Journal of Exceptional People

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Institute of Special Education Studies
Faculty of Education – Palacký University Olomouc

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Content

Introduction

Dear readers,
we believe that number 13 marking another issue of our Journal of Exceptional People magazine is not a negative symbol. We hope that we can largely contribute to your good mood and good reading. Also for the autumn issue you are holding in your hands our editorial team have chosen the most interesting articles concerning a wide spectrum of matters which is interesting for experts dealing with education and upbringing of people with health and social handicap and also with those who are extraordinarily talented. When selecting the articles we tried to take into account also the interests of a laic reader and therefore we have chosen not only scientific studies concerning particular researches but also interesting articles summarizing findings from lives of "exceptional people".

An introductory contribution written by Nigerian author J. D. Nanjwan is focused on comparison of the flexibility of students with three grades of visual handicap. In a following article the same author together with his colleague (J. D. Nanjwan, I. E. Shwamut) deal with the effectiveness of special individual educational IEP programme in Nigeria. The following chinese article (P. Yuntong) is focused on supportory systems for preschool inclusion of children with ASD.

Our magazine also contains an interesting study dealing with acalculia combined with an impairment – Split-brain Syndrome. This article was sent to us by H. Červínková who used her practical experience with working with clients at Neurorehabilitation Department of University Hospital in the Czech Republic. Other Czech authors J. Zvědělíková and A. Hanáková are describing the role of so called rescreening in people with hearing impairment.

The contibution of author from Olomouc (Czech Republic) M. Valenta is focused on the structure and dynamics of partial functions of auditory skills in children during their last year at nursery school and their first two years of school attendance.

Also the following article of three Czech authors K. Vitásková, J. Tabachová and L.Kytnarová is worth reading. It is depicting the matters of so called sandplay therapy and work with symbols in treating clients with disrupted communication ability.

The last contribution of two Czech authors M. Fasnerová and D.P. Stolinská deals with children's adaptation to the school environment in the context of the impact of teaching assistants and school club lecturers from the perspective of headteachers and employees of selected schools in the Olomouc Region (Czech Republic).

At the end of our magazine you can find two book reviews written by B. Hudcová and V. Mužná. The first one concerns the book Kelman I. & Stough, L. *Disability and disaster: explorations and exchanges*. The second one concerns the book by a Spanish author C. Naranjo *Cosas que vengo diciendo*.

Have pleasant autumn days with JEP magazine!

Comparative analysis of flexibility among students with three levels of visual impairments in special schools in Cross River State

(scientific paper)

Nanjwan, Josephine Dasel

Abstract: *This paper is about a comparative analysis of flexibility among students with three levels of visual impairments in special schools in Cross River State. It is mandatory for visually impaired students to be assessed before being given adequate training on to participate in flexibility activities. The term visual impairment and flexibility were explained as well as the literature review on flexibility and students with visual impairments. The research design adopted for this study was descriptive survey design. The study area was Cross River State. The entire population of the visually impaired students in all the schools of the study was 72. The sampling procedure used in the study was in stages: stratified, simple random sampling and purposive sampling technique. The sample size for the study was sixty (60). The instrument used in the study was Observational Rating Scale (ORS) and Practical Activities Package (PAP). Measurement of flexibility was done on activities like sit and reach, stand and reach, and trunk extension. The result of the study showed was presented in a table. Based on the statistical analysis, the study revealed that the flexibility of students with low vision, functional blindness and total blindness significantly different. Recommendations and suggestions were also made.*

Keywords: *Comparative, analysis, flexibility students three levels of visual impairment*

1 Introduction

The society has imposed many conditions on individuals wanting to participate in flexibility activities. These conditions make it mandatory for visually impaired students to be assessed before being given adequate training on to participate in flexibility activities.

The term visual impairment is an umbrella term. It covers a variety of visual conditions, some of which could be traceable to the time of birth, and some the time after birth owing to gradual deterioration of sight overtime (Yakubu, 2009). The visual system consists of the eyeball and its inner parts, the muscles that surround it, and the nervous system which connects, or links the eyeball and the occipital lobe, and vision center in the brain.

Little wonder Baumgartner et al (2003) defined flexibility as a range of movement about joint. Visually impaired students have differences in flexibility, which depend on the physiological characteristics which influence the extensibility of the muscles and ligaments surrounding their joints. Hill, Snook & Hill (1996) opposed their maintenance of a sitting position for an extended period. To them, that resulted in muscles becoming much shorter than they should be. They advocated for additional stretching exercises as a necessity for the visually impaired students to enjoy the adequate flexibility of their muscles and their reiteration of their normal length.

Physiologists like Bucher (1989) and Winnick (2005) identified flexibility as one of the physical fitness components. They reiterated that the components of physical fitness to be separate entities should be developed with separate procedures. To them, to improve and maintain physical flexibility assessment of participants before they are involved in active recreational activities is essential. Equally, in their opinion, it is essential that teachers understand the effects of exercises on the body of each student, to plan programmes that may be appropriate for students who have various degrees of visual impairments. Flexibility infers that the body can make a wide range of movements, such as those needed in swimming, diving, and tumbling.

Hence, Adedeji (1985) and Edim, Akah & Emeribe (2010), maintained that specific aims of teaching physical education to secondary schools are to help produce certain desirable qualities, like mobility and social qualities in the individuals. They further highlighted the achievement of the aims and objectives of teaching adapted physical education activities to be realistic only when the interests and needs of visually impaired students are given priority in the development of flexibility.

2 Statement of the problem

Sports are an avenue for participants to show their talents and flexibility skills. There have been many sports competitions for athletes with disabilities organized by different groups in different countries since 1960.

In Nigeria, many National Sports Festivals have been held in different states, (Special sports athlete). For example, in May 2003, Second National Games for the Deaf were held in Kaduna with activities such as athlete food ball cycling. Despite all these recorded histories on sports performance by the physically challenged, most of the participants never came from Nigeria, particularly Cross River State. The reason is sports

for the disabled in Cross River State, is usually under the care of Ministry of Social Welfare and Community Development and not Ministry of Sport. Secondly, special schools hardly host or hold a practical test of flexibility activities for the visually impaired in Cross River State. The visually impaired students rarely have opportunity to participate in all local and international sports competitions. They seem neglected. Their ambition of gaining good interpersonal relationship become therefore frustrated. Their physical body flexibility needs to be assessed based on the degree of vision loss.

To this point, certain questions become pertinent: is the extent of visually impaired student participation and performance in practical daily or test activities dependent upon their flexibility status? Or is it that the practical test activities with which to test their fitness status to identify which activities they are best fit are generally lacking? It is against this background that this study assessed the flexibility status of students with visual impairments and their participation in practical test activities in special schools in Cross River State.

Purpose of the study

The objective of the study is to ascertain the differences in flexibility of students with the three degrees of visual impairments in special schools in Cross River State.

Research questions

How does flexibility differ among students with the three degrees of visual impairments in special schools in Cross River State?

Statement of hypotheses

There is no significant difference in flexibility among students with the three degrees of visual impairments in special schools in Cross River State.

3 Literature review

Flexibility and students with visual impairments.

Flexibility is specific to each joint. It is, therefore, never measured with just one test. Each movement that is possible at each joint is measured or tested if all aspects of flexibility are to be provided with appropriate practical activities (O'Neill, 1995).

Exercise is quite necessary because people who are flexible are less open to injury during physical activity. This is consistent with the findings of Zhang (2007) which revealed that lack of regular exercise was responsible for poor performance in flexibility activities by the students with visual impairments. The researcher identified visually impaired students with a flexible body to have a lower risk of injury and to have the ability to perform daily living routines much more easily.

Wang, Belza, Thompson, Whitncy & Benneth (2006), investigated the effects of aquatic exercise on flexibility, strength and aerobic fitness of middle-aged visually impaired persons with osteoarthritis of the hip or knee. The subjects for the study were randomly divided into two groups. Participants were residents selected through community sources. They were randomly assigned to a 12-week aquatic programme of a non-exercise control condition. Data from 38 participants were collected at baseline, after week 6, and week 12, in 2003 and 2004. Instruments used were a standard plastic goniometer, a hand-held dynamometer; a 6 minutes' walk test, a multidimensional health assessment questionnaire, and a visual analogue scale for pain. Repeated measures analysis of variance showed that aquatic exercise significantly improved knee and hip flexibility, strength and aerobic fitness, but had no effect on self-reported physical functioning and pain. The exercise adherence rate was 81.7%, and no exercise-related adverse effect was observed or reported. Results suggested that aquatic exercises did not worsen the joint condition or result in injury in middle age visually impaired persons.

Thus, conclusions were drawn since short-term effects of aquatic exercise were beneficial to adults with osteoarthritis of the hip or knee flexibility. The implication was that although, the programme may not offer pain relief or self-report on improvement in physical functioning, excitement and interpersonal relationships were developed. Nurses engaging in disease management and health promotion for these patients should consider recommending or implementing aquatic classes for patients.

Pangrazi & Hastard (1995) advised teachers to follow strictly the principles of exercise if physical fitness levels of visually impaired students were to be improved and maintained. They emphasized frequency, intensity and time duration (FIT) to be the three most important principles to be used while considering and structuring flexibility activities for the visually impaired. They further identified some exercises that can develop and maintain flexibility to include exercises involving the lower back and the posterior thigh. They also pointed out that visually impaired students need to be instructed and be continually reminded that, to decrease the possibility of injury, all their stretching exercises must be done slowly and relatives to their ability. They also emphasized that since flexibility is not a general component of physical fitness, it is not possible to measure it just by one type of test.

Houwen (2007), examined gross motor skills of children with visual impairments and its association with the degree of visual impairments and sports participation. Twenty (20) children with visual impairment (Mean age 9.2 years, S.D 1.5) and 100 sighted children (Mean age 9.1 years, SD 1.5) from mainstreaming schools participated in the study. The result showed that children with visual impairments than the sighted had significantly lower scores in object control than in locomotor skill. No significant difference was, however, found between children with moderate and severe visual impairments. Children with visual impairments who participated in

sports had significantly higher scores in object control skill than those who did not. No significant associations were found between motor skills and participation in sports among sighted children.

Cartwright, Cartwright, & Ward (1989), therefore, concluded that visually impaired students with a flexible body had lower risks of injury and more easily performed daily living routines than their counterparts. They highlighted flexibility activities to always help prevent disabling contractions.

4 Research methodology

Research design

The research design adopted for this study was descriptive survey design. The choice descriptive survey was because the researcher wants to survey the flexibility characteristics of the subject as at the time of the research. That is the researcher used the visually impaired students as a subject to assess and determine their flexibility status based on their different level of visual impairments (low vision, functionally blind and totally blind students).

The research area was Cross River State. Cross River State is one of the thirty-six (36) states of the Federal Republic of Nigeria. Cross River State is situated in the South-South geo-political zone of Nigeria and has eighteen (18) local government areas.

Sampling procedure and technique

The sampling procedure used in the study was in stages: stratified, simple random sampling and purposive sampling technique. Stratified random sampling technique was adopted only in St. Joseph Center, Obudu, because Obudu has the largest number of visually impaired students. The visually impaired were grouped into three strata of low vision, functionally blind and totally blind based on degrees of visual impairments.

The researcher used the available 14 low visions. While 12 functionally blind and 11 totally blind selection was done using simple random sampling. This gave a total of 37 visually impaired students. Stratified random sampling was used in selecting the functionally blind and totally blind to ensure that the different groups had an equal number of representatives in the sample, and purposive sampling was used in picking all the available low vision students.

Purposive sampling technique was used in seven schools because the numbers of visually impaired students were small. Therefore, all the available number of visually impaired students in the seven inclusive schools were used for the study. The number comprised 6 low visions, 8 functionally blind and 9 totally blind making a total of 23 students in the seven inclusive schools. The researcher used an equal number

of subjects in the 3 levels of visual impairments (low vision, functionally blind and totally blind), (20 low visions, 20 functionally blind and 20 totally blind students). In the selection of the visually impaired into strata, the researcher used Snellen Chart to test their visual acuity and the help of Orientation and mobility teachers as well as observation by the researcher.

