase during puberty.

The category characterizing students' adaptation problems was heavily infused with statements that related to descriptions of areas in which adaptation issues occur. These areas relate to the relationships to the environment, people, activities, stages of learning, various perceptual stimuli, and other conditions under which adaptation problems occur.

The first of these areas addresses the issues of adaptation upon pupils' entry to school. Teachers' experience shows that the first requirement for successful adaptation in this case is to prepare a suitable environment. In the process of adaptation, this environment should be stable, structured, supported by visualisation and without major changes. The adaptation process optimally starts before the start of school. U1 describes this process for one pupil: "We were in the process of enrolling a new pupil, and she had been coming for almost a year and a half for a gradual adaptation. First she only visited the school, then she just sat in the classroom with her legal guardian, then she was assigned a place to work that will not change, then she worked with a parent, and then with a teacher. Visiting time was also increased gradually. At the beginning it was just one hour, then two hours, then she tried a snack, etc." Close collaboration with parents is essential in this area (U7).

Behavioural problems may arise in the process of pupils' adaptation to school staff and classmates: 'When problematic behaviour occurs, it is important not to relate the aggressive behaviour to oneself. I just must make sure that both he and I are safe" (U1). An important part of this process is also work with other pupils in the classroom, who must learn to respond appropriately to challenging situations and not encourage escalation of risky incidents. The process of adaptation must move forward by building mutual trust between pupil and teaching staff.

U4 describes the adaptation to the daily schedule and changes at school: "Again, it is unique to each individual, some pupils do not have a problem with the changes… One of the pupils moves things to where they belong, straightens furniture, tools, things." In addition to a range of strategies such as following a routine, clear and understandable instructions, and regular school attendance, U1 also mentioned the positive role of time and the importance of teacher consideration, "They find it difficult to respond. Gradually they get used to it and usually they adjust. I avoid things unless they are necessary. As I get to know the pupil, I generally work to ensure the calmest possible process. If I need to try a new activity, a new room for example – I try it for as short a time as possible and respond to the pupils' reaction. We practise gradually. If a pupil refuses an activity, I don't reject it completely, but I try to offer it again on another day."

There have been many changes in schools recently because of the COVID-19 pandemic. This has been particularly challenging for pupils with severe SEN (U5): "In the current 'covid' era, coping with change is harder. They don't want to wear the mask, they don't want to have online classes, then they don't want to go to school again, it always takes time to get used to the new situation, but they always accept it in the end, and although they often comment on it, they know that there is nothing else they can do. They are medicated at home; we explain to them that there will be a change so that they are ready for it. They get used to it; they just talk about it all the time at first."

Adaptation to cooperation in group activities is extremely important in school collectives, as many group learning activities take place even in classes where pupils are educated according to the curriculum for special primary schools. Teachers reported that their pupils with ASD have difficulties in this area to varying degrees, ranging from an inability to tolerate a collective of pupils, to the ability to tolerate others without actively engaging in joint activities, to tolerance of the collective, but at the cost of frequent conflicts and difficult situations.

In addition to cooperation with classmates, some specifics of students' sensory perception were mentioned in interviews with teachers, such as hypersensitivity to certain sounds, visual or tactile stimuli. These stimuli may be more prevalent in certain subjects, e.g. music, sensory or art education. The situations in which pupils are unable to tolerate a perceptual stimuli tend to be considerably unpredictable for teachers, as pupils with ASD have a different threshold of sensitivity for perceiving these stimuli.

Intervention focused on issues with adaptation in pupils (category 2)

Statements related to the intervention were divided into three subcategories. In the first two subcategories, which related to key principles, guidelines, and important

teacher qualities, teachers described the application of commonly known rules such as structuring, visualization, individualization, demonstrativeness, appropriateness, and sustainability. U7 applies the principle of the need for successful teaching: "I find it very important that the pupil must know that learning is a game. When they do something well, they get great joy out of it, and then the sense of 'I can do it and you know that about me.' Then the child develops a sense of self-worth and matures into a positive person." The physical environment and communication with a student with ASD should be characterized by stability and consistency.

Teachers also mentioned some important qualities that are necessary for an effective adaptation process, such as empathy, patience, kindness, calmness, optimism, and interest in the pupil. As stated by U7: "A firm kind teacher". The teacher needs not only patience given the often-slow progress of pupils, but also a realistic assessment of the pupils' capabilities (U4): "progress is very small and slow, one must not have exaggerated expectations, not be discouraged by this, proceed patiently, reasonably, do not overload the pupils". The teacher also needs sufficient self-reflection to be able to recognise her own psychological state and to adapt her work with the pupils accordingly (U4): "Pupils are very sensitive and can sense when the teacher is not at ease, then it reflects on the pupils themselves."

The second sub-category covered a wide range of strategies and approaches. Teachers talked about creating a pleasant climate as a prevention of problematic behaviour in the adaptation of the pupil (U4): "Positive relationships and an overall positive climate in the classroom, in the collective, is central to working with these pupils". Pairing with the pupil (adapting and forming a relationship with the teacher and the environment, materials, etc.) helps in this regard. The climate in some classrooms has a family-like atmosphere (U3): "The overall atmosphere in the classroom is important and is kept friendly or even family-like. Furthermore, communication between staff and pupils, which is always kind and welcoming, yet respectful of the teacher's authority, contributes to the classroom climate. Last but not least, the climate is also influenced by procedural prerequisites such as the alternation of interesting activities during the lessons and the avoidance of stressful situations for the pupils." The modification of the environment also includes the structuring of the space, the unchangeability and relative permanence of the environment. Similarly important is the creation of a predictable daily routine. Some teachers said they try to avoid major changes. Another preventive strategy is to prepare pupils for changes or activities, e.g. by repeatedly reminding them of the upcoming change through visualised routines or verbal communication.

An individual approach to the pupil is possible by determining their current level and gradually increasing the workload, e.g. by extending the length of the lessons. This requires an adjusted time allocation and a teaching assistant, as teaching often cannot take place within the normal 45-minute teaching time. U7 states, "for

example, one little boy needs to run all the time, he can't sit still for long. We use a minute timer a lot. The little boy knows he has to sit for the minute to ring and if he can do that, he gets a reward. So, in little steps like that, it works." Although one-to-one teaching is a significant component of instruction for pupils with severe SEN, group activities cannot be avoided. Teachers reported great importance of morning circles – ritualised morning meetings that follow a pre-arranged pattern and thus facilitate pupils' adaption to the teaching routine.

Strategies for dealing with maladaptive behaviour, e.g. aggression, are described by U3: "We help the pupil to understand the situation by explaining it and naming his emotions. We try to ask questions so that there is mutual understanding and point out what is important in the situation. In this way, the pupils gain information about their behaviour and the effect on their environment, and they also find out which of their behaviours are reflected in the behaviour of others, so that they can adjust and adapt their conduct." U7 uses emoticons to name emotions and then express them. This helps pupils avoid escalating internal tensions. U4 tries to avoid triggers of negative emotions by removing them or avoiding them if possible.

Other strategies mentioned included appreciation, rewards, withholding favourite activities, feedback, creative and fun activities (to increase engagement in activities), repeated explanation and reassurance, etc. U4 pointed out the importance of the collaboration of teaching staff: "The collaboration of teaching staff is also important, we consult the activities together, we know exactly who has to do what."

Cooperation with parents (category 3)

Cooperation with parents of pupils with severe SEN is extremely important, therefore we have singled out this topic as a separate category. The importance of cooperation with the family is highlighted by the fact that these pupils are often not able to pass on the information that teachers or parents need (U4): "the information from the parents on how the pupils behave at home, how they acted in the previous institution, what their interests are, what they do not like, is very important for teachers in the adaptation of the pupil, so that they can then work actively with it. It is very beneficial if parents and teachers communicate daily, any problems, uncertainties can be resolved immediately."

U3 continues: "At arrival and departure, the parents and the class teacher keep each other updated on the pupil's mood and condition so that they can keep each other informed of what is happening and adjust the pupil's further activities. Parents play an indispensable role in this task. … After school, they ask the pupil about their school experience and help them to make the best of their education and the adaptation process." In some cases, close collaboration is also necessary for the actual

implementation of the intervention, as described, for example, in the section on school adjustment.