Population

The population of this study consisted of all the visually impaired students in all 8 special and inclusive schools in Cross River State. The entire population of the visually impaired students in all the schools for the study was 72. The sample size for the study was sixty (60) visually impaired students, comprising of 32 males and 28 females. The breakdown showed 20 low visions, 20 functionally blind and 20 totally blind students. Their ages ranged from 15 to 25 years.

Table 1 *Summary of population distribution*

S/N	Schools	Low Vision	Functionally Blind	Totally Blind	Total Number of students
1	St. Joseph Centre Obudu	14	16	19	49
2	Holy child secondary school Mount Camel Ogoja	0	1	2	3
3	Mary Knoll secondary school Okuku	1	2	1	4
4	Government Boy Secondary School Obudu	2	1	1	4
5	Government Girls Secondary School Obudu	1	2	2	5
6	PinMargaret secondary school Calabar	0	1	2	3
7	Bekwara Secondary School	1	0	1	2
8	Government secondary school Obuchiche	1	1	0	2
Total		**20**	**24**	**28**	**72**

Source: field survey (2010)

Instrumentation

The instrument used in the study was Observational Rating Scale (ORS). The Observational Rating Scale (ORS) had two sections A and B. Section A required personal data like age, sex, and type of visual impairments. Section B contained 3 items constructed to elicit information on flexibility.

Practical Activities Package (PAP) was made up of practical activities that were performed by the subjects under flexibility activities. The activities included the

following: sit to reach, stand to reach and trunk extension exercises. A ruler was used for measurement of sit and reach, stand and reach, and trunk extension. A stopwatch was used for checking of the time consumed on each test.

Measurement of flexibility

I. Sit and Reach

The degree of the trunk may flexion depend on the length of the trunk extensor muscles of the back and the hamstring muscles. The subject assumed a sitting position with the knees fully extended and the bottom of the feet against the lower board of the bleachers (a constructed bench). The hands and arms are stretched forward as far as possible, and this position is held for 3 seconds. Two rulers were used for measuring the distance in front or beyond the edge of the bench. Measures in the first front ruler are negative, whereas measures beyond are positive. This test may also be taken by standing on a bench and reaching down as far as possible (stand and reach). All the exercises and measurements were taken three times then the best performance scores were recorded as the subject scored.

II. Stand and reach

The degree of trunk flexion may depend on the length of the trunk extensor muscles of the back and the hamstring muscles. The subject assumed a standing position on a bench. The subjects bend their body with their hands and arms stretched down as far as possible, and this position is held for 3 seconds. A ruler was used for measuring the distance in front or beyond the edge of the bench downward. All the exercises and measurements were taken three times then the best performance scores were recorded as the subject scored.

III. Trunk extension

The test is a measure of the range motion when the back is placed in the prone position. The subject lied face down on the floor with a partner holding the buttocks and legs down. The fingers were interlocked, and the head and shoulders are raised as far as possible from the floor. The distance was measured from floor to chin with a ruler. All the exercises and measurements were taken three times then the best performance scores were recorded as the subject scored.

Validation of the instrument

The face and content validity of these instruments were established with the help of experts in Special Education, Human Kinetics and Health Education, Measurement and Evaluation, all in the Faculty of Education, University of Calabar.

Data collection procedure

The researcher obtained permission from principals of the schools under study and introduced herself as a Ph. D research student in the Department of Human Kinetics and Health Education, University of Calabar. One week before the administration of the tests, eight research assistants were given orientation and trained by the researcher on the following: (a) the nature and the scope of the study; (b) the facilities and equipment that were involved in the activities of the practical test; and (c) the research assistants' specific duties during administration of the activities of the practical test.

The following facilities and equipment: mat, none elastic measurement tapes, a ruler, and stopwatch were used to measure performance on the practical activities test of flexibility.

The researcher and the six research assistants helped in conducting the study. Two of the research assistants were nurses. Three of the research assistants were specialists in visually impairment education (one mobility instructor and two physical educators). Others included a timekeeper, a recorder of scores and a photographer who filmed and snapped the practical activities.

The duration of the study was eight weeks. The testing sessions were done three times a week. The tests were carried out in the morning from 8–11 AM and in the evening 4–6 PM. The duration of practical test activities was 30 minutes per subject. For each of the practice days, the subject's first participated in warm-up activities which get them prepared for the practical test activities.

5 Results and discussion

Hypothesis: The flexibility of students with the three degrees of visual impairments is not significantly different.

To test this hypothesis, the performance of students was on flexibility activities like sit and reach, stand and reach and trunk extension. These activities were compared.

Table 2: *Descriptive statistics showing mean (X), standard deviation (SD) and one-way analysis of variance (ANOVA) of the influence of level of impairment on flexibility.*

Flexibility parameters	Level of impairment	N	Mean	SD
Sit and reach	Total blindness	20	10.75	4.327
	Funct. blindness	20	11.00	5.099
	Low vision	20	11.85	5.678
	Total	60	11.20	5.001

Stand and reach	Total blindness	20	3.93	1.321
	Funct. blindness	20	5.50	1.076
	Low vision	20	7.13	1.062
	Total	60	5.52	1.742
Trunk extension	Total blindness	20	12.40	2.037
	Funct. blindness	20	9.70	1.867
	Low vision	20	11.20	1.989
	Total	60	11.10	2.230

Variable	Source of variance	Sum of squares	df	Mean square	F-ratio	p-level
Sit and reach	Between groups	13.300	2	6.650	.259*	.773
	Within groups	1462.300	57	25.654		
	Total	1475.600	59			
Stand and reach	Between groups	102.408	2	51.204	38.115*	.000
	Within groups	76.575	57	1.343		
	Total	178.983	59			
Trunk extension	Between groups	73.200	2	36.600	9.474*	.000
	Within groups	220.200	57	3.863		
	Total	293.400	59			
Overall Flexibility	Between groups	186.308	2	93.154	3.788*	.029
	Within groups	1401.875	57	24.594		
	Total	1588.183	59			

Significant at .05 *P < .05 df = (2,57) critical f = 3.15
Source: field survey (2010)

Table 2 result indicated that the F-ratios associated with stand and reach (38.115) and the overall flexibility (3.788), to be statistically significant at .05 levels ($p < .05$), where, the F-ratios associated with sit and reach (.259), were not statistically significant at .05 levels ($p > .05$). The result equally indicated the F-ratios associated with trunk exercises (9.474) not to be statistically significant at .05 level ($p < .05$). In all, the hypothesis was rejected, suggesting there was a statistically significant difference in the flexibility of the low vision, functionally blind and totally blind students in the special schools.

Using Fisher's least significant difference the result in the table indicated in respect to stand and reach, significant group differences between low vision and total blindness; low and functional blindness. It also indicates functional and low vision groups had a higher mean score ($x = 7–13$), followed by the total blindness group

(x = 5.50) and the total blindness group which had the least mean score (x = 3.93). This result indicated that the low vision group was superior to its counterparts in terms of the stand to reach activity, while the total blindness group was least in that activity.

The result also showed that significant group differences existed between functional blindness and total blindness groups and between functional blindness and low vision groups for trunk extension activities. The low vision group was statistically superior to the functional blindness group, while the total blindness group was statistically superior to the functional blindness group in trunk extension activities. This suggested functional blindness tend to account for significant group differences in trunk extension activities.

In terms of flexibility, the performance in sit and reach activity was greater than maximum, while in trunk extension it was less than minimum. However, in stand and reach activity performance was to be noted average. This result suggested subjects exhibited a good level of flexibility with regards to sit and reach activities; acceptable level of flexibility with regards to stand and reach activities; and a poor level of flexibility in trunk extension.

Discussion of findings

The results of the study revealed that the flexibility of students with low vision, functional blindness and total blindness was significantly different. Contrary to the stated null hypothesis of the study. This finding indicated that flexibility problems to show more on the level of effect of visual impairments. This simply meant that careful assessment must be done of the ability and limitation of visually impaired students' conditions as a first step to determining the eligibility of their participation in sports (flexibility activities).

This study is consistent with the findings of Zhang (2007) which revealed that lack of regular exercise was responsible for poor performance in flexibility activities by the students with visual impairments. The researcher identified visually impaired students with a flexible body to have a lower risk of injury and to have the ability to perform daily living routines much more easily.

Also, the result of this finding is in line with the findings of Houwen (2007) which concluded that there is no significant difference was, however, found between children with moderate and severe visual impairments. Children with visual impairments who participated in sports had significantly higher scores in object control skill than those who did not.

This finding is also in line with the findings of Cartwright, Cartwright, & Ward (1989) which concluded that visually impaired students with a flexible body performed daily living routines more easily than their counterparts. They highlighted flexibility activities to always help prevent disabling contractions.

6 Conclusion

Based on the research finding, it was concluded that the flexibility of students with visual impairments was significantly different.

Recommendations

Based on the finding of the study, the following recommendations were made:

1. Assessment of flexibility students with visual impairments should be carried periodically.
2. Basic flexibility activities package should be put in place by school curriculum planners to motivate teachers.

Suggestions for further study

Based on the limitation of the study, the following suggestions were made:

1. Similar studies should be carried out to cover other states and larger samples of visually impaired students.
2. A replication of this study should be carried out again on regular students.
3. Further studies should be carried out on flexibility relative to other types of impairments.

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(reviewed twice)

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Effective educational services for a child in need of Individual Education Programme (IEP)

(overview essay)

Nanjwan Josephine Dasel, Shwamut Ishaku Elisha

Abstract: *This study reviewed the role of team members in developing individualized education program (IEP) for persons with special needs. In other to accomplish the objective of IEP, the researchers discussed the meaning of Individualized Education Programme (IEP) as a legally binding document provided by the Federal Law, for children with special needs. And listed what the committee should do to develop IEPs that are linked to standards. The paper discussed importance and functions of IEP as well as the components of IEP. Also, highlighted the role of students (learners), teachers, parents and other professionals as members of IEP assisting students with special needs. Thus, IEP can be made functional and beneficial to the special need child in Nigeria through appropriate legislation, designing appropriate instruction by professionals/ experts, use of technology and modification of teaching methods. The paper concluded with an advice that if every member of the team is considered equal to other members, IEP shall be effectively developed.*

Keywords: *Educational services for a child in need, Individual Education Programme (IEP)*

1 Introduction

The success of our lives in school settings is what we achieved as an individual. This is because we understand the teaching that is being touched. Due to differentiated learning abilities teachers have experience with special needs children, their educational safety can be improved through Individual Education Program (IEP) alternatively called an "Individualized Education Plan. An IEP is a legally binding document provided by the Federal Law, for children with special needs. It is a legally binding document that spells out the type of special education services a special child will receive.

The Individuals with Disabilities Education Act of 2006 advised that it includes the child's classification, placement services, therapies, behavioural goals, a behaviour plan if needed, the percentage of time in regular education, and progress reports from teachers and therapist. The individualized part of IEP means that the plan must be tailored specifically to the child's special learning needs, not to the needs of the teacher, or the school, or the district. Goals, modifications, accommodations, personnel, placement, all should be selected to enforced and improve the learning needs of a child in mind to make the service appropriate. (Kauffman, McGee, & Brgham, 2004).

University of the State New York, State Education Department (2010) affirmed that IEP is a document developed by a team of people for students attending school system who have a direct relationship of helping students with special needs to be able to reach their full potentials. It is used for better understanding of how and what a student needs to succeed in his or her education.

It can also serve as a roadmap to address the student's goals, progress, and services needed. It is also a legal document that is required for each student.

IEP is the cornerstone of the special education process for each individual student. It is the tool to document how student's special needs related to his/her disability will be met within the context of an educational environment. This guidance document provides important information for Committees on Preschool Special Education (CPSE) and Committees on Special Education (CSE) in developing IEPs that are reasonably calculated to result in educational benefit to a student.

The IEP is planned at an IEP meeting. In developing a student's IEP, it is the responsibility of the Committee to recommend goals and services that will assist the student to be involved and progress in the general education curriculum or for preschool students in appropriate activities. This means that members of the Committee will need to consider both the State's learning standards as well as the school-based instructional curriculum, which should be aligned to the State's learning standards. They will need to know the expectations of the general education classroom for the corresponding age of the student both in terms of what learning is expected (general curriculum) as well as how the students are expected to access/demonstrate that learning. This information will assist the Committee in determining if the student needs adaptations, accommodations, or modifications of the general curriculum for all or part of his/her learning. It is essential that the student's general education teacher(s) participate in the Committee meetings for them to be knowledgeable about the general education curriculum.