The cooperation between the family and the school should ideally take a form of partnership (U4): "The role of the parent in the educational process is very important, optimally the parent should be a partner of the school, be helpful, actively participate in the whole process, including adaptation." U7 views the idea of partnership primarily as listening to the parents. "We try to listen to parents a lot, it is very valuable for them to see that they are important to us and that we are simply interested in them."

4 Discussion

The results of this study show the variety of areas that teachers in Czech schools must deal with in relation to the adaptation of pupils with severe SEN. Using data collected from seven teachers, we identified areas of adaptation problems related to school entry, different people present in the school, daily schedule, changes in the school environment, cooperation in group activities and diverse perceptual stimuli. These findings are consistent with previously published findings (Hall, 2017; Granpeesheh et al., 2014; Reichow et al., 2011).

Another aim of this study was to describe specific strategies and practices that teachers use to address pupils' adaptation issues. From the principles and guidelines reported by the teachers, it is evident that their practice is still strongly influenced by the intervention methods that were introduced into Czech special education practice at the time of the opening of the first rehabilitation classes. This includes structured learning (Čadilová, Žampachová, 2008), which is based on the TEACCH programme (Schopler, Reichler, Lansig, 2011). The influence of behavioural techniques, such as behavioural conditioning techniques or task analysis (Richman, 2006), is also evident.

The quality of cooperation between parents and teachers is another factor that fundamentally determines the process of adaptation of pupils with high level of SEN (Kantor, Ludíková, 2015; Mitchell, Sutherland, 2022). Especially when entering the school setting, it is virtually impossible to help pupils adapt easily and quickly without close cooperation between the family and the school. For this collaboration to be successful, a description of specific strategies is simply not sufficient, although the practical implementation of this collaboration relies on certain strategies, e.g. strategies for communication and information transfer. However, it is above all about recognising the key role that parents of pupils with severe SEN have in the educational process, the need to listen to them and to treat them as partners.

The overview of strategies and practices that we developed from the data collected through interviews does not pretend to comment on the effectiveness of each strategy, given the type of study. Thus, it should in no way be considered a recommendation for the use of specific strategies. In this study, we have explored this area mainly to

gain a deeper understanding of local teaching practice, which will enable us to offer specific suggestions and recommendations. These suggestions are appended to this paper at https://osf.io/3r2k6/.

Reflection on the study's limits

During the preparation, implementation, and production of the publication output of this study, we reflected on some strengths and limitations of the procedure that may have influenced the nature of the resulting conclusions. Among the limitations is the fact that we used only one source of data gathering, which may have been biased. Similarly, we did not include teaching assistants and other professionals whose relationship with pupils with severe SEN is different from that of teachers in the research sample. Further research in this area could therefore focus on collecting data primarily from other teaching professionals and paraprofessionals. For logical reasons, we were unable to conduct interviews with the pupils themselves and access to their parents was difficult during the pandemic (the study was conducted as part of the undergraduate thesis of Bc. Anna Šudřichová in the period 2020–2021).

In this study, we also did not expect to obtain new original strategies regarding the adaptation of pupils with high level of SEN. In fact, the teachers in this study largely described what is already known from Czech or foreign literature. This study helped us to provide a context for conceptualizing educational goals related to adaptation from the perspective of current teachers and their educational practice. This study also did not aim for a deep phenomenological exploration of the topic, which was not accommodated by the data collection and analysis procedure.

5 Conclusion

Teachers of pupils with high level of SEN deal with a wide range of adaptation problems related to school entry, the people present during education process, schedule of the day, changes in the school environment, cooperation in group activities and diverse perceptual stimuli. In terms of intervention, teachers consider collaboration with parents to be very important. Since adaptation goals are not addressed at all by the current curricula (especially the curriculum for special primary schools), in the appendices of the paper (see https://osf.io/3r2k6/) we offer concrete examples of how these objectives can be worded in pedagogical documentation and suggest how to incorporate the issue of adaptation of pupils with severe SEN into the current curriculum for special primary schools.

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Strategies of the therapeutic educator in promoting inclusion in early stimulation according to the principles of Maria Montessori

(overview essay)

Petra Mitašíková, Peter Farbar

Abstract: The paper deals with the issue of supporting inclusion through early therapeutic-pedagogical stimulation using Marie Montessori's concept. It presents the results of qualitative research, on the basis of which the therapeutic strategies of the therapeutic pedagogue were identified in the context of early stimulation. The research presents verbal and combined verbal-physical-activity strategies in early therapeutic-pedagogical stimulation according to M. Montessori. Therapeutic-pedagogical early stimulation according to Maria Montessori's concept is a specific therapeutic approach within a broader understanding of early intervention. The goal is to maximize the participation of a child with at-risk development in the life of the family and community in the context of supporting inclusion.

Keywords: early intervention, early therapeutic-pedagogical stimulation, Montessori pedagogy, Montessori therapeutic pedagogy, Montessori therapy, inclusion, risky development

1 Introduction

A family with a child with at-risk development at an early age is faced with many problems and difficulties. Parents of these children visit several specialist clinics. They leave most of them with only a report in hand and basic information. Parents lack a deeper understanding of the issues and guidance. In the context of early stimulation, the therapeutic educator offers early support to families with a child at risk of development through early therapeutic educational intervention. At the child's early age, one of the optimal therapeutic-educational approaches is the concept of therapy according to the principles of Maria Montessori's pedagogy. One of the underlying aims is to facilitate the inclusion of these children and families into the wider community.

2 Promoting inclusion through early therapeutic-pedagogical stimulation using the Marie Montessori concept

2.1 The importance of early stimulation as part of early intervention in promoting inclusion

Early stimulation is part of a broader understanding of early intervention. Kohli--Lynch, Tann, and Ellis (2019) report that in most EU countries, early intervention is broadly understood as support for the early years child and his/her parents, including early identification of a problem, early diagnosis, and early support. In this broader context, early childhood intervention includes all medical, therapeutic, educational, psychological, and special education services. Hradilkova et al. (2018) write about stimulation in early intervention as the provision and reinforcement of stimuli from the environment so that the child has enough sensations and strong enough stimuli to respond to. It is imperative that the early intervention practitioner is knowledgeable about the various stages of child development and has the skills necessary to comprehensively stimulate a child's development. Early stimulation is, in the author's opinion, one of the most effective means to promote a child's learning. According to Guralnick (2005), in the context of the developmental systems model of early intervention, the principle of inclusion represents all efforts to maximize the participation of children and their families in typical home and community activities. Although inclusion is often thought of in the context of promoting interactions between children with developmental risk and other children, it is more broadly about promoting the full participation of all children in the life of the community. Pretis (2009 according to Slanej et. al. 2017) writes about the involvement of parents in the process of early intervention, which deviates from the diagnosis of the child as the center of interest in early intervention. Practitioners in early intervention have begun to focus on the competencies and internal resources of the family system. According to Guralnick (2005), early intervention programs are relevant to promoting inclusion, with the goal of maximizing the participation of children with developmental risk in home and community life. Families with children with at-risk development should be encouraged to seek services close to where they live and to engage their children in natural childhood peer activities. 'Inclusion' is to be included as an underpinning goal in intervention plans for children with disadvantages. This considers family functioning and community contexts. Jacob, Olisaemeka & Edozie (2015) consider an inclusive approach to be the most effective means of combating discriminatory attitudes in creating accepting communities and achieving the right to education for all. The positive effect of inclusion is also achieved from an economic point of view, in terms of saving resources in the social and health sectors. Hebbeler et al. (2007) say that early intervention has many benefits, especially in the context of promoting

the inclusion of children with developmental delays. Early intervention programs can minimize, or in some cases prevent, developmental delays in children at risk of health or social disadvantage or in children with already identified causes of health and social disadvantage. They can reduce the need for special education and related services when a child enters compulsory schooling and promote independence. Families benefit from early intervention by being better able to meet their children's needs from an early age throughout their lives.

2.2 Early therapeutic-pedagogical stimulation

At an early age, parents provide early stimulation to their children, ideally naturally, if they are able to recognise, respond to and meet their needs. Parents provide children with a natural upbringing. Sometimes conventional parenting practices are not enough for an individual child or family for a variety of reasons. This occurs for two main reasons. The first is a problem on the part of the child and the second is a problem within the child's narrower or wider social ecosystem – that is, within the family or on the part of the parents (e.g., the vulnerable parent) and other caregivers. This is where the need for parents/carers to seek help often comes in. The solution is to offer therapeutic-educational intervention – of a preventive-curative nature. The therapeutic educator offers to accompany parents in improving their parenting skills. She models for parents how they can prepare an appropriate stimulating environment to support the child's healthy development, how to respond with their parenting behaviour to the child's expressed needs, and how to meet the child's needs practically and effectively. In the case of a child whose development is altered from the norm due to various internal or external circumstances – e.g. delayed, disturbed, at-risk, uneven, etc., the therapeutic educator initially makes a diagnostic assessment of the underlying problem and proposes therapeutic solutions. In the context of early therapeutic pedagogical intervention, children are often worked with who show only certain delicate symptoms of problems, which may stem from a variety of causes. The aetiology of the problem and the complex diagnostic conclusions may not yet be known at the time. In young children, these may be symptoms of future deeper problems or more complex medical diagnoses that cannot yet be concluded at that age. The second group may be children whose development is only transient and uneven, which can be corrected to normal with early intervention. According to Guralnick (2005), preventive early intervention programs are recommended not only for children with confirmed medical or social disadvantages, but also for children who are categorized as developmentally at risk. The philosophy and principles of Maria Montessori's pedagogy are a firm part of the theory and practice of therapeutic pedagogy (Horňáková, 2012). Therapeutic pedagogy focuses on education that promotes the health, optimal development of a person with a handicap, or in a situation of

threat by adverse life circumstances, who needs individual professionally guided help in coping with life tasks. Her competences are based on knowledge from medicine, psychology, sociology and in practical terms on the use of methods and techniques of therapeutic approaches that use movement, play, music, drama, literary art and activities (Horňáková, 2007). The role of the therapeutic educator is in an unobtrusive way of guiding the child, helping in such a way and offering activities that copy the child's developmental level. From the offered activities, the child then chooses the one that interests him/her the most and that responds to the fulfilment of his/her inner needs. The child chooses the activity, the place of work, the rhythm of his/her activity and whether to work independently or invite someone to cooperate (Tichá, 2017). The rediscovery of Montessori pedagogy as a therapeutic pedagogy is an idea that Lore Anderlik, a Montessori educator and therapist who is a close collaborator of Professor Theodor Hellbrugge at the Sonnenschein Children's Centre in Munich, based on her own experience, brings to the table (Anderlik, 2019).

2.3 Specifics of early stimulation according to M. Montessori's concept

Pretis, Barlová, and Hradilková (2020) talk about Montessori pedagogy in connection with approaches in early intervention that promote the child's independence. The authors consider that theoretical approaches aimed at promoting the child's own activity and independence are more strongly represented in Europe than in the USA. According to Valente (2017), Kozelkova (2013), and Anderlik (2019), the basic principles of the Montessori method valid in both Montessori pedagogy, Montessori therapeutic pedagogy, and Montessori therapy include respect for the child's natural development – his/her "sensory periods", learning through movement and activity and unconscious absorption of surrounding facts ("absorbing mind"), respect and trust for the child and his/her ability to learn independently (the non-interference method), the child's freedom ("Teach me to do it by myself"), the child's normalization (the process of regaining psychological balance through deep concentration on the activity), and a stimulating environment prepared for the child. According to Kozelkova (2013), the idea of introducing the Montessori method into therapy arose from Montessori therapeutic pedagogy. Professor Hellbrügge of the University of Munich contributed to the introduction of this method into therapeutic work with children with various disabilities. Montessori therapy integrates the findings of neurophysiology, neuropsychology, pediatrics, social pediatrics, developmental rehabilitation, genetics, and pedagogy. Anderlik (2019) writes that Montessori therapy seeks to compensate for missing opportunities in a child with a medical or social disadvantage at an early stage of development, using similar tools to Montessori pedagogy. The challenge is to find „tailored solutions" for these children in therapy. For children with at-risk development, different paths lead to cognition. Montessori

pedagogy, Montessori therapeutic pedagogy, and Montessori therapy share the same goal, only the paths to achieving it differ. The goal of all approaches is to achieve the highest possible level of independence in the child. The child is freed from dependence on the adult. Even in clients with severe forms of social and health handicaps, the aim of Montessori therapy is to build the foundations of independence. The task of Montessori therapy is to eliminate the problems, prepare the environment, and aid so that even a child with handicaps can achieve independence. According to Kozelkova (2013), in Montessori therapy, we use more direct motivation and limitation of free choice of activity (what will be worked with is alternately chosen once by the child and once by the therapist), whereas in Montessori pedagogy there is more emphasis on the child's spontaneous activity and free choice of activities. According to Anderlik (2019), Montessori therapy offers the child with a disability, in addition to many tasks and goals, preparation for the child's integration into a social group. According to Kozelkova (2013), Montessori therapy uses the same tools that are used in Montessori pedagogy. They are clearly structured and arranged in a prepared environment and build on each other. In the therapy sessions, the therapeutic materials are offered to the child client in the context of a thoughtful gradation of difficulty that the activity presents. The progression is from the simplest, isolated activities, – to more complex activities requiring serial thinking (the ability to follow multiple meaningful steps in sequence). Each new therapeutic activity presents the child with an offer to practice and master an isolated issue of varying difficulty. According to Dattke (2014), for the Montessori therapist, Montessori aids are also diagnostic material. They enable him or her to continuously obtain up-to-date information about the child's developmental level during participant observation of the child's work with these aids. Also, Luborsky (2014) argues that the prepared environment according to the M. Montessori concept is rich in activities that provide the adult with a wealth of information about the child. Observing what work the child is engaged in, or what work the child avoids, is a valuable source of information about the child's strengths, but also about the child's reserves in the following areas. These areas are executive functions: self-regulation, attention, planning, organization, seriality, working memory; musculoskeletal functions: postural strength and control and motor skills. According to Valente (2017), respectful communication with the child is key. The author recommends using polite expressions toward the child, speaking calmly and without shouting, getting down to the child's level when talking to him/her, and looking into each other's eyes. This means basing the relationship with the child on mutual respect and esteem.

3 Qualitative research

3.1 Methodology

In this research, we used qualitative methodology, a method of thematic analysis. According to Silverman (2005), the methods used by qualitative researchers convey a deeper understanding of social phenomena. The emphasis is on 'immersing' oneself in naturally occurring events in order to gain first-hand knowledge. According to Gavora (2006), qualitative research aims to reveal how people interpret the world. In qualitative research, an inductive approach that moves from data to theory is prevalent. Each individual or group study is a unique case for the researcher. Generalization is only possible if it involves other individual cases that have been deeply, comprehensively, and/or intensively studied. Silverman (2005) recommends the use of qualitative methods when researchers choose to study people – their life stories. Those methods can provide a 'deeper' understanding of social phenomena. They favour analysis of words rather than numbers; observation over experiment; unstructured observation/interview rather than structured; meanings rather than descriptions of behavior; and inductively linked research rather than deductive.

3.2 Research aim and research questions

The aim of the research was to identify and analyze the communication and therapeutic strategies used by the therapeutic educator during therapeutic sessions in the context of early therapeutic stimulation according to M. Montessori's concept. We formulated the following research questions:
1. What therapeutic-communication and counselling strategies does the therapeutic educator use during therapeutic-pedagogical sessions?
2. Which of the identified therapeutic strategies are primarily based on verbal approach and which combine verbal, activity, and physical access in the context of therapeutic-pedagogical therapy?

3.3 Research Set

The research sample of the qualitative case study consisted of a mother with a child with at-risk development who participated in therapeutic-educational sessions conducted according to M. Montessori's concept and a therapeutic educator who was present. At the time of the research, the child had not yet completed the formal diagnostic process with diagnostic conclusions. The selection of the research sample was deliberate.