To develop IEPs that are linked to the standards, the Committee should:

i. Review the content as well as the expectations of how the student will learn or demonstrate knowledge and skill in the content areas.
ii. Identify the strengths and challenges of the student in relation to those expectations in the present levels of performance section of the IEP.

iii. Identify how student's needs are linked to the general curriculum (e.g. a student's difficulty with visual processing may affect graphing skills required to achieve the math standards).
iv. Identify the goals that the student will be expected to achieve in one year and, when appropriate, short-term instructional objectives or benchmarks that are the intermediate steps to reach those annual goals.
v. Identify the special education services, including the adaptations, accommodations or modifications to the general curriculum, and/or instructional environment and materials, as needed by the student to reach those standards.

Importance of IEP

i. Support a student to participate and progress in general education curriculum.
ii. Incrementally prepared the student for adult living.
iii. Ensure a strategic and coordinated approach to address student's needs.
iv. Identify how the resources of the school need to be configured to supports the student's needs.
v. Guide the provision of a specially designed instruction.
vi. Provide an important accountability tool.
vii. Persistently support the student's personal learning process.
viii. Positively express the student's improvement and development.
ix. Provide positive learning experiences.
x. Result in successful organisation of teaching and modes of action.

The functions of IEP

U.S. Department of Education (2007), explains the functions in the following ways:

1. The IEP is not only a good resource and guideline to assisting students; it is also a link that educators and parents of the child can have a base information sharing document that will help to work at home, school and within everyday life.
2. The IEP is a working document that is to be assessed and upgraded on a regular basis for it to be of value to the educator, parent and for the child.
3. There are sample copies of IEP's guideline, but each child will need recommendations that will be developed for the individual needs and distinct learning styles.
4. The IEP allows for a broader explanation of the student's strength, capabilities, weak areas, social balance, behaviour needs, and adjustments needed for the education and personal growth of the child.

5. The information on the IEP can direct the teachers, parents and other professionals to compile the information that will give the student a distinct advantage in reaching his/her requirements (Friend, 2008).
6. It also allows a clearer understanding of the individual's personal needs. IEP can change many lives of an individual, family, and other students.

2 Components of IEP

An IEP should be arranged by schools for every child that is eligible to receive special education services, unique learning needs and regular progress measure (Gargiulo, 2009).

It is mandatory to provide everything promised in an IEP document by law. The IEP should contain the following:

a) A child's present levels of academic and functional performance

There should be current information of not more than a year. Here, a description of the child's abilities, skills in academic and functional levels are presented. All areas of development that the child needs support is addressed. The academic subjects covered the general core curriculum like sciences, education, arts and social sciences. However, the functional skills include daily living skills, social skills, behaviour, mobility skills, vocational skills, etc Lewis 2007).

b) Specific and annual goals

The law requires every IEP document to contain annual educational goals for each child. These goals should be written in a specific realistic and measurable manner because they will ensure a child is making good progress. An example of a specific goal is: at the end of the lesson, term, and year the pupil should be able to accomplish the goal.

c) A child's eligibility

Merely having a disability is not sufficient for eligibility. Before IEP, the school must first determine whether the child qualifies for special education services. To qualify or to determine eligibility, the school must conduct a full evaluation of the child in all areas of suspected disability. The disability must have an adverse effect on the child's educational progress. I.e. there must be the presence of disability/disabilities. The school, therefore, must conduct a full evaluation for a child in all areas of development (functional vision or colour perception, general intelligence, motor ability, communication, etc).

Based on the results of the evaluation, the school along with the parents must meet to review the results and the child's current level of performance and to determine

whether special education services are needed. If the child is found eligible for IEP services, the school is required to converse an IEP team and develop an appropriate educational plan for the child. The IEP should be developed or implemented as soon as possible after the child is determined eligible.

d) Members of IEP team

The IEP team must include student and student's parent(s) or guardians, a general education teacher/case manager, at least one regular education teacher, a representative of the school or district who is knowledgeable about the availability of school resources and an individual who can interpret the instructional implications of the child's evaluation result(s) such as the school psychologists.

The parent or school may also bring other individuals who have knowledge or special expertise regarding the child for example, the school may invite related service providers such as speech and occupational therapists. The parent may invite professionals who have worked with or assessed the child or someone to assist the parent in advocating for their child's needs such as parent advocate.

e) Appropriate placements

The IEP should be completed before placement decisions. After the IEP is developed, the placement can be done depending on the degree and nature of disability. The examples of placement are regular classes, special schools, resource room, inclusion, home school (Deno, 1970) etc. A location to receive therapy must be known. The IEP team determines the placement in the environment in which the child's IEP can be implemented (Weishaar, 2001) (Kamens, 2004).

f) Related services and supplementary aids.

Spencer (2005) admitted that the IEP must indicate the kinds of support and services the child will receive, the related services include slate and stylus, adaptive technology, functional life skills, therapies (speech therapy, occupational/physical therapy, computer instruction, etc).

There are also supplementary aids to help the child learn in the general education classroom such as accommodations, transportation (wheel chair) and assistive technology (soft wires).

g) Programme modifications

Modifications are changes in what is taught or expected of a student. The IEP must explain what types of testing adaptations and modifications will be used for the child and why they are necessary. They include assignments, assistive technology, environment, seating position, extra time for test or examination, etc. They can help a child to be accommodated and work around to pursue his/her education (Clark, 2000).

h) Progress report

A child's progress should be measured and reported to the parents, especially progress towards the annual goals. On the other hand, the child's strengths and weaknesses should be observed and considered in all areas of cognitive, social and psychomotor development.

i) Transition plan

Transition planning includes services and support to assist a child who graduates from school in getting an instruction and related services, career interest, community activities, daily skills, adult services and employment services.

Parent Role

According to Lewis (2005), the role of the parent is:

i. Verify the accuracy of personally identifying information.
ii. Provide information and observations about the child's level of functioning in the home and community.
iii. Provide information regarding the child's medical status.
iv. Provide information on the child's ability, interests, performance and history.
v. Provide information on instructional strategies and if appropriate, behavioural supports that have been successful.
vi. Assist in developing educational goals, objectives and benchmark.
vii. Assist in identifying the special education and related services to be provided.
viii. Assist in determining the appropriate educational plan and the least restrictive environment.
ix. Provide input on the vision statement.
x. Assist in all decisions made during the IEP meeting.
xi. Express concerns when developing and reviewing IEP.

Benefits of Parents Involvement in IEP Development

The involvement of parents in the IEP process has many benefits:

- Increase the teacher's understanding of the child's environment
- Add to parents' knowledge of the child's educational setting
- Improve communication between parents and the school
- Increase the school's understanding of the child
- Increase the likelihood that, with an improved understanding between home and school, mutually agreed upon educational goals will be attained.

Role of Regular Teacher

i. Provide information regarding the child's current level of performance in the regular education environment
ii. Provide information on the general education standards, curriculum and expectations
iii. Assist in determining appropriate positive behavioural interventions and strategies
iv. Assist in determining supplementary aids and services
v. Assist in determining program modifications and support needed for school personnel.

Special Education Teacher

For effective educational services, the special education teacher is expected to:

i. Conduct academic and behavioural assessments to acquire baseline data on the child before the meeting.
ii. Gather input from other team members before the meeting.
iii. Develop draft goals and objectives and share them with team members including the parent before meeting.
iv. Identify instructional strategies that would meet the needs of the child.
v. Discuss how to modify the general education curriculum to help the child learn.
vi. Identify the supplementary aids and services that the child may need to be successful in the regular classroom and elsewhere.
vii. Describe how to modify testing or to provide the test with individual appropriate accommodations so the child can show what he/she has learned.
viii. Describe how instruction can be individualized and how the program will be implemented throughout the course in the school.

Role of the Related Service Provider

The following are the roles of related service providers

i. Identify the child's present level of performance by contributing performance statements, data and baseline information related to the child's academic and functional performance
ii. Identify the child's needs related to academic and functional performance
iii. Contribute to the development of goals and objectives for parents and team members
iv. Recommend and describe the nature, frequency and amount of related service to be provided once the child's goals and objectives have been established.

v. Identify instructional and environmental modifications or accommodations that would assist the child in benefiting from special education.

Role of School Representative

i. Ensure that the services will be provided for the student
ii. Ensure that legal requirements of federal and state laws and operating standards are met
iii. Assist the team in identifying the variety of service delivery and placement options available.
iv. Coordinate the acquisition of needed services.
v. Clarify questions regarding curriculum adaptations and modifications.

The Child's Role

i. Provide input on interests and preferences
ii. Provide input on future planning
iii. Participate in decision-making and goal-setting
iv. Cooperation with the team members

How to Make IEP Functional

For IEP to be made functional and beneficial to the special need child in Nigeria, the following must be in place:

i. Legislation: According to Lewis (2005), for IEP to be made functional and beneficial to the special needs child, the legislation made by the federal government be given a top priority and be followed practically.
ii. There should be respect for one another, therefore keeping to IEP meeting time is important to every member of the team. And no one claims superiority over another, hence there are equal rights for speech making for every member.

3 Summary and conclusion

In summary, the development of a comprehensive programme, with goals and objectives that are relevant and acceptable to parents, regular teachers, and special education teachers is very important. For IEP to be functional and beneficial to the special needs child, all the stakeholders in education must be effectively involved. These include the government, parents, teachers and caregivers, professionals and the special needs persons themselves. Training a child in IEP can be time-consuming. Therefore, teachers and caregivers should be patient and tolerable in performing their duties. Based on individual differences among special needs learners, every child can be saved from

being illiterates by gaining the right educational services and practice. When learners have the privileges of appropriate educational placement they will have success.

Recommendations

Looking at the different steps IEP team members go through in this paper, one wonders about the financial implication it may cause. It is therefore recommended that:

- Every individual, groups and government should show concern and intervene by contributing to help the programme to be a success.
- Special education teachers and other related services specialist need more of government support for adequate job motivation.
- Special needs learners should be well considered in terms of appropriate educational placement that will suit their learning abilities.
- Financial allocations for IEP should be properly utilized. It should not be diverted to other educational programmes.

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Collaboration in preschool inclusion for children with autism spectrum disorders

(scientific paper)

Peng Yuntong

Abstract: *Focused on supporting systems for preschool inclusion of children with ASD, the research is aimed at exploring the collaboration between different support providers within the supporting systems. The researcher adopted a qualitative paradigm, and collected data through interview and observation. Grounded theory approach was applied to analyze the qualitative data, and to develop theories that can further interpret the reality and offer new insights into the practice of collaboration. The interaction between different support providers forms a network within the support systems. The collaboration between support providers varies in term of ways of communication, frequencies of collaboration, content/ways of collaboration, and effectiveness of the collaboration. Different factors influenced the practice of collaboration.*

Keywords: *preschool inclusion, collaboration, support provider, supporting system, autism spectrum disorders*

1 Introduction

Preschool inclusion provides young children with SEN with the opportunities to be included at a very young age, and has offered natural and realistic learning experiences for children. For children with Autism Spectrum Disorders (ASD), who have deficits in social communication and social interaction, inclusive settings provide them with natural environment for peer communication and interaction, which could be very beneficial.

Collaboration, underlining different professionals working together on a common problem, is critical for the success of early childhood inclusion (Allen & Cowdery, 2011). Focused on preschool inclusion of children with ASD, the current research adopted a qualitative approach to explore the current situation of the collaboration

in early inclusive settings in China, and to figure out problems that may hinder the success of interdisciplinary collaboration, aiming to contribute to the improvement of the preschool inclusion.

2 Method

The research adopted a qualitative paradigm, and grounded theory approach was utilized to analyze data collected through interview and observation. With the theories developed, the research aims to further interpret the reality, offer new insights into the practice of supporting systems construction, and therefore guide the practice of supporting systems construction.

Participants

The research was conducted in Chengdu city, the provincial capital of Sichuan province, China. The researcher adopted purpose sampling, and chose five children aged between 3 to 7 years old who were diagnosed with ASD and included in common preschool classrooms, as shown in *Table 2.1*.

Table 2.1 *Demographic Characteristics of Participants (Group A: children with ASD)*

Participants	Name	Age	Gender	Grade	Diagnosis	Placement
Participant A1	CC	4	Male	K1	Yes	Regular classroom + institution (half day)
Participant A2	LL	5	Male	K2	Yes	Regular classroom
Participant A3	RR	6	Male	K3	Yes	Regular classroom + institution (one semester)
Participant A4	JJ	6	Male	K3	Yes	Regular classroom
Participant A5	YQ	7	Male	K3	Yes	Regular classroom + resource center (weekend)

Note: K1–K3 means the different grades in kindergartens. K1 = bottom class; K2 = middle class; K3 = top class; Participant A4 spent one more year in the top class in the kindergarten.

The personnel who were related to the construction of the supporting systems were the sources of data, as shown in *Table 2.2*. The researcher used theoretical sampling to seek for more participants or interviews with recruited participants to collect further data which would best serve the construction of theories.

Table 2.2 *Demographic Characteristics of Participants (Group B–G)*

Participants	Number of participants	Average Age	Gender	
			Female	Male
Parents of children with ASD (B1–B5)	5	31	5	0
Preschool teachers (C1–C10)	10	29	10	0
Childcare workers (D1–D5)	5	44	5	0
Administrators of kindergartens (E1–E4)	4	45	4	0
Resource center teachers (F1–F2)	2	31	2	0
Other professionals (G1)	1	30	1	0

Data collection

Data collection of the research was conducted during a 22-week period, and the researcher mainly applied interview and observation to collect data. The interviews were carried out face to face by the researcher with parents, teachers, administrators and other relevant staff of the kindergartens, and both semi-structured and unstructured interviews were used. The observation was mainly conducted in the kindergarten. The researcher focused on the life of the children with ASD in kindergartens and how the personnel involved collaboratively supported the children.

Data management

To keep the accuracy of the data and to keep the chain-of-evidence, the data collected were managed with caution. First, all the data collected were dealt with in time, such as the transcription of interview recordings and the observation records. Second, all the data were filed and stored in computers. All the "raw data" and all the records of analysis such as memos and notes were filed and backed up in order to keep the chain-of-evidence.

Data analysis

In current research, the researcher followed the data analysis procedure in a grounded theory study. Two levels of coding process had been conducted, including open coding and axial coding. The researcher utilized the qualitative data analysis tool – ATLAS. TI (version 1.0.51) – to help with the analysis process.

At the open coding stage, the researcher first coded line-by-line, and broke the data into manageable pieces. Then the researcher tried to identify concepts, which were tentative and could be checked out against subsequent data. The properties and dimensions of concepts were developed, and similar codes were used to form categories. With the ongoing process of data collection, new information was then gathered and the codes and categories were further revised.

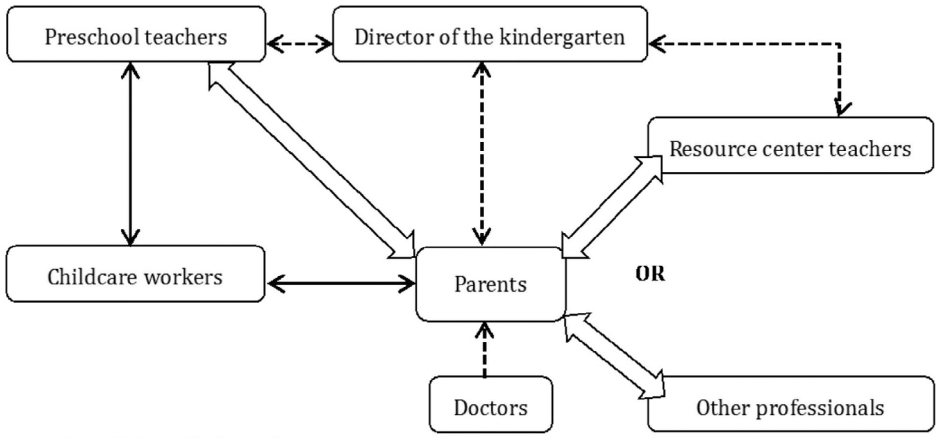
During axial coding, which is to explore the relationships between and within categories, the researcher tried to relate categories and subcategories, and attempted to figure out the links between different categories. With this process, categories were linked together to formed basic explanations.

3 RESEARCH Results

3.1 Overview of the collaboration between support providers

According to the data collected, the collaboration between different support providers forms a network within the support systems. *Diagram 3.1* illustrates the actual collaboration among main support providers, including preschool teachers, childcare workers, directors of the kindergartens, parents, resource center teachers, other professionals and doctors.

Diagram 3.1 *Collaboration between main support providers in the supporting systems*



Properties of the collaboration:

- **Ways of communication: face-to-face, phone call, phone message, chat software...**
- **Frequencies of collaboration: (− +)**
- **Content/ways of collaboration: (− +)**
- **Effectiveness of collaboration: (− +)**

Note: (1) Different arrows represent different extents of collaboration, with the wider arrow indicating collaboration at higher level of intensity and scope and the arrow with dashed line indicating collaboration at the lowest level of intensity and scope. (2) The directions of the arrows indicate the collaboration is unidirectional or bidirectional.

In the central part of the diagram is an important component "parents". The position of "parents" in the diagram indicates the roles that parents played in the systems. Parents interacted with preschool teachers, childcare workers, directors of kindergartens, other professionals or resource center teachers. Among those interactions, the collaboration of "*parents-preschool teachers*" and "*parents-resource center teachers/other professionals*" forms very critical relationships in the systems, because according to the data collected, these two kinds of collaboration were the most active relationships in the systems and were of significant importance.

Parents also interacted with childcare workers, directors of kindergartens and doctors, but the frequency and scope of the collaboration were much less. There was also collaboration between preschool teachers and childcare workers, between preschool teachers and directors of kindergartens. In very seldom cases, resource center teachers might interact with directors of kindergartens, but the collaboration was also limited in terms of frequency and scope.

Based on the data collected, the collaboration between support providers varies in term of *ways of communication, frequencies of collaboration, content/ways of collaboration, and effectiveness of the collaboration*.

The content of collaboration between main support providers has been summarized in *Table 3.1*.

Table 3.1 *Content of collaboration between main support providers in the system*

Collaborative relationship	Content of collaboration
Parents-preschool teachers	• Information exchange • Development of goals • Communication of expectations • Collaborative intervention • Emotional support
Parents-resource center teachers	• Communication about educating children with ASD • Information exchange • Development of training plans • Collaborative intervention • Emotional support
Parents-other professionals	• Information exchange • Development of training plans • Collaborative intervention • Emotional support
Parents-childcare workers	• Information exchange • Communication of expectations
Preschool teachers-childcare workers	• Discussing strategies • Assistance in teaching • Emotional support

Preschool teachers-director of the kindergarten	• Discussing problems with the children with ASD • Discussing possible solutions
Parents-director of the kindergarten	• Consultation about placement • Discussing parents' accompany
Resource center teachers-director of the kindergarten	• Introduction of resources (occasional cases)
Parents-doctors	• Diagnosis

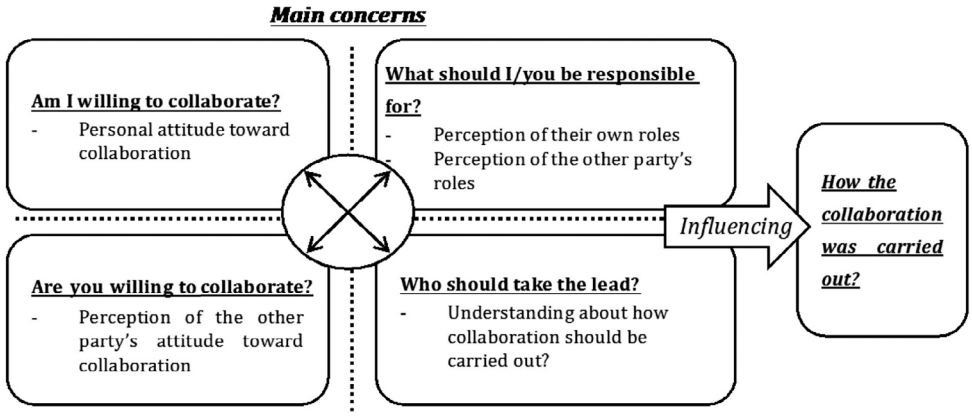
3.2 Factors influencing the collaboration

Having stated before, the collaboration of "*parents-preschool teachers*" and "*parents-resource center teachers/other professionals*" forms very critical relationships in the systems. In the following part, the researcher will elaborate on the factors which were influencing these two important relationships.

3.2.1 Factors influencing the "parent-preschool teacher" collaboration

Various factors had influence on the collaborative process, and those factors were sorted into four main categories, as presented in *Diagram 3.2*. These four main categories of influencing factors were also major concerns of preschool teachers and parents, which interacted with each other and jointly influenced both parties' behavior in collaboration.

Diagram 3.2 *Influencing factors of collaboration between parents and schooll teachers*



Am I willing to collaborate?

This category indicates an important element that underlies the practice of collaboration, that is, personal attitudes toward collaboration.

For preschool teachers, their personal attitude toward collaborating varies from very passive to active. For instance, the researcher found teacher H. (participant C1) was very passive to collaboration and sometimes even resistant.

> *Observation record: When the teacher was told that the mother of the child would come to the kindergarten to discuss what could be done to help the child, the preschool teacher looked very resistant. She complained that there were many difficulties and she could do nothing.*

Conversely, some teachers were very active to communicate with parents and tried to cooperate. Teacher L. (participant C3) said she had very good communication with parents of the child with ASD in her class. She told the researcher that she had learnt a lot from the mother, such as how to communicate with the child, how to let the child interact with others, and she would actively use the skills she learnt to help the child.

As for parents, their attitude toward collaboration with preschool teachers also varies from passive to active. What is different from the teachers' attitude is that most of them were willing to collaborate. For example, the parents would actively share what the children did at home.

Are you willing to collaborate?

This category refers to the perception of the other party's attitude toward collaboration. The positive feedback from the other party in the process of collaboration could offer people with motivation for further collaborative practices, and vice versa.

Teacher L. (participant C3) introduced her experience of collaborating with the parents of the child.

> *"After diagnosis, the mother took the child to Beijing (to have training in an institution) for one semester, and she kept contact with us… … When they came back, she accompanied the child in the classroom, and she told us what to do while talking to the child… … She worked for the railway company, as long as she had time, for example, when she was off-duty or after a night shift, she came to the kindergarten and accompanied the child. During the four years, we have been deeply touched by the mother."*

However, some of the parents complained that the teachers were very passive to communicate and cooperate with them. During the interview, JJ's mother (participant B4) showed a very negative attitude when talking about their relationship with the preschool teachers, and had fewer expectations for the preschool teachers. On the other hand, the preschool teachers of child JJ (participant C1 and C2) complained that the parents did not show a very active and open attitude during their communication and that the parents did not admit that their child is different from other children.

What should I/you be responsible for?

The third category indicates parents' and preschool teachers' perceptions of both parties' roles in collaboration. If there are more agreements on the roles of each party, there will be fewer problems. Based on the data collected, both parties' perceptions of each other's roles have been summarized in the table below. According to the table, there are some differences between the two parties' perceptions. For teachers, the safety of the children is their first priority. For parents, except for safety, they expected that their children could be educated in the kindergarten and could interact with peers. They were worrying about whether their children were discriminated, how they performed in the kindergarten.

Table 3.2 *Preschool teachers' and parents' perceptions of either party's roles*

	Preschool teachers' roles	Parents' roles
Preschool teachers' perception	• Ensure the safety of the children • Look after the children for daily routines • Inform parents about the children's performance • Love the children • Extra instructions for the children • Stop any problem/dangerous behavior • Stop conflicts among children • Include the children into activities • Provide opportunities for the children	• Be open to the communication with teachers • Accompany the children in the kindergarten when necessary • Seek for professional institutions to provide intervention for the children • Provide consistent education for the children at home
Parents' perception	• More attention for the children • Extra instructions for the children • More patience for the children • Stop problem/dangerous behaviors • Build a tolerant and warm atmosphere • Not discriminate the children • Stop potential bullying or discrimination • Inform parents about the children's performance • Look after the children for daily routines • Include the children into activities • Provide opportunities for the children	• Take care of the children after school • Accompany the children after school • Provide opportunities for the children to develop and practice necessary skills • Accompany the children in the kindergarten when necessary • Seek for professional institutions to provide intervention for the children • Give the children a warm and full-of-love family environment

Who should take the lead?