3.4 Methods of data collection and processing

Data collection was conducted through participant observation and conducting video analysis. The video recordings of each treatment-education session were continuously transcribed into records made up of transcripts and descriptors. We then broke down the transcribed qualitative data into discrete units of meaning. We assigned a numerical code to each meaning unit. The transcripts thus numerically coded were ready for ongoing analysis. The objectively observed data were categorized into lower (second) and then higher (first) order categories. On the basis of the collected, transcribed, and continuously analyzed data, we theoretically elaborated 8 themes – lower order categories. 2 categories denote therapeutic strategies of a purely verbal nature and 6 categories denote combined therapeutic strategies – verbal, activity, and physical. The individual categories represent themes that offer a theoretical overview of the therapeutic strategies of the therapeutic educator in the context of the case study of early therapeutic pedagogical stimulation according to M. Montessori's concept.

3.5 Limits

A limitation of the research was the limited number of participants – 1 mother with one child at risk and one therapeutic educator.

3.6 Research findings

The research identified 2 main first-order categories (themes) and 8 second-order sub-categories (themes), which were thematically labelled and saturated with individual units of meaning (numerically coded) with 2 second-order categories classified as verbal and 6 second-order categories were verbal-physical-activity categories.

We labelled the higher-order categories as follows:
1. Verbal strategies of the therapeutic educator in early therapeutic-pedagogical stimulation according to M. Montessori's concept
2. Combined verbal-physical-active strategies of the therapeutic pedagogue in early therapeutic-pedagogical stimulation according to M. Montessori's conception

Under the two higher-order categories, we have grouped 6 lower-order categories and labelled them as follows:
1 Verbal strategies of the therapeutic pedagogue in early therapeutic-pedagogical stimulation according to M. Montessori's concept
    1.1   Verbal accompaniment
    1.2   Verbally instructing the child

2 Combined verbal-physical-activity strategies of the therapeutic educator in early therapeutic-pedagogical stimulation according to the M. Montessori concept

In the following, we formulate the research divided by each category.

In the following, we further elaborate on the research findings by each category.

4 Verbal strategies of the therapeutic pedagogue in early therapeutic-pedagogical stimulation according to the concept of M. Montessori

4.1 Verbal accompaniment

The number of cases within this category was 133. The aim of this therapeutic technique is to immediately offer the child conceptual representations of current events and a model speech pattern from the adult during the therapy. The therapist verbally accompanies the child for the duration of the therapy session ('tracking') during the different therapy exercises. The purpose of this strategy is to comment on the child's actions verbally, the actions of the therapeutic educator himself, and other persons present in the therapy session (e.g., the actions of the parent). The therapeutic educator also mirrors the child's emotional experience. The therapist clearly, comprehensibly, and slowly names the steps of the activity for the child, using concrete and distinct terms. The terms are chosen very deliberately. They are simple, precise, concise, and often repeated by the therapist. The therapist does not overwhelm the child with too much verbalization, but rather 'spares' the words. Verbalisation is participatory – the therapist interacts with the child on a physical level, e.g. sitting with the child on the carpet. An important principle of such commenting is the perceptive presence of the therapist and responsiveness to the child's actual expressions. The principle is to follow the child physically and verbally accompanying his/her expressions. The therapist balances the degree of following the child with offering new stimuli. This must be in balance. This category emerged as the most saturated in the research, as evidenced by the fact that this strategy is the most frequently used by the therapeutic educator in therapy. The occurrence of this category was recorded

in a total of 133. A few specific examples documenting this category are provided. 1.57 TE: "You threw the shells out. I'll put them here, on the shelf"; 1.64 TE: "I'll throw the chips out". This also includes examples where the therapist comments on various situations that occur accidentally during the therapy: 1.85 TE: "Never mind, we'll fix it, we'll pick it up". For the therapeutic educator, this is a way of expressing to the child that he or she is close, that he or she is present, and that he or she sees everything and is interested. If the child performs the action-activity with the aid correctly, the therapeutic educator avoids praise, describes the situation, and thus gives feedback to the child. This is about building intrinsic motivation. The aim is that the child performs the activity with the aid for the sake of the activity itself and the satisfaction and pleasure the child gets from it, and not for the sake of external praise – extrinsic motivation. Examples of this are 3.110 TE: "Finished. We put all the chips in. We'll put it away."; 4.9 TE: "You put all the shells in.".

4.2 Verbally instructing the child

This is a category of a therapeutic strategy that occurred in a total of 66 cases of semantic units. Within the category of 'giving verbal instructions, this is purely verbal support of the child's direct action (no active demonstration by the therapist or adult). Verbal instructions serve as external guides for the child's first active participation in playing with a particular material. They also serve for his subsequent instruction in further independent activities (or attempts at activities). The strategy in question is part of a procedural therapeutic-pedagogical diagnosis in which the therapist ascertains the child's current understanding of speech. This initially involves building passive vocabulary (speech understanding). The therapist ascertains whether the child's previous repeated experience of a particular activity or working with aid has also created a conceptual representation (whether the child associates a correct concept with a particular activity or thing). They may not yet verbalize at this stage. If the child understands the verbal instruction, he or she will carry it out independently or with assistance. This is to prepare the child for participation in mainstream kindergarten, where it is essential to understand and follow the teacher's instructions. The goal is to build the child's work on demand. Within the framework of therapy, the child's ability to perform simple actions on the basis of verbal instruction alone is gradually built up. This must be preceded by a comprehensive demonstration of the play exercise by the therapist and the child's experience of the correct use of the therapeutic material. In doing so, we follow the principle in therapy: "once you, once me" depending on the child's attention span. For example, the therapist demonstrates throwing two chips into a box and then offers the child to try it out. Instructions are simple and easy to understand, such as 8.107 TE: "Put in."; 8.112 TE: "Put in some more. Look, open."; 2.15 TE: "Oliverko, take out the square, put it out.".

5 Combined verbal-physical-activity strategies of the therapeutic pedagogue in early therapeutic-pedagogical stimulation according to the concept of M. Montessori

5.1 Movement accompaniment of the child

The second most frequently occurring category, closely related to the previous category, is the category "movement accompaniment of the child", which occurred a total of 67 times. This category presents situations in which the therapist provides tactile and kinetic guidance to the child. The therapist motorically copies the child's positions in relation to the environment (e.g., the child is lying on his/her stomach during play, sitting in a Turkish sit-up, or leaning on a table), the positions the child is in during play, and the movements the child makes during play. The therapist does not do the activities for the child but offers only the necessary physical support/support. The challenge is to sensitively balance the therapist's interventions and the child's willingness to do a play exercise/activity on his/her own. Often it is more a matter of just kinetically directing the trajectory of the child's hand movement when performing a certain activity. Sometimes the therapist will place the child's hand on his/her arm so that the child can feel the direction of movement and the force needed in the chosen activity. In this way, the child is able to experience the activity sensorially through the therapist's hand movements during a particular activity. This is a model experience of the precision and purposefulness of individual hand actions. The activity is thoughtfully divided into individual acts and at the same time, the child is provided with a model in its overall complexity. This is to encourage the child to practise an individual skill that can be learned when using an individual therapeutic aid. The therapist also provides physical accompaniment by appropriately adapting the child's position in the space to the current position when playing with the material ('movement mirroring, tracking'). For example, sometimes she sits opposite the child, sometimes behind the child, and sometimes beside the child, in order to provide the best possible physical support for the child. An example of this is the following situation: 7.92 "The therapeutic educator folds another ring with both hands." 8.58 "The therapeutic educator adjusts the child's grip. He also engages his other hand." 8.103 "Educator takes the child's hand and directs it to the opening of the box".