In the process of collaboration between parents and preschool teachers, another concern is who is going to take the leading role. This is also related to the expertise of the preschool teachers.

For teachers, they have much knowledge and experiences of teaching preschool children. They are supposed to provide professional information and advice for

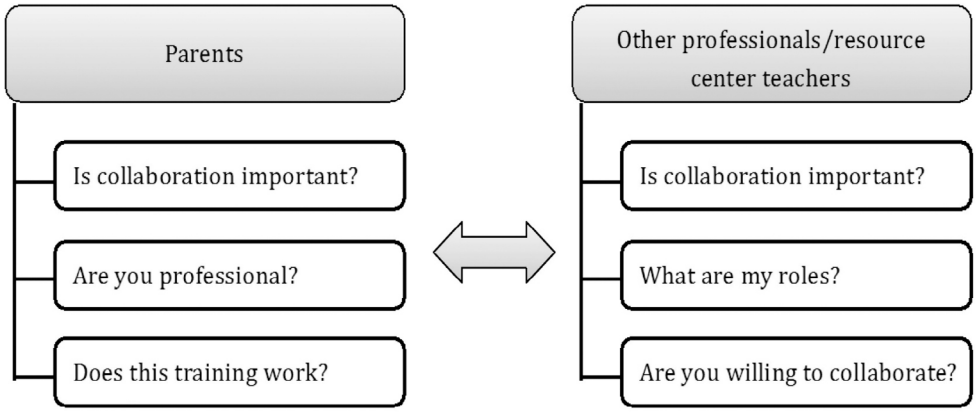
parents. However, almost all the preschool teachers reported that they had little knowledge or skills to teach children with ASD. Therefore, in real practices, without external supports, many of them failed to take the professional roles and were busy coping with all the challenges brought about by the children with ASD.

Parents, on the other hand, had many expectations for the preschool teachers. They would like to communicate with them about what they could do to help the children adapt to the life in the kindergartens. Some teachers would accept the parents' suggestions, but some of them might feel offended and annoyed.

3.2.2 Factors influencing the "parent-other professional/resource center teacher" collaboration

Several factors influenced the collaboration between parents and professionals from the institutions/resource center teachers as shown in *Diagram 3.3*.

Diagram 3.3. *Factor influencing the collaboration between parents and other profesionals/ resource center teachers*



Is collaboration important?

For both parties, their perceptions of the importance of collaboration were very critical for the carrying out of collaboration. The understanding of the value of collaboration could provide inner motives.

Resource teacher M. (participant F2) mentioned the teachers in the resource center realized that only with the parents' participation could the intervention be more effective and efficient.

The mother of YQ (participant B5) told the researcher about their understanding of their collaboration with the resource center teachers:

"We come to the resource center for every Saturday morning. It's not because how much he can learn during this one or two hours. It's because the teachers can find out what he lacks and can give us suggestions. Then we can go back and teach the child by ourselves. Our child was diagnosed when he was four, and we have been teaching him since then. The teachers cannot provide very comprehensive intervention to the child, we have to participate and cooperate."

Are you professional?

This category shows the influences that parents' perception of the professionalism of the other professionals/resource center teachers had on their collaboration. When the parents trust the other professionals/resource center teachers, they tend to be more willing to collaborate.

"The parents trusted us and were very cooperative, because they see the effects of professionalism and respect professionalism", said the resource center teacher (participant F1). Parents' perception of the professionalism is also related to the following category, which relates to the effectiveness of the training. Resource teacher M. (participant F2) also said that: "when the parents cannot see the strength or professionalism of the institution, they would neither trust them nor actively cooperate."

Does this training work?

This category indicates the parents' perception of the effectiveness of the training. The more effective they thought the training was, the more cooperative they would be during the process.

The mother of YQ (participant B5) reported her perception of the effectiveness of the training in the resource center:

"We come here once a week. The teachers tell us how to teach our child, and give us home training plans. We follow the plans to train the kid at home. Since then, we've found that our kid starts to make rapid progress."

Teacher L. (participant F1) also told the researcher that the parents of YQ were very cooperative and they had very efficient communication. Although there were doubts from the parents, the teacher explained to the parents and insisted on the training. Later her insistence turned out to be right. The parents saw the effectiveness of the teacher's strategies and became more supportive in the whole process.

What are my roles?

This category refers to other professionals' or resource center teachers' understanding of their roles, which is associated with what they would do and how they do it.

For example, the professional from the institution (participant G1) considered solving the child's (CC) problems emerging either at home or in the kindergarten

as part of the roles they should play. Therefore, the parents of the child would come to the professional when they found problems faced by the children either at home or in the kindergarten, and they would figure out solutions together. The resource center teacher M. (participant F2) also mentioned how they started to include parents into their program, and the resource center teachers defined their own roles as a "guide". Therefore, based on their perception of roles, they provided topics and let parents share their feelings and experiences, and offered supportive guidance when necessary. "We invited parents to introduce what they worry most at the first time, and then we summarized the most frequently mentioned topics," said the resource center teacher.

Are you willing to collaborate?

This category indicates the other professionals' or resource center teachers' perceptions of parents' attitude toward collaboration. When the parents are active and cooperative in the intervention, it's more likely for the professionals and resource center teachers to include the parents and carry out collaborative practices.

One of the resource center teachers (participant F1) said,

> *"The mother attached great value on the child's training, our communication is very efficient. She is very clear about what we did and what she should do at home, and she will do it… I can see that she is very devoted, and I will tell her why we should do this… After we tell her (what to do), his mother will do it exactly as she was told. So our collaboration works very smoothly…*
> *I believe the parents have been very positive and tried very hard to seek resources, so I think we, as members of society, should do more."*

3.3 Problems existing in current network of interdisciplinary collaboration

3.3.1 Loose internal structure of the collaborative network

According to *Diagram 3.1*, the connections among different support providers were loose, and persons involved in the inclusive practices did not collaboratively work all together. In the network of collaboration, the parents were located in the central part; they interacted with other parties. However, there were no direct contacts between other parties. Most of other professionals provided services in places other than kindergartens, and the kindergartens usually did not employ them as their staff. As stated before, they did not collaborate with each other as a team.

The quantitative survey which was used as triangulation also confirmed this argument. For the 13 participants who had children with SEN in their classes, 76.92% reported no external supports from other institutions or resource centers.

3.3.2 No explicit definitions of the roles for each party

There were no explicit definitions of the roles each party should play and of responsibilities they should assume. Without specific guidelines for implementing inclusive education, persons involved in the practice might have different understanding of both their own and others' roles. How they perceived their responsibilities had great influences on the ways that they behaved. Divergences of the understanding between different parties could even cause barriers in communication.

3.3.3 Unequal status during the communication

Just as presented before, a clear definition of each party's roles is very important for effective collaboration; an equal status is the same. Some parents reported their concerns while communicating with preschool teachers, that they were afraid to say things too explicitly because they might offend the teachers. "I do not want to say in that way (too directly), because the kid is studying here anyway, and if the child is treated differently as a result, I do not think I can accept", said the mother of JJ (participant B4). On the other hand, the preschool teacher of JJ (participant B1) also told the researcher, "Currently, the kindergartens are more emphasize providing services for parents… we did not dare to tell the parents too directly".

3.3.4 No settled guidelines for collaboration.

No formal collaboration was carried out based on the data collected through interviews and observation. Different participants reported different ways of collaboration, and it depended on their own situations.

In an effective collaboration model, all the team members work within a shared framework and all the parties have equal status, focus on the same goals, voluntarily participate, share information with each other, keep communication among team members, contribute their expertise, and respect other's ideas and have shared responsibility for decision making and for outcomes (Cross et al., 2004; Friend & Cook, 2012; Giangreco et al., 2000; Idol, 1997). However, given the problems discussed above, the collaboration during the inclusive practices was insufficient. In consequence, the lack of collaboration was very likely to cause all the service providers working toward different goals, and the services provided were not within an integrated plan.

3.3.5 insufficient preparation of preschool teachers

In inclusive settings, preschool teachers are supposed to possess certain qualities, such as the abilities to collaborate with other personnel involved, to adapt the curriculum and practice to meet the special needs of the children, and to be open to other professionals' suggestions etc. The level of professionalism influences how they understand their responsibility, how they perceive the importance of collaboration

and how they perform during the collaboration with other parties. However, based on the data collected, none of the preschool teachers who participated in this research had any training about inclusive education.

The process of triangulation confirmed this argument. Among all the 36 participants, 69.44 % had heard of inclusive education. Only 52.78 % of the preschool teachers learnt some pre-service courses related with educating children with special needs or inclusive education, and only 13.89 % of them had in-service training related with educating children with special needs.

4 Conclusion

According to the results of the research, the collaboration in the preschool inclusion for children with ASD was not very promising. The insufficient collaboration between different parties also affected the functioning of the whole supporting system for children with ASD. There are still many problems to be solved, and also aspects to be improved. In order to promote better collaboration within the network of the supporting system, firstly, the roles of different support providers should be clearly defined. Second, detailed guidelines for the collaborative practice in inclusive education should be developed. With an explicit guideline for carrying out the work, all the parties can have consensus about their responsibilities, and the work of each party can be regularized and standardized. Thirdly, pre-service as well as in-service training should be provided for preschool teachers, because the level of professionalism of preschool teachers can underpin the functioning of supporting systems. In addition, mutual respect and open attitudes are also important during collaboration, and it would be very beneficial if all the parties can have those qualities. Only with effective collaboration among all the personnel involve, the inclusive practice can be successfully carried out.

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Acalculia in patient with split-brain syndrome – a case study

(scientific paper)

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Abstract: *Aim of the contribution is to describe speech and language assessment and therapy of patient Jiří after removal of tumor in corpus callosum using a case study. Split-brain syndrome, cognitive impairment and acalculia occurred after tumor removal. Acalculia is an acquired disorder of processing and calculations skills following cerebral damage. Split-brain syndrome occurs in patients with damage to corpus callosum. Cognitive functions were assessed by an MoCA test and Addenbrook cognitive test, calculation was diagnosed by self-constructed test. After 1 month of therapy Jiří was retested using the same tests. Cognitive functions and calculation skills have improved however impairments in general numerical knowledge, place orientation and recent memory remained weak.*

Keywords: *acalculia, speech and language assessment, speech and language therapy, split-brain syndrome, recent memory*

1 Introduction

The aim of the contribution is to describe speech and language assessment and therapy of patient Jiří after removal of tumor. Neurorehabilitation was given by author of contribution (speech and language pathologist) in the Neurorehabilitation department of Faculty hospital in the Czech Republic. At the beginning of the hospitalization Jiří's cognitive functions, language and calculation were assessed. Based on the input assessment Jiří was given appropriate therapy. Cognitive functions, language and calculation were retested after approximately one month. After that Jiří was discharged to home care.

2 Theoretical basis

2.1 Acalculia

Number processing and calculation are an essential part of our culture: we use numbers for counting, measuring; we constantly need to calculate, understand fractions, proportions and ratios, and to understand and remember PIN codes, telephone numbers, addresses, shoe sizes etc. (Semenza et al., 2014). Acalculia is an acquired disorder of processing and calculations skills following cerebral damage (van Harskamp, Cipolotti, 2003). During the performing of calculations, parietal, prefrontal and cingulate areas are systematically activated (Dehaene et al., 2004). Activation of horizontal segment of the bilateral intraparietal sulcus (HIPS) is present solely during calculations and cannot be explained away by spatial, attentional, eye or finger movements artifacts (Simon et al., 2002). Eger (2003) and Naccache (2001) indicate, that HIPS is amodal and not specialized for a particular number notation: it reacts identically whether numerals are spoken and written, and whether they appear in Arabic notation or in spelled-out form. Left and right parietal cortices, therefore, showed a different resolution in single-digit comparison, the left being necessary for fine discrimination, and both right and left being able to support coarser comparisons (Ansari, 2008). Bilateral parietal lobes (intra-parietal sulci and neighbour areas, with an emphasis on the left hemisphere) is the neural substrate of number magnitude processing (ibid). Calculation ability represents a multifactorial skill, including verbal, spatial, memory and executive functions (Ardila, Rosselli, 2002). Acalculia is not a unitary disorder and can take a variety of different forms: patients may show impairments in number processing (number production and number comprehension), in calculation or both (Cappelletti, Cipolotti, 2012; Vitásková, 2013; Vitásková et al., 2015).

2.2 Split-brain syndrome

Split-brain syndrome (disconnection syndrome) occurs in patients with damage to corpus callosum e.g. in patients with multiple glioblastoma, after callosotomy and in patients with agenesis corpus callosum (Pekárková, 2015). In the case of split-brain syndrome information from the dominant hemisphere is not transmitted into motor area of the non-dominant hemisphere, so the dominant hemisphere loses control of the motor area of the non-dominant hemisphere (ibid.). Thus the corresponding side of body (mostly left hand) is not able to perform intentional and planned movements; however unintentional movements work well (ibid). Somatic and visual information from the left side of body and space is not transferred to their interpretative area and could not be used for reasoning and decision making (ibid). Patients could suffer from disturbed orientation in space and apraxia of left hand (ibid). Koukolík (2014)

states that disconnection of the hemispheres damage recalling information from memory whereas recognition is spared.

3 Research Methods

In the research part of the contribution we used the method of case study. For assessment acalculia we used our self-constructed test. Cognitive functions were diagnosed by Montreal Cognitive test (MoCA) (Nasreddine et al., 2005) and Addenbrook cognitive test (ACE-R).

3.1 Anamnesis of Jiří

Jiří is a right-handed 62-year-old man. He trained as a waiter. After he graduated from Hotel School he worked in his own restaurant, later as a taxi driver. His last job was a porter. Jiří likes going to his cottage, travelling, cooking and do-it-yourself activities around the cottage. He is interested in cars. He was after removal of tumor (anaplastic oligodendrogliom) with extension to ventricular system from front part of corpus callosum in 12th July 2017. Before, in February 2017 MRI showed subarachnoid hemorrhage with hematocephalus and small intracerebral hematoma in left gyrus rectus. He was hospitalized in the neurosurgery department, after in the neurorehabilitation department. After removal of the tumor, partial split-brain syndrome appeared. Jiří did not tactile recognize some items in his left hand, before he correctly named these items). On the 4th day after surgery Jiří tactile recognized 4 of 5 items in his left hand. He had severe troubles with recent memory. His psychomotor processing was slow. In the next 4 days Jiří produced rich speech in sentences. Naming was mildly impaired, sometimes he used semantic paraphasias. Comprehension of multiple instruction about pointing on different parts of his body was mildly impaired. In the next week, he could hold simple conversation, psychomotor processing remained slower, his recent memory remained severely impaired, but slightly improved. He was disorientated by place and time. He could repeat a sentence of up to 5 words. Jiří was placed into neurorehabilitation department 2 and half weeks after surgery.

4 Results

4.1 Input assessment

Results of assessment of calculation is in table 1, results of ACE-R is in the table 2 and results of MoCA test is in the table 3.

Table 1. *Results of Assessment of Calculation in Jiří.*

Task	Score on 3/8/2017	Score on 31/8/2017	Interpretation
1. Counting			normal
a) Forward (1–20) by one	20/20	20/20	
b) Backward (20–1) by one	20/20	20/20	
c) Forward (10–90) by tens	9/9	9/9	
2. Reading arabic numerals (up to 10)	10/10	10/10	normal
3. Personal numerical knowledge	5/5	5/5	normal
4. Transcoding			normal
a) Reading arabic numbers	7/7	7/7	
b) Writing arabic numbers	7/7	7/7	
c) Number words to arabic numbers	7/7	7/7	
d) Reading number words	7/7	7/7	
e) Verbal form to number words	7/7	7/7	
f) Arabic numbers to number words	7/7	7/7	
5. Mental calculations			improvement
a) +, –, *, / up to 10	7/8	8/8	
b) +, –, *, / up to 100	6/8	7/8	
c) +, –, *, / up to 1 000	12/16	15/16	
6. Subitizing	5/5	5/5	normal
7. Knowledge of arithmetic signs			normal
a) Reading arithmetic signs	4/4	4/4	
b) Completing arithmetic tasks with arithmetic signs	4/4	4/4	
8. Counting dots	3/3	3/3	normal
9. Numerosity judgement	9/10	10/10	improvement
10. General numerical knowledge	7/8	7/8	unchanging
11. Simple written calculation			normal
a) +, –, *, / up to 50	8/8	8/8	
b) +, –, *, / up to 1 000	8/8	8/8	
c) Calculations in columns	8/8	8/8	
12. Composition of value from money	7/7	7/7	normal
13. Number bisection task			improvement
a) Number bisection task	1/3	3/3	
b) True & false questions about number bisection	1/3	2/3	
14. Knowledge of arithmetic rules			deficient
a) Calculations with zero	7/8	8/8	
b) +, –	3/4	4/4	
c) *, /	1/4	2/4	
15. Story problems	6/7	7/7	improvement
Total	**213/232**	**226/232**	**improvement**

4.1.1 Assessment of calculation

Jiří's performance in counting, reading arabic numbers, personal numerical knowledge, transcoding, subitizing, knowledge of arithmetic signs, counting dots, simple written calculations and composition of value from money was correct and fast.

In single digit division (6 / 2) Jiří calculated for too long, approximately 2–3 minutes, as well as in subtraction (19–9, 76–42) and two-digit division (60/30). In simple division (72 / 8), two-digit subtraction (99–34), and two-digit multiplication (30 × 30) Jiří thought about the task so long that he forgot what to calculate.

One of 10 tasks of numerosity judgement was performed incorrectly (32 and 23).

In general numerical knowledge Jiří erroneously answered the question „how many legs does the housefly have", other answers were correct.

Jiří failed in half of the task of number bisection, all the tasks were presented orally, without number line (23 and 29, 32 and 38 and in the task if 84 is between 80 and 86 he thought too long – about 2 to 3 minutes). Tasks examining calculating with zero were performed flawlessly except task 5 /5 when Jiří answered 0 instead of 1. In the task concerning knowledge of arithmetic rules Jiří did not apply arithmetic rules, he tried to calculate tasks mentally (if 79 + 54 = 133 so 133 – 54 = ?, if 45 × 16 = 720 so 16 × 45 = ?, 84 × 5 = 420 and 83 × 5 = ?, if 63 × 4 = 252 so 63 + 63 + 63 + 63 = ?). In the other tasks eg. 37 + 19 = 56 and 370 + 190 = ? Jiří started to calculate two numbers around the word „and" without comprehension of the task. After examiner's notification he started to solve task correctly. In story problems there was an error in 1 of 7 story problems. In the multi – step story problem Jiří had a different result than he performed previously in the next calculation.

Table 2: *Performance of Jiří in ACE-R*

Areas of ACE-R	Score on 3/8/2017	Score on 31/8/2017	interpretation
attention and orientation	14/18	15/18	improvement
memory	10/26	14/26	improvement
verbal production	6/14	4/14	deterioration
language	26/26	26/26	normal
visual – spatial abilities	16/16	16/16	normal
total score	**72/100**	**75/100**	**improvement**

Table 3: *Performance of Jiří in MoCA test*

Areas of MoCA test	Score 3/8 2017	Score on 31/8 2017	interpretation
visuospatial orientation, Clock test	5/5	5/5	normal
naming of animals	3/3	3/3	normal
attention	5/6	5/6	unchanging

repeating sentences	1/2	1/2	unchanging
rapid naming	0/1	0/1	unchanging
abstraction	2/2	2/2	normal
memory – recalling words	0/5	0/5	unchanging
time and place orientation	3/6	4/6	improvement
total score	**19/30**	**20/30**	**improvement**

4.1.2 Assessment of cognitive functions and language by observation and by tests ACE-R and MoCA

Time and place orientation. Jiří could tell correctly actual date, day of week, year and season, he could not say actual month. He knew the region, state and town where he actually was, but he did not know the name of hospital or department or floor.

Memory. He was able to repeat 3 words from ACE-R test, but was able to recall only one word from 3 words after another task. Jiří could repeat 4 items of address from 7 items in ACE-R test. In the reminding remembered information, he could not recall any items in the ACE-R test as well as in the MoCA test. Hints given by examiner in the recognition of remembered address in the ACE-R test helped him in 2 items from 5. In subtest of long-term memory Jiří answered correctly 3 questions from 4. He did not know the name of the premier of the Czech Republic. Jiří did not remember when his girlfriend went him to visit the hospital. He did not remember of which disease his brother had died.

Attention and calculating. In sequential subtracting number 7 he made one error in the middle of the task in both tests. He made 2 mistakes in the indicating letter "A" in the MoCA test. Short form of digit span test in the MoCA test was solved well.

Language. His verbal production was slower, without anomic pauses or paraphases and fully meaningful. Naming was intact. Jiří repeated sentences from MoCA test with small inaccuracies. Comprehension of spoken and written language was good. Reading and writing was intact. In the rapid naming of the words Jiří could say 6 words beginning with the letter "p" in 1 minute and say 10 animals per 1 minute in the ACE – R test. In the MoCA test he produced 5 words beginning of letter "k" per 1 minute.

Visuospatial abilities. Jiří could copy pentagon, cube and block. Clock test was 100 % correct. A small part of trail making test in the MoCA test was performed very well. He could count dots and recognized incomplete letters in ACE-R test. But he is lost in orientation in the department of hospital. For example, he often went to the kitchen instead of bathroom. He went to watch TV to another department and floor of the hospital. He got lost in the area of hospital when he went to the snack bar.

4.2 Content of the therapy

The aim of the therapy was to improve vocabulary, cognitive functions, especially recent memory and calculation. Jiří had therapy from a speech and language patholo-

gist every working day. He was getting some assignments at every therapy. Sometimes he did not work on an assignment because he forgot that he had got some assignment. Family members were asked to encourage Jiří in the training.

For enlarging vocabulary he had to produce a maximum of words beginning with various letters, a maximum of words within 1 semantic category (e.g. brands of cars, drinks, meals, soups, means of transport, sports, clothes…), word game "verbal football", determining antonyms. Speech and language therapy was started with time and place orientation according to calendar, after with task focused on short term memory (for instance remembering 5 different songs, famous persons, shopping lists). Jiří was taught mnemonic devices – e.g. method of loci, categorization. After training recent memory, strengthening long-term memory and logical thinking followed – for example naming all members of Jiří's family, matching 2 foods that we can eat together, matching appropriate genus and species of mushrooms, completing idioms, thinking about mutual adjectives of 3 substantives. At the end of session information from training recent memory was recalled. Training of attention was carried out for instance by reading text backward. Training of calculation consisted tasks focused on mental calculations, numerosity judgement, number bisection task, knowledge of arithmetic rules and story problems. A personal diary was set up.

4.3 Output assessment

After approximately 1 month of training, Jiří was retested by MoCA test, Addenbrook cognitive test and test of acalculia. Results of these test are in the tables 1, 2 and 3.

4.3.1 Assessment of calculation

Jiří's performance in counting, reading arabic numbers, personal numerical knowledge, transcoding, subitizing, knowledge of arithmetic signs, counting dots, numerosity judgement, simple written calculations, composition of value from money, number bisection task, knowledge of arithmetic rules up to 10, knowledge of arithmetic rules in calculation with zero and in addition and subtraction and story problems was correct and fast.

In mental calculations up to 100 in the simple division (72 / 8) and in mental calculation up to 1000 in multiplication (30 × 30) Jiří still thought about answers too long.

In general numerical knowledge Jiří erroneously answered again in question "how many legs does the housefly have", other answers were correct.

Jiří failed only in one task in the second part of number bisection task– in the decision making if suggested number is between other 2 suggested numbers (if 78 is between 75 and 83 he said "yes".

In the task knowledge of arithmetic rules in the multiplication and division Jiří did not apply arithmetic rules and he mentally calculated the task in 45 × 16 = 720 so 16 × 45 = ?, 84 × 5 = 420 and 83 × 5 = ?.