5.2 Presentation of working with the aid

The category occurred 59 times. The therapeutic educator presents the child with a demonstration of working with play material – very precisely, rather slowly, and sequences it into individual distinct steps. The presentation of the demonstration is

also verbally accompanied by the therapeutic educator. But in this therapeutic strategy we are only concerned with verbal accompaniment during the demonstration. The choice of vocabulary must also be well thought out. During the demonstration it is necessary to "save words", not to overwhelm the child with words, to name only exactly what is necessary. The therapist himself must have the exercise very well mastered and rehearsed. He must be aware of the steps and their sequence. The demonstration presents the child with the exact procedure and thus develops serial thinking – the ability to work systematically and to remember the sequence of steps. Alongside this, it also develops the child's memory skills. The demonstration is presented to the child at an adequate speed (neither very slowly nor very quickly). The demonstration begins by naming the activity as a whole or by naming the material itself. E.g. "Today you have chosen spillover." "Today I'm going to show you the pink tower." "These are stringing rings", etc… Always adapt the demonstration to the child – his interest and the length of his ability to concentrate. If the child is not able to endure watching the therapist's demonstration all the way through (in its entirety), the therapist chooses to actively engage the child during the demonstration. The child's work with the new material is always preceded by a demonstration of the therapist's work with the material. This prevents the child from experiencing failure, demotivation, and also unfair handling of the material or its subsequent damage. The intention of the aid is to teach a specific skill. Therefore, an initial demonstration of how to work with the material is essential for the child. Here are some specific examples from the research: 1.41 "The therapeutic educator opens the first drawer, takes out a shell and places it on the cabinet." 1.46 "The therapeutic educator puts the shells in the bottom and closes the drawers." 1.58 "The therapeutic educator collects the shells and places them on the shelf." 2.20 "The therapeutic educator puts the circle back into the plate." 3.60 "He slowly runs his finger around the circumference of the circle." 3.71 "The therapeutic educator slides the hand back onto the carpet and slowly puts the circle back in." 4.24 "The therapeutic educator slowly makes a presentation of the aid." 4.27 "The therapeutic educator slides the bullet back into the box." 4.29 "The therapeutic educator puts the bullet into the hole on the box." 4.104 "The therapeutic educator picks up the lock and holds it in the air."

5.3 Deliberately directing the child's attention

Within this therapeutic strategy, occurring 81 times, the therapist directs the child's attention "from the outside." He or she directs the child's attention both verbally and non-verbally. This category also aims to support the child's learning to be able to focus on the chosen activity for a period of time and not be distracted by other external or internal stimuli. The child learns not only to start the activity but also to bring it to an end and to stay with it. If the child stops the activity for any reason, he or she

learns to return to the activity again and complete it. The treatment educator's strategy in these situations is for the child to bring his or her attention back to the activity. From a personality perspective, the child's persistence and constancy of attention are encouraged. If there is another child in the room who is working with the aid, the child is naturally guided to wait for the desired aid or possibly join the other child in sharing it. This also contributes significantly to the development of concentration. We observed verbal guidance of attention in situations such as 4.158 TE: „Look Oliver, can I show you something? Today we have a novelty."; 7.88 TE: „Look. I'll put it down.". Non-verbal attentional guidance, where the therapeutic educator uses a pointing gesture or a tapping of the finger on the object to direct or bring the child's attention back to the aid and work with it, was more frequent. This was observed, for example, in the following situations: 7.144 "The therapeutic educator points at the door on the box." 2.21 "The therapeutic educator taps the handle on the inset of the square." 4.142 "The therapeutic educator points with a finger at the cup to which the next smaller cup belongs."

5.4 Bringing system and order

Another category expressing the therapeutic strategies of the therapeutic educator is the bringing of and 'adherence to system, and order' and the resulting stability and some permanence to the work with play therapy materials. We identified this category in the number of 38 semantic units. It is an essential part of therapeutic work with the child in the context of the principles of M. Montessori's pedagogy. All the aids have a stable place in the prepared environment, which does not change. For the child client, this means fulfilling the need for security by making events and things around him predictable. This corresponds to the child's need for stability, system, order and some predictability. Particularly for vulnerable children with more severe forms of disability, it is important for the adult to persist in adhering to the ways of working and handling aids as well as to his or her own constant behaviour and communication. It requires a fair amount of self-control, sensitivity and adaptability on the part of the adult to the child's needs. The environment is prepared with aids that correspond to the child's natural developmental period and are therefore appealing to the child. The child naturally saturates his/her developmental needs when working with them. In such an environment, the child feels safe and secure, and this is one of the basic conditions for learning. Most activities are prepared in a defined place (e.g. on a shelf), in certain containers or on certain defined surfaces (e.g. in boxes, in baskets, on trays) – in ordet to teach children to orient themselves in the environment. The child has all the components of the activity ready in one place, does not have to search for them, and their intrinsic motivation to work is harnessed. The aids are also visually and aesthetically unified to encourage the child to work spontaneously

with the activity. The fundamental principle is that the activities are freely available in a space for the child to freely choose and use. This removes the unnecessary barrier for the child of having to ask or beg for activities from an adult. He simply chooses what he currently wants to work with in the environment according to his inner interest and current developmental need. The adult – therapist or parent – is part of the prepared environment in the sense of the stability of the child's actions and his stable and predictable reactions. The adult's role is to continuously prepare the prepared environment for the child and to teach him maintain order. By being aesthetically arranged, the activities also serve as a strong initial stimulus for the child to begin working with the material spontaneously, without prompting. He simply comes, sees the stimulus, chooses, picks it up, takes it to the work area and begins to work independently. This promotes the child's independence from permanent adult teach. In the case of children with disabilities, this is an important aspect, as they are often over-assisted, leading to a stage of permanent 'dependency'. In a prepared environment, the child decides what to play with, where to play, for how long, with whom and with what possible variations within the limits and possibilities of the material. In addition to practising certain skills and acquiring certain knowledge when playing with the equipment, the child is also supported personally in terms of developing his autonomy and independence. Naturally, other personal qualities are also developed in the child, e.g. respect for external material things and for the overall situation in the prepared environment (e.g. respect for the duration of the therapy session or the rules for handling materials, etc.). An important aspect of the therapeutic encounters is also to support the child to subconsciously 'notice' and then respect the arrangement and aesthetics of the material things in the environment, the overall culture of the environment. The aids themselves are made of valuable materials (wood, glass, porcelain, metal…) and thus the handling of valuable objects leads to prudence and delicacy in handling them. The child sees where the object belongs and is guided to return it there after use. This builds in him a sense of responsibility and a sense of order for the rest of his life. At the same time, a culture of calmness, gentleness and responsibility towards the world around them is being internalised. Gradually, the child's overall psychological calming and stabilisation – in Montessori's words, 'normalisation' – takes place. 6.57 The therapeutic educator placed the matryoshka in the child's hands, went to the shelf and pointed with his finger at where the aid was kept. 6.58 TE: „This is where the matryoshka belongs. Here is its place." The system in handling the aid and storing the parts of the aid on the work surface supports the child's skills and heTEs to avoid chaos and confusion that can demotivate the child. This aspect of the orderly environment is demonstrated, for example, in the following situations: 6.27 "The therapeutic educator places the matryoshka in two opposing rows consisting of the upper parts of the matryoshka on one side and the lower parts of the matryoshka on the other side." 7.27 "After a while, the therapeutic educator

approaches the child. He collects the scattered shells and places them on the cabinet, arranging them each over one drawer."

5.5 Involving and activating the parent

We identified the given category in 19 situations. The intention of the given communication strategy of the therapeutic educator is to work simultaneously with the parent in the therapeutic session with the child. Gradually, the parent is invited to take an active part in the child's games. The aim is to make the parent understand that he or she is part of the therapeutic process. It is about his/her activation and self-actualisation in the context of his/her parenting competencies. The parent needs to be convinced that he or she is capable of accompanying his or her child with developmental risks. In the process of therapy, the parent has to discover his/her competence to follow the needs of his/her child and to support him/her effectively in his/her development. This is done through non-directive prompting and encouragement of the parent by the therapist. The therapist avoids the directive, direct "coaching, rehearsing, or training" of the parent. Rather, it is about guiding and exploring the parent's parenting competencies in the sense of "empowering" the parent in his or her parenting role. This is done in the protected, safe environment of a therapeutic playroom with a therapist present. The aim is to gradually transfer these acquired or 'awakened' parenting competencies to their home environment. This involves therapeutic accompaniment of the parent of a child with developmental risk in a situation of "changed parenting". The therapist offers model patterns of behavior and approach to the child according to M. Montessori's concept and allows the parent to practise the ways of supporting the child as observed by the therapist during the therapy sessions. Through individualized therapy sessions with the therapeutic educator, the parent attempts to introduce new approaches to the child and break out of often dysfunctional patterns of parenting behavior. The parent sees in the therapist that some new approaches of communication and action toward the child work better and tries to adopt them into his or her behavioral repertoire. On the part of the therapeutic educator, this requires a high degree of empathy for the parent. He adapts the offers to the parent individually in terms of the parent's availability, e.g. in his ability, adjustment, or speed to accept change, in his openness or closedness to the new. Inviting and involving the mother in the therapy was observed e.g. in situations: 7.105 TE: „Will you try again? Try with Mommy, Oliver."; 7.155 "The therapeutic educator walks away and gestures to the mother to come forward." 8.14 "The therapeutic educator moves the tray closer to the mother and nonverbally indicates to her that she is the one who should carry out this activity with the child. The therapeutic educator engages and invites the mother to work with the child usually indirectly, through an activity, situation or gesture."