4.3.2 Assessment of cognitive functions and language by observation and by tests ACE-R and MoCA

Time and place orientation. Jiří could tell correctly actual date, month, year and season, he could not say day of week. He knew the region, state and town where he actually was, but he did not know the name of hospital or department or floor.

Memory. He was able to repeat 3 words from ACE-R test, but was able to recall only 1 word from 3 words after another task. Jiří could repeat 6 items of address from 7 items in ACE-R test. In the reminding remembered information, he could not recall any items in the ACE-R test as well as in the MoCA test. Hints given by examiner in the recognition of remembered address in the ACE-R test helped him in 4 items from 5. In subtest of long-term memory Jiří answered correctly 3 questions from 4, he mixed up another question in contrast with input assessment. He forgot the name of president of the USA.

Attention and calculating. Jiří was successful in sequential subtracting number. He made 2 mistakes in the indicating letter "A" in the MoCA test. Short form of digit span test in the MoCA test was solved well.

Language. His verbal production was slower, without anomic pauses or paraphases and fully meaningful. Naming was intact. Jiří repeated sentences from MoCA test with small inaccuracies. Comprehension of spoken and written language was good. Reading and writing was intact. In the rapid naming of the words Jiří could say 5 words beginning with the letter "p" in 1 minute and say 7 animals per 1 minute in the ACE – R test. In the MoCA test he produced 4 words beginning with the letter "k" per 1 minute.

Visuospatial abilities. Jiří could copy pentagon, cube and block. Clock test was 100 % correct. A small part of trail making test in the MoCA test was performed very well. He could count dots and recognized incomplete letters in ACE-R test. His bad orientation in the department of the hospital remains.

5 Conclusion

Performance in counting, reading arabic numbers, personal numeric knowledge, transcoding, subitizing, knowledge of arithmetic signs, counting dots, simple written calculations, composition of value from money did not change. Jiří got better in the mental calculations, numerosity judgement, one part of number bisection task, knowledge of arithmetic rules up to 10 and in story problem, he did not make any mistakes. Jiří's answers with results in mental calculations was appreciably faster, unfortunately his 2 answers in mental calculations took time in some tasks. In general numerical knowledge Jiří failed in the same question. Jiří has troubles in mental subtraction and division, in the number bisection task which is also performed

mentally and in the knowledge of arithmetic rules. One wrong answer was present in the numerosity judgement, general numerical knowledge and in the story problems. The tendencies to calculate numbers around the word "and" in the task "knowledge of arithmetic rules" disappeared with another presentation of the task.

In time and place orientation and long term memory Jiří knew questions which he did not know in the input assessment and on the other hand he did not know questions which he knew before. Score remained unchanged. His ability to encode some information got better. Recalling remembered information was still poor, he had improved recognition of remembered information. Score in subtest attention in MoCA remained unchanged, however in subtest "Attention and calculation" Jiří scored one point more, so he successful solved the task, so attention is slightly improved. Despite training in vocabulary Jiří scored worse in producing words beginning with the letter "k" and "p" and producing maximum kinds of animals per 1 minute. Visuospatial abilities in tests stayed perfect. Orientation in the department of the hospital was still very weak.

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Role of rescreening in special education intervention

(overview essay)

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Abstract: *According to the statistics of the World Health Organization in March 2015, 328 million adults and 32 million children have hearing impairment. Early diagnosis and early special education intervention affect the quality of life of the child and their family. A big part of hearing defects can be detected a few days after birth by new-born hearing screening, which is done through examination of otoacoustic emissions. This examination should ideally establish hearing rescreening. Our study confirmed that in some individual cases, test results using BERA or SSEP indicate a significant difference between the measured values and actual hearing status. According to the results of check-up (rescreening), after a certain time no pathology of hearing or hearing impairment of milder degree in maturing central nervous system may be reported. From the qualitative data, we obtained results of 10 respondents, while in 3 of them a milder degree of hearing impairment was measured.*

Keywords: *hearing impairment, hearing rescreening, childhood, diagnostics*

1 Introduction

Sensory development is complex, with both morphologic and neural components. Development of the senses begins in early fetal life, initially with structures and then in utero stimulation initiates perception. Sound transmission from the mother's speech, heartbeat, and external noise stimulates fetal hearing development prior to birth. After birth, environmental stimulants accelerate each sensory organ to nearly complete maturity several months after birth (Clark-Gambelunghe & Clark, 2015).

In persons with hearing impairment speech perception is disrupted (hence stimulus deprivation) a disruption of auditory orientation in their environment occurs.

There can appear difficulties in social communication and the consequent lack of social experience can arise.

As reported by Hanakova and Stejskalova (2015), although symptomatic speech disorder is not the dominant issue in terms of primary disability, it can significantly affect the quality of life of individuals, especially its psychosocial dimension. "Communication, cognition, language, and speech are interrelated and develop together. It should come as no surprise to us that the key to intervention with deaf children is to establish, as early as possible, a functional communication system for the child and the parents. Early intervention programs need to be multidisciplinary, technologically sound and most important; it should take cognizance of the specific context (community, country) in which the child and family function" (Daneshmandan et al., 2009, p. 363).

In the context of increasing demands on professionals who provide intervention, Hanakova and Stejskalova (2015) focused on the currently relatively marginalized issue – symptomatic speech disorders in people with sensory impairment. Their main goal was the exploration of current needs of special education practice. The intention of their research was to explore the current state from the perspective of speech therapists and identify specific and potentially problematic aspects. Their data showed that the majority of respondents (speech therapists) had already had some experience with clients with sensory disabilities. Many of them, however, admitted that they felt not competent enough for working with these people, and therefore turned to other professionals. In this context, the therapists also admitted that they lacked sources of scientific information. However, the possibility of cooperating with other experts looks promising. The majority of respondents know where to turn to for help and actively cooperate with other professionals. But only in a few cases can we describe this cooperation as interdisciplinary.

2 Research Focus

Lejska and Havlik (2008) state that currently, abroad (mainly in the USA), combined standard hearing tests using otoacoustic emissions and ABR (Auditory Brainstem Response) are used. ABR reveals defects in hearing that after examination of otoacoustic emissions come out false positives. Using only one method may produce a distorted diagnosis.

Examination of otoacoustic emissions, among the objective tests of hearing, the diagnosis belongs exclusively to doctors, the medical staff. As part of special educational practice, use of subjective tests of hearing, depending on the child's age, cooperation and intellect, is increasingly common. Medical staff use subjective tests of hearing (mostly tone audiometry) to preschool / school-age children. In establishments providing special educational intervention, training takes place in response

to a sound stimulus, called Hearing Education. For this reason, subjective hearing test can be done at an early age. Horakova (2012) states that it is important to keep in mind that you cannot rely solely on objective methods for demonstrating how a child hears a sound, but it is necessary to take into account the results obtained from behavioural methods, i.e., whether the child responds to some sounds at home, identifies sounds and how the child normally reacts to them. In this case, it is necessary to cooperate with the child's parents, ENT doctors and special education teachers.

In healthy term neonates, newborn hearing screening is performed at neonatal departments, usually on day 2 to 4 postpartum, or on day 2 to 4 of corrected age in preterm neonates so that the auditory tract becomes more mature. Investigations have either a positive result, i.e. physiological or negative, i.e. abnormal (it is uncertain whether the child has hearing loss greater than 40 dB). If the result is negative, the attending physician will examine the ear canals and this examination should be repeated at least after 24 hours as the first rescreening of the newborn's hearing to avoid measurement errors. Children, in whom the negative result of newborn hearing screening is confirmed during the first rescreening, should be referred to the local ENT/phoniatric clinic within 1 month for second rescreening. If the result is confirmed, the patient's hearing should be tested and further procedure planned at this clinic. Any correction of hearing disorders by using conventional hearing aids should be made within 6 months of age, respectively 6 months of corrected age in preterm infants with attending ENT doctor. Children with very severe hearing loss are sent to a specialized department of ENT to determine the suitability of cochlear implantation and to provide a method of rehabilitation. (Ministry of Health, 2012)

3 Material and method

In a qualitative design, we used the method of observation. It was a short, direct observation to monitor sensate phenomena. Sensate effects were caused by the intervention of the observer – specifically inducing sound initiative audiometer PA5 and children were monitored in response to the tone of a certain frequency and intensity.

The sample of observation were 10 children aged 2 (1y. 7m.) to 7 years of age diagnosed with hearing impairments of varying degrees. Indicative hearing tests using child audiometer PA5 was conducted on November 5, 2014 in the department of special education centre. Investigations took place in a room designed and furnished for sitting with the children's parents. The clients were in a familiar environment, familiar room, so they did not hesitate. At each examination the child's teacher and possibly one parent were also present.

Figure 1: *Participants*

	Age	Hearing loss	Presence of associated disability	Note
Child 1	3y. 7m.	Profound	No	–
Child 2	6y. 2m.	Profound	No	–
Child 3	6y.	Profound	No	–
Child 4	7y.	Profound	No	–
Child 5	1y. 7m.	Profound	No	Despite the low age, the child actively cooperated, there was no need for help from the teacher, the child had a very good vocabulary in the sign language, it was easy to motivate, and the examination was an obvious joy.
Child 6	5y. 8m.	Mild	No	–
Child 7	6y. 1m.	Severe	Yes (autistic spectrum disorder)	The examination was actively attended by a kindergarten teacher, who motivated the child to work. The child did not respond to the researcher at all, only perceiving his presence. Every time she was supposed to „listen to the ball," she checked the presence of the researcher in the mirror and then looked at the head of the special education center. The child responded to the sound stimulus without visual support. Based on the measured values, we repeated the exam to be valid. Therefore, this examination lasted for a long time and without the participation of the kindergarten teacher it would hardly be done.
Child 8	4y. 3m.	Profound	No	–
Child 9	2y.	Profound	No	The child was accompanied by the mother from the session at a special pedagogical center. The child was tired and kept their attention only for the right ear. We started at 500 Hz and at 80 dB. From 80 dB we got up to 20dB, at 1000Hz the situation was repeated. The examination was verified because the mother of the child claimed she did not hear the right ear. The child ceased to have fun and could not cope with further cooperation. With the Special Education Teacher, we agreed that the reactions were valid. I offered the parents the option of rescreening. The mother was not interested.
Child 10	5y. 5m.	Severe	No	The own-initiative examination was actively attended by a kindergarten teacher who motivated the child to work.

With the child audiometer, PA5 hearing checked tone audiometry in the range of 20 to 80 dB and 500 to 4000 Hz. Specifically, we measured the ear at frequencies of

500, 1000, 2000, 3000 and 4000 Hz. The results were entered in an audiogram manually. The distance between the speaker and the ear of the child shall be 50 cm. Fair distances ranged from 40 to 60 cm. The measurement we used was an intermittent tone, and the intensity at a particular frequency is always verified.

After the arrival of the child, all compensatory aids were removed and the child was seated at a children's table. The examination was carried out as a game to be more attractive for the child. The tests employed tools: balls, drum, and audiometer PA5 and carpet pipe. First, the child was explained what was going to happen. To understand the activity, we used the first reaction to the drum sound perception, in which in addition to a strong acoustic initiative and feeling of the vibrations. The baby grasps the ball to the opposite ear than was investigated and, if heard, or if the eardrum felt sensory perception, dropped the ball into the carpet pipe. For children who have not responded to PA5, first rehearsal took place through the eardrum, examinations' highest intensity at all frequencies using PA5 and subsequently re-used drum.

4 Results

Figure 2 shows the current classification of hearing impairment according to the World Health Organization. Figure 3 shows the measurement results.