5.6 Unconditional Acceptance

Within this category, we identified situations that are related to another essential therapeutic strategy of the therapeutic educator, which is related to unconditional acceptance. We identified 15 semantic units. Every person deserves respect and regard for the way they live their life and what they need. The client is always part of a larger whole, a certain system of relationships. It is a closer and wider social environment that the therapist must take into account. The task is therefore to work in therapy not only with the child client himself, but also with his environment (family, educational institutions, other support institutions, etc.). We concentrate on developing the client's full potential and on finding ways to support him/her in the surrounding environment. The aim is to promote interactive action or responsive accompaniment of the child by the relational persons in his/her vicinity. According to M. Montessori, the child deserves respect and respectful treatment. Montessori pedagogy, Montessori therapeutic pedagogy and Montessori therapy are based on the same principles that M. Montessori observed and developed in children. She communicates them in two leitmotifs: "Teach me to make it on my own." and "To take me from grasping to understanding" (Anderlik, 2019). According to M. Montessori, children have a strong sense of personal dignity. Adults are often unaware of how often they hurt this feeling (Montessori, 2012). In our research we identified situations of fostering respect for the child client e.g. here: 2.5 TE: , "Welcome Oliver, hello. (pause) Looking around to see what we have here." 3.2 TE: „Hello. Welcome Oliver."; 3.113 TE: „Done for today Oliver. Come on mommy get you dressed and you go home. I'll look forward to seeing you next time. Have a nice day." Respect is also shown by the therapeutic educator by thanking the child for the favour in the same way as an adult and using the word , "Like" when handing an object or aid: 4.30 TE: , "Try you, Oliver. Like."

6 Conclusion

Early therapeutic stimulation according to the concept of M. Montessori has its specificities and benefits in the therapy of children with developmental risks. The initial prerequisite is appropriate therapeutic strategies of a verbal-physical-activity nature. In our research we have identified effective therapeutic strategies, of different nature, in the framework of early therapeutic-pedagogical stimulation. The most prominent verbal therapeutic strategy from the category of Verbal Therapeutic Strategies with the label „Verbal Accompaniment" is also defined by the authors Kocabas and Bavli (2022), who identify the position of the educator according to the concept of M. Montessori in the context of communication with the child as a guide, counsellor and teacher. The authors talk about the communication style of the educator, which

reflects the needs of children and the differences between them. They stress the importance of observation, which is crucial in communication. Communication is built up gradually, on the basis of trust, and reflects the child's emotional needs and developmental level. The next most saturated strategy in our research was 'Verbal Instruction' in the sense of verbal support for the child's direct action. Kocabas and Bavli (2022) also point out the need for individual communication between the teacher and the child, the so-called one-to-one communication approach, which reflects the individual differences, pace, needs and readiness of the child. During communication with the child it is important to be concise, clear, direct, trustworthy, caring and to use appropriate verbal terms. In the context of the second group of therapeutic strategies – called Combined Verbal-Physical-Activity Strategies of the Therapeutic Educator in Early Therapeutic Stimulation according to the concept of M. Montessori, we identified a therapeutic strategy called, "Movement Accompaniment of the Child". Vodičková (2021, p. 73) states: "Life means movement. Movement in humans is a response to sensory stimuli. In a broader sense, a person uses movement to reflect on what is happening in his or her environment. Movement expressions tell about one's psychological state, physical attributes, self-characterization, and inclusion in the wider community. Psychomotor activities promote freedom, liberty, cooperation, sharing, working with rules, respecting and understanding one's own and others' boundaries, relaxation, good mood, togetherness, cooperative skills and abilities. Participants in movement games learn to play fair play, compromise, negotiate, affirm their self-worth in interaction, self-knowledge, self-reflection in movement, but also to strengthen individual psychological functions through movement, etc. All this has a rich inclusive potential." Another identified therapeutic strategy is "Presentation of the work with the aid". Anderlik (2019) states that every child, even the most handicapped, needs stimuli, needs teach to use the stimuli. The teach must be appropriate so that the child can manage the work, but at the same time so that his self-esteem does not suffer. In Montessori therapy, the author recommends offering each new object first so that the child can look at it long and well enough. As in Montessori pedagogy, it is necessary in therapy to name the characteristics of the object in a way that is understandable to the child. In this way, we offer him experiences through which he learns to recognise objects and their properties that he would never have come to know of his own volition. The therapeutic strategy "Intentional attentional guidance" is also defined by Kozelkova (2013) as a basic principle of therapeutic work in Montessori therapy and consists in inducing the child's concentration. The child should discover and experience the prepared environment with the senses on his/her own. Christl (2009) says that it is necessary to achieve polarisation of attention in therapy in the child as often as possible, because this has an impact on the construction of his personality. The child feels and perceives himself as a person in his work. Due to the process of self-discovery, he is able to handle more challenging tasks and more

challenging task complexes. It is a process of "self-education". Achieving polarisation of attention in the child in therapy is possible even when the child's sensory phases for certain areas have already been completed. The specific therapeutic strategy , "Parent involvement and activation" finds an echo in the arguments of Anderlik (2019), who emphasizes the role of parents within Montessori therapy. According to the author, Montessori therapy is completely dependent on the collaboration with parents. The latter is set up to ensure the most ideal conditions for the child with developmental risks, but on the other hand it must not put the family under pressure. In Montessori therapy we try to link the support of the child and the consideration of the family's possibilities. The author does not recommend giving parents any homework that the therapist would then check and thus burden the family. The emphasis is on involving the parents in finding a path that leads through the child's real interests. The goal is for the child to be able to participate in the life of the family as best as possible. A creative approach and creative solutions on the part of the parents are encouraged. Valešová Malecová (2018) states that the therapist in early intervention also focuses on imparting knowledge and teaching parents (or other relatives) to learn skills related to supporting child development. The relational person builds these skills by observing the therapist in therapeutic activities with the child, then in independent direct work with the child under the supervision of the therapist, and also by way of referrals from the therapist. A reference to a therapeutic strategy called "Unconditional Acceptance" can be found in Kocabas and Bavli (2022). The authors suggest promoting it through accepting communication with the child. In doing so, they discuss specific practices such as lowering oneself to the child's level, ensuring eye contact with the child, greeting the child and sharing emotions while doing so. Educators pay attention to the child's moods, needs, and current reality.

Early therapeutic-pedagogical stimulation within the framework of early intervention according to M. Montessori's concept in the field of therapeutic strategies has its specifics. Their aim is to promote inclusion in the context of the closer and wider social environment of the family with a child with development at risk. The issue requires further research in the area of parental involvement in supporting the therapeutic process.

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Studies on deafness in an ecological system context

Joanna Kossewska. *Studies on Deafness in An Ecological System Context* | Wydawnictwo JAK, 2018, 170PP | ISBN: 9788364506444

Reviewed by LI Lin

Before the ecological system theory, the study of psychological development was often limited to a specific environment, overemphasizing the role of the environment and ignoring the influence of individual biological factors (Liu, Meng, 2009). In 1997, American psychologist Urie Bronfenbrenner put forward the idea of ecological research trend after realizing that discussing individual psychological development in the natural environment and specific social and cultural background can reflect the psychological development of individuals in real and natural life better firstly (Bronfenbrenner, 1977). Then in 1979, his book "The Ecology of Human Development" fully expounded the ecological system theory. Ecological system theory regards the environment as a dynamic process with constant change and development, emphasizing that development comes from the interaction between humans and the environment. The system in space includes four environmental levels: microsystem, mesosystem, exosystem and macrosystem. The individuals develop with age, and the four environmental levels around them also change with the times, so there is also a chornosystem in the time dimension (Bronfenbrenner, 1979, cited in Zhu, 2005). There are 1.5 billion people suffering from varying degrees of hearing loss in the world, of which about 430 million need rehabilitation services of hearing loss (World Health Organization, 2021). Deafness has a specific influence over the psychological developmental process (Kossewska, 2018), Dr. Joanna wrote the Studies on Deafness in An Ecological System Context to discuss the influence of different environmental systems on the development of individuals with hearing impairment.

The structure of Studies on Deafness in An Ecological System Context is clear, and it is convenient for readers to obtain the information they need in a short time. It has six chapters, and each chapter discussed the different development characteristics of individuals with hearing impairment within the varying environmental system. It is worth noting that each chapter is an independent study with independent research

background, research purpose, research object, research method, research results and conclusions, so this book is a collection of papers within the framework of a broad theme. Readers can understand the development characteristics of individuals with hearing impairment in different environmental system in a single chapter according to their own needs, or read the whole book to understand the developmental impact of different environmental systems on individuals with hearing impairment, so as to adjust their education and intervention strategies of individuals with hearing impairment appropriately.

The content of this monograph is rich and reliable. Dr. Joanna studied the developmental characteristics of individuals with hearing impairment in the five environment systems of microsystem, mesosystem, exosystem, macrosystem and chornosystem from different perspectives with refined language and clear diagrams in chapters 1 to 5. Then, a comprehensive view of individuals with deafness in the context of the ecological systems theory is given in Chapter 6 (Kossewska, 2018). The remarkable thing is that more than 400 references are cited throughout the book, so the knowledge throughout the monograph is rich and reliable. After reading the whole book, readers can not only have a comprehensive understanding of the development of individuals with hearing impairment in different environment systems, but also have a deeper understanding of ecological system theory and the group with hearing impairment. At the same time, the scientific and systematic research methods also subtly affect every reader. In addition, the results and conclusions of each chapter can also provide a lot of inspiration for education and intervention support for individuals with hearing impairment to the readers. For example, on the basis of introducing the theory of mind development and related parental involvement, the first chapter conducted a Theory of Mind development level test by three types of tasks and related factor analysis for 105 mother-child dyads (including hearing-impaired groups and hearing groups). The study found that a developmental delay is observed in all experimental tasks of children with deafness in hearing families, but subjective maternal predictions of their children's mentalization skills were found to be irrelevant and inconsistent with the experimental objective Theory of Mind development measures. So the microsystem impacts that the Theory of Mind development in children with deafness should be strengthened through appropriate training of significant others-especially hearing mothers-regardless of the developmental stage or chronological age of the individuals with hearing impairment (Kossewska, 2018).

In general, with the scientific and systematic research methods, and clear structure, the whole monograph is informative and reliable in content. It has a significant enlightening effect on the development and education of individuals with hearing impairment under the ecological system context.

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Sandtray: life on the palm of your hand: a practical manual for applying game therapy in a sandbox

GALUSOVÁ, Veronika, 2020. *Sandtray: život jako na dlani: praktický manuál pro aplikaci terapie hrou v pískovišti* | B.m.: Pointa Publishing, s.r.o. | ISBN 978-80-7650-018-1

Reviewed by Jiří Kameník

Many of us have our childhood linked to memories of playing in the sandbox free of all the worries. This confined space can provide a safe haven for ideas, desires and wishes in an environment without restrictions and worries. These characteristics make the sandbox ideal for achieving therapeutic change. The book Sandtray – life on the palm of your hand by Veronika Galusová can become your guide through this procedure.

The book is a practical manual for the application of game therapy in a sandbox. It contains basic information for those who, with the help of Sandtray, would like to widen the range of their therapeutic skills. This eclectic approach allows you to use Sandtray with other methods either simultaneously or sequentially, as appropriate for your situation.

The publication follows to a certain extent a well-known foreign title The Sandtray therapy: a practical manual by Homeyer Sweeney, which should be published in the near future as its 4th edition. The author also drew inspiration from the works of Virginia Satirová and Madeleine do Little.

However the topic of Sandtray has not been published In the Czech environment. On the pages of this book can be found inspiration enthusiasm and authentic practical experience. The world hidden under a layer of sand is being slowly uncovered for the reader through reports and illustrative photographs.

During the narrative are readers introduced to the theoretical concepts of psychotherapeutic practice which are fundamental for the Sandtray. A necessary part is also a description of the therapy room, equipment, including figures and other objects.

Each meeting in the sandbox is divided into several phases, including preparing the room, welcoming and listening to the problem, a scene in the sandbox, change in

the scene in the sandbox, reflecting on the experience and appreciation, and finally taking a photo. In addition to the description of these parts, inspiring exercises are prepared for readers.

The chapters "The Road to Healthy Self-Esteem", "Discovering and Anchoring Life Values" and "Compensating for Internal Tension" form the introductory story reports in this book.

Self-esteem and self-evaluation are one of the most common topics which make people seek professional psychological help. The author herself observes that, regardless of the problem, the client always seeks and strengthens his own value and faith in himself and in his ability.

In her story, an eighteen year old Soňa tells us about her feeling that everybody is more successful than her that everyone is constantly watching and evaluating her. She was most satisfied in the gym when she was facing a considerable physical exertion. Soňa tried the Sandtray method for the first time during the second meeting. The creation of the image of "healthy self-confidence" together with the experienced emotions completed a scene in front and inside the sandbox, in which there was no need to compare oneself with others and Soňa managed to turn the feeling of anxiety into a feeling of relaxation. Soňa spent a total of four meetings in the sandbox before she found the key to solving her problems and began to trust herself more.

In sandtray therapy, the client assumes responsibility for himself in the maximum possible way, and therefore also for his path to healing. Healing requires a change in old and dysfunctional behaviours and attitudes in an individual's life. Every change in the sandtray leads to a practical skill that can be immediately applied in life.

Jaroslav was 26 at the time of his first visit and had been trying to cope with the break-up with his girlfriend for a long time. As a result of the unsuccessful relationship, Jaroslav suffered from feelings of frustration and failure, which have recently burdened him so much that he could not concentrate on work and slept poorly. As he believed in the God he was burdened with the idea of sleeping with a woman he had not married. How many forms can masculinity take in a therapeutic sandbox? Is it possible to find common characteristics of a successful and composed man in one picture? What role do the sheriff's star and the figure of a young girl in a red dress play? Will an element of harmony appear in a scene full of fear and uncertainty, a vision of a positive future? And what role will faith play in the picture and in Jaroslav's life? Jaroslav visited the therapy two more times. He no longer wanted to work with the sandbox. He began to actively change a lot of things in his life, and he only needed to sort out his thoughts during conversation and confirm his decisions. The experience at the sandbox was crucial for him and gave him a lot of energy.

The main healing phase in the sandtray process is the release of internal tension. Despite the initial shyness and the effort to control their activities in the playroom, adult clients quickly immerse themselves in creative activities that engulf them.

Uncertainty is replaced by a feeling of sobriety, during which long-suppressed contents begin to emerge. Children begin to compensate for their inner tension directly through play or image building. Sometimes the action in the sandbox is very fast and sometimes it is repeated over and over again.

The scenery of the "Battle Desert", which turned into a "Dead Desert" during the session, is a picture of the inner tension, disappointment and insecurity of little Lukáš, whose family fell apart due to domestic violence. Lukáš has just started going to second grade. He was anxious and quiet, he didn't get much involved with his classmates. Lukáš has just started going to second grade. He was anxious and quiet, he didn't get much involved in the team. He had no friends. The evening was very tearful. Therapy was supposed to help boost his self-confidence. The dynamic process, in which everything was killed and destroyed until the moment of utter destruction, was in direct conflict with the personality of a gentle and shy boy. How to bring little Lukáš to a positive change in a picture full of destruction, ruin and suffering? And is it even possible to feel safe in this world? The topic of combat and subsequent laying sand and burying is an important form of compensation. In such a case, it is necessary for the action to take place, often repeatedly. When working with clients, the most important part of therapy is the client, who knows what he needs, himself. The therapist is there for him and he should accompany him, not tell him what to do!

During the therapeutic session, attention is paid to emotions, which always have a direct impact on the client's physical experience. In sandtray, clients experience very deep emotions that often surprise them. Clients are often ashamed of them and consider it their failure. The therapist's task is to help the client recognize their emotions and to identify how and where he experiences them in the body and find a suitable way to express them.

How we treat ourselves and other people depends on what we have learned in our original family. We repeat the same patterns and the same gestures simply because we "looked" at them. Creating a family image offers us the perfect opportunity to find meaning in all relationships in our life experience so far. Sandtray is thus ideal for working with family schemes and constellations.

Most of us assign different values to different parts of our "I". We perceive some positively because the environment reacts positively to them. We consider the parts that we associate with the negative reactions of the environment to be undesirable and we try to hide them. The party of personal parts, following the example of V. Satir, usually took place in a group of 15 to 40 people who were willing to dramatically portray roles representing the various internal parts of the host, ie. the person whose parts are to be played. Everything happens in a large room using disguises and scenery…

Sandtray through this technique can help the client in finding different qualities of displayed attributes or skills. We could call it the polarisation technique. In

addition to the extreme variants of the same part, it is possible to look for a suitable and strengthening variant for the client on the scale between these poles.

Sandtray allows the therapy of a couple and a group. The therapist can get a complete picture of mutual communication, experienced patterns, roles, ways of dealing with the rules, meeting personal and shared needs in a family environment, etc. Depending on the needs and wishes of clients, you can work with a couple on either one or two sandboxes at the same time. Both have their advantages.

Conclusion

The publication Sandtray – Life in the Palm of Your Hand brings the reader comprehensive information on both the theoretical framework and practical application. The book is written in an accessible and readable form with a predominance of narration, which is set in a theoretical psychotherapeutic context. It will also offer readers numerous recommendations for purchasing your own therapeutic sandbox, including toys and other items. The publication is suitable for anyone who deals with the topic of the game in the context of therapeutic action and is looking for other ways and inspiration in their practice.

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Becoming and being a play therapist

Edited by Ayling Peter, Armstrong Harriet, Clark Lisa Gordon (2019). *Becoming and being a play therapist. Play therapy in practice* | Abingdon: Routledge.

Reviewed by Petr Kosek

The Play therapy

The play therapy is mostly concerned with the wellbeing of children. It is based on the assumption that the play is the language of the children. While the adults need to talk about their troubles, children need to play about them. The verbal therapies are not sufficient to children, instead of helping them the verbal therapy can be more stressful to children who are not capable of fully using verbal language in psychotherapy till they are twelve (Landreth , 2012). While the use of play therapy can be traced back to the work of Anna and Sigmund Freud, the most influential for the growth of play therapy was the work of Virginia Axline (1964). In 1964 Axline published case study Dibs in search of himself, which described her use of person centered psychotherapy by Rogers in the work with a little boy. Axline allowed us to witness the power of nondirective approach in this touching book, which became one of the most influential case studies in psychotherapy. In the United Kingdom the growth of play therapy has been mostly significant since the first training in the nineties by the dramatherapists Anna Cattanach and Sue Jennings and the establishment of the British Association of Play Therapist (BAPT) in 1992.

The idea for this book was conceived at the occasion of the 25th anniversary of BAPT in 2017, and two years later was published by Routledge. The result is stunning. The book captures the essence of the Play therapy field in Britain. This book is divided into the three parts: Becoming play therapist, Being play therapist and Play therapy in practice. Overall it contains 20 chapters by 22 authors. The editors managed to create a really understandable structure of the book and to contain the most important themes of play therapy in the UK.

The first part Becoming a play therapist is concerned about training of therapists and their own therapy and supervision. Also it deals with the theme of setting

independent practice and about the ways how to prepare a play therapy room. The second part Being a play therapist is concerned about ethics, playfulness and improvisation in play therapy, and about setting limits and containing aggression in therapy. The last and longest part Play therapy in practice deals with special settings: school, Child and Adolescent Mental Health Service (CAMHS); themes: sexual abuse, bereavement; and approaches: narrative, integrative, relational, EMDR, working with the parents and children and the use of Polyvagal theory.

List of chapters

Part one: Becoming a play therapist
1. Training issues: before, during and after (Lisa Gordon Clark)
2. The play therapist's personal therapy (Julie McCann)
3. The role of clinical supervision in play therapy practice (Carol Platteuw)
4. The play therapy room: why it matters (Anne Fullalove)
5. Setting up in independent practice as play therapist (Harriet Armstrong)

Part two: Being a play therapist
6. Being an ethical play therapist (Linda St Louis)
7. Being a playful therapist (Karen McInnes)
8. Being an improvisational play therapist (Simon Kerr-Edwards)
9. Containing feelings and setting limits in play therapy: working with aggression (Peter Ayling)
10. Time-limited play therapy (Jenny Reid)

Part three: Play therapy in practice
11. Play therapy within CAMHS setting (Ruth Lazarus and Carrie Waldron)
12. Play therapy in schools (Sonia Murray)
13. Narrative group play therapy in a school setting (Sharon Pearce)
14. Play therapy with children affected by sexual abuse: developing awareness, safety and trust (Tim Woodhouse)
15. Working with bereavement and loss in play therapy (Chris Stone)
16. Integrative approaches to working with trauma (Lisa Waycott and Clare Carbis)
17. Play therapy and polyvagal theory: towards self-regulation for children with paediatric medical trauma (Stuart Daniel)
18. Working with child trauma through EMDR and play therapy (Debra May)
19. Relational approaches to play therapy: supporting adoptive and foster carers and their families (Berni Stringer)
20. Working with parents and carers: Child Parent Relationship Therapy (Trudi Cowper)

Who is this book for?

This book is a must read for anyone interested in play therapy from the UK or abroad. It gives the reader the essence of the training, requirements and profession of play therapist in the UK. For people abroad the book offers big inspiration and lots of thoughts about how it works in the UK. The book can be also interesting for anyone working with children, whether it is a social worker, special educator or teacher.

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Information for authors

Basic information about the JEP

Journal of Exceptional People (*JEP*) should be based on 2 times a year publishing period in both electronic and traditional – printed form. To guarantee professional standards of the Journal we have applied to the front of special needs teachers, psychologists, therapists and other professionals in the U.S., Finland, Spain, Slovakia, Hungary, China, Russia, Poland and other countries. Above mentioned scientific journal aspires to be registered into the international database of impacted periodicals (Journal Citation Reports).

Journal of Exceptional People (*JEP*) will provide research studies and articles on special education of exceptional people. This area covers individuals with disabilities and, on the other hand, gifted persons. The *Journal* will focus on publishing studies and articles in the field of education, social science (sociology) and psychology, special thematic issues and critical commentaries. The publishing language of the *Journal of Exceptional People* is to be English exclusively.

The periodical is going to be published since the year 2012 by the **Institute of Special – pedagogical Studies at Palacky University in Olomouc**.

Instructions for authors

Scope of the article is strictly given – must'not be more than **20 pages** formatted according template (including list of references, images, tables and appendices). The body of the text shall be written in letters of Times New Roman size 11 b. Different styles are undesirable, use the normal template and also please avoid numbering of pages. The final version of the articles ought to be formatted to the paragraphs. The Editorial Board reserves the right to refuse contributions.

The file should be saved under the same name with the surname of the first author and sent in a format with the extension .doc or .docx (MS Word 2007 and upper versions). Before sending a file with the paper it is required to scan for possible infections or viruses. Authors are responsible for content and linguistic aspects of the contributions. Please, do not number pages. Images, graphs and tables should be numbered according to the example (***Figure 1:** Preparatory exercise* [Times New Roman 11 b, italics]).

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The list of literature and references to resources ought to follow these norms and directives: ČSN ISO 690 and ČSN ISO 690-2 or Publication Manual of the American Psychological Association APA.

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