Figure 2: *Classification of hearing loss (WHO)*

Classification of hearing loss (WHO)	
Verbal description	PTA (0,5–4 kHz)
Normal	≤ 25 dB HL
Mild	26–40 dB HL
Moderate	41–60 dB HL
Severe	61–80 dB HL
Profound	≥ 81 dB HL

Figure 3: *Measurement results*

	Hearing loss (medical report ENT doctor)	**PA5**	**Result – rescreening**	**Note**
Child 1	Profound	without response	Respond	
Child 2	Profound (71–90 dB)	measured at 80dB at 2000 Hz right ear, others without response	Respond	
Child 3	Profound (70–90 dB)	without response	Respond	

Child 4	Profound (80–100 dB)	on the right ear – 80 dB at 3000 and 4000 Hz, on the left ear – 80 dB at 2000, 3000 and 4000 Hz	Respond	
Child 5	Profound	without response	Respond	
Child 6	Mild (total loss of 23 %)	bilateral loss of 40–50 dB was measured	**Severe degree of hearing loss**	
Child 7	Severe (50–60 dB)	bilateral loss of 20–30 dB was measured	**Milder degree of hearing loss**	Child with autistic spectrum disorder
Child 8	Profound (100–110 dB)	without response	Respond	
Child 9	Profound (left hearing is diagnosed with severe hearing impairment – loss of 70–80 dB, full deafness detected on the right ear)	On the right ear at 500 and 1000 Hz–20 dB	**Milder degree of hearing loss**	
Child 10	Severe (bilateral 60 dB)	bilateral loss of 20–40 dB was measured	**Milder degree of hearing loss**	

Discussion

For the six children, we measured hearing rescreening with the same degree of hearing impairment, as stated in the medical report ENT doctor. In one case, we measured a severe degree of hearing loss and in 3 cases a milder degree of hearing loss. Nine children cooperated without difficulty. Only one of the children did not respond to the investigators, therefore, to actively involve the examination kindergarten teacher. It was a child diagnosed with Autism Spectrum Disorder and moderate hearing impairment, which was subsequently measured milder degree of hearing loss (for the validity of the result we repeated a full screening for this child). Another child, in whom we measured milder degree of hearing loss, was the child was the "Child 9". This two years old child came with mother after sitting in a special education centre. The child was obviously tired, but thanks to the motivation willing to cooperate. In all children, we first investigated the highest intensity and lowest frequency. We gradually decreased intensity. With "Child 9" we got up to 20 dB at frequencies 500 and 1000 Hz right ear. Given that a child has been diagnosed loss in his left ear 70–80 dB and the right profound hearing loss, we needed to check the results several times, which has led to fatigue and eventually the child refused to cooperate. We offered her mother rescreening, but she refused.

The results of measurements conducted show that rescreening hearing in children with hearing impairment is justified and therefore cannot rely solely on objective

tests of hearing. From the experience of workers for early care we know that they would like to use subjective tests for rescreening of hearing children. Great predictive value has made the results rescreening hearing in 10 children with hearing impairment. 3 of the 10 children were measured milder degree of hearing impairment. We believe that in some individual cases, the test results using BERA or SSEP indicate a significant difference between the measured values and actual status hearing. Cause can be abnormal electrical activity in the brain – e.g. in children born prematurely may be through objective tests of hearing diagnosed with severe hearing impairment. According to the results of the check-up, but after some time, no pathology of hearing may be exhibited or hearing impairment is much milder grades because maturing central nervous system.

There is no doubt that the implementation of rescreening hearing is important for both quality and compensation for hearing defects and subsequent rehabilitation. In this case, transdisciplinary collaboration is necessary, where individual experts consult each intervention for that client.

4 Conclusion

We believe that it is advisable to equip the clinic paediatricians with audiometers. Acquisition of child audiometer is not so expensive; prices of audiometers are around 50 000 CZK. Paediatricians are required (since 2012) to monitor child development and focus inter alia on the detection of hearing defects. If the clinic paediatricians were equipped by audiometers, not only could lead to early detection of hearing loss, but also for rescreening hearing impaired children. Some of today's audiometers are equipped with a touch screen display, so that the children could operate by themselves. Children usually do not have difficulties with technology; today's generation of children is technically proficient. Komínek (2012) reported that in a small percentage hearing impairment may occur at a later age, and therefore it is important to monitor children who have already passed the hearing screening. With the inclusion of preschool facility and a group of peers with more frequent illness of a child, so we can at this time meet with obtaining hearing impairment, e.g. because of recurring inflammation of the middle ear. Timeliness detection of hearing impairment affects the possibility of compensation for hearing defects, initiate intervention and hence improve the quality of life of individuals.

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Dynamics of auditory partial functions in children and pupils from 5–8 years of age

(scientific paper)

Milan Valenta

Abstract: *The article provides insight into the procedural aspect and the theoretical framework of investigating the factors which influence the educability and school success/failure rate amongst children in a research project of the Faculty of Education, Palacký University Olomouc. The article focuses on the structure and dynamics of partial functions of auditory skills in children during their last year at nursery school and their first two years of school attendance.*

Keywords: *educability, partial function deficits, school failure, auditory functions.*

1 Introduction

The article evaluates the partial results of ongoing research carried out at the Institute of Special Education Studies in the Faculty of Education in Olomouc. The research was focused on factors which affect the dynamics of educability in children and pupils with the need for special-education support measures; i.e. with special education needs. It focuses on (for the needs of this study) the dynamics of the following auditory-oriented partial (basal) functions:

- auditory differentiation of the figure-background
- auditory differentiation of speech
- auditory memory – phonemes

The theoretical framework of the research is based on substantiated theory on the deficits of partial (basal) functions (further also DPF) by Sindelar [1] and on the empirical evidence of both authors supplemented by the empirical evidence of so-called partial performance weakening. The general theoretical basis of the research stems from neuropsychology, cognitive psychology and ontogenetic psychology.

Adequate maturing and balanced development of partial (basic, basal) functions is a prerequisite for the development of more complex processes and complicated skills such as, for example, the three Rs: reading, writing and arithmetic skills. Deficits of partial functions (DPF) are thus one of the causes of specific learning and behavioural disorders.

DPF should be define as a decrease in performance of individual factors or elements within a greater functional system which is necessary for mastering certain complex processes of adaptation. Such a general definition of a phenomenon includes, however, an extremely broad spectrum of disorders, and therefore, for the purposes of counselling and special education practice, the entire concept has been narrowed and, above all, specified.

Partial functions include (in a simplified way and for the purposes of the research project) a group of ten functions where a deficit in any of them can manifest itself by a similar symptom in the educability of a pupil (the same mistake, e.g. incorrectly written words in a dictation exercise, the same mistakes in reading).

Sindelar (detto) illustrates clearly the individual partial functions with the example of a language dictation written by a second grade pupil. In order to be able to write the dictated sentence correctly, the pupil has to be able to:

1. differentiate the voice of the teacher from other noises in the surroundings (auditory attention – auditory differentiation figure-background),
2. hold shortly the uttered sentence in their (auditory) memory,
3. divide the word into sounds – phonemes (auditory analysis),
4. discriminate the isolated phonemes from similar phonemes (auditory differentiation – phonemic hearing),
5. look up graphemes for the individual phonemes (visual memory),
6. not mix up similar graphemes (visual differentiation – visual acuity),
7. connect an appropriate phoneme with an appropriate grapheme; i.e. connect interperceptive information (intermodal function, the partial ability to create intermodal relations),
8. coordinate the fine motor skills of the fingers when writing (visual-motor coordination)
9. place the letters on the line on a correct spot and in a correct position (spatial orientation),
10. not mix up the sequence of phonemes and later graphemes and not forget any particular detail from the entire set of operations mentioned (perception of time sequence, seriality).

DPF diagnostics use the above outlined process scheme, instrumentally introduced by means of the normative diagnostics of psychology and special education

(both counselling and clinical), and has a preference for using the means of dynamic diagnostics.

2 Methodological aspects of the investigation – material and methods

The aim of the project is the identification, description and comparison of the determinants of educability and its dynamics amongst children and pupils with the need for special education support measures.

The quantitative design of the investigation was applied to the data collections using the variable "test battery DPF Sindelar" focused on the below stated markers. Unified stimulus material was used ("mid" material from the testing tasks for the target group of the first grade of primary school) for the comparison (and the analysis of factors which affect the dynamics of individual basal functions, thus also affecting the educability of a child or pupil) of the target groups (nursery school – first grade of primary school – second grade of primary school):

A. auditory segmentation (acoustic differentiation of figure and background)
B. auditory differentiation of speech (phonematic discrimination)
C. auditory memory (phonematic)

The battery explicitly – for the target group of respondents of a younger school age. [2]

The research has been carried out through an investigation of children (pupils) from four Moravian regions and Prague in the form of longitudinal research – children were observed from their last (preparatory) year of pre-school education to the second grade of primary school (i.e. children and pupils ranging between 5–8 years).

The selection of children and pupils for the research sample was executed in the form of intentional institutional selection, with 547 children and pupils in total.

Child/pupil	5yrs	6yrs	7yrs	8yrs	Total by grade
Nursery school	122	110	6	0	238
First grade primary	9	97	114	17	237
Second grade primary	0	0	29	43	72
Total by age	**131**	**207**	**149**	**60**	**547**

Note: there is only one specification given in the respondent table – the age – with respect to the fact that the statistical analysis did not demonstrate any difference in the performance of girls and boys in the monitored subtests. The sample included intact children and pupils with no DPF diagnosed (or any deficit suspected).
The table also shows the amount and age of the children attending nursery school and both grades of primary school – the statistical analysis of the collected data worked with these differentiations as well.

The research itself was preceded by pre-research which verified the methodological tools and the process scheme of investigation on a selection of target groups with the following numbers of respondents (testing stimulus material).

The research problem and the question of the published stage of investigation were phrased in the following manner:

Are there dynamics in the development of auditory partial functions in intact children and pupils on the continuum preparatory year of nursery school – first grade primary school – second grade primary school? If so, what are its dynamics?

The factual hypotheses were verified by statistical processing of quantitative data aimed at differences in the maturation of the observed partial functions in intact children of the preparatory year of nursery school and in intact pupils of the first and second grades of primary school.

Statistical hypotheses (without null H):

H_1: There is a statistically significant difference in the results of the auditory segmentation (acoustic differentiation of figure and background) subtest in intact children of the preparatory year of nursery school and in intact pupils of the first and second grades of primary school.

H_2: There is a statistically significant difference in the results of the auditory differentiation of speech (phonematic discrimination) subtest in intact children of the preparatory year of nursery school and in intact pupils of the first and second grades of primary school.

H_3: There is a statistically significant difference in the results of the auditory memory (phonematic) subtest in intact children of the preparatory year of nursery school and in intact pupils of the first and second grades of primary school.

A. Stimulus material for the subtest of auditory segmentation (auditory differentiation figure – background), subtest Aa of the test battery:

We articulate the stimuli words to the pupil slowly and at an easy pace and wait if the pupil recognizes the vowel/sound O in the word; we keep our mouth covered by a sheet of paper to prevent the pupil from reading the sounds from our lips; we do not emphasize the words with an O sound and we avoid eye contact. If the pupil answers in a stereotypical way (yes-yes-yes… or no-no-no…) we choose an example and ensure that he or she understands the instruction correctly.

Instruction: *I will be saying some words to you now. Listen carefully and tell me if you hear the sound O in the word.*

Stimulus material:

POKUD – MOST – břeh – DROZD – pecka – guma – nebe – DORT – RÁDIO – MÁSLO –AUTO – tužka – tele – OCET – OBRAZ – zajíc – ocas – dveře – prase – ORNAMENT – ruka – KAKAO – čapka – pruh

Assessment: for each correct answer (yes × no) we assign one point; i.e. the maximum number of points scored in the test is 24.

B. Stimulus material for the subtest of auditory differentiation of speech (phonematic discrimination), subtest C of the test battery:

We give the first sample pair of words bon – bon to the pupil and ask if both words are the same or not and check if he or she understands the question. If the pupil answers incorrectly, we explain that both words are the same and repeat the words to the pupil. We repeat the process with the second sample pair of words pol – pul with the difference that if the pupil answers incorrectly, this time we explain why both words are different.

During the actual test we pay attention to pronouncing all pairs with the same accent, i.e. not emphasizing different phonemes (sounds). We do not make eye contact with the child and keep our mouth covered so that the pupil cannot read from our lips.

Instruction: *I will always say two nonsense words to you. They do not mean anything. Listen carefully – you will tell me if these two words are the same or not.*

Stimulus material:

sample pairs: **bon – bon**, pol – pul.

material for the actual test (20 pairs): **rut – rut**, kip – gip, ful – vul, nus – mus, **hik – hik**, **lar – lar**, **hep – hep**, **desk – desk**, pem – bem, **tes – tes**, bim – bem, zus – zuz, bid – bit, **mez – mez**, psom – som, **tal – tal**, hob – hub, **vap – vap**, **kro – krol**, **vis – vis**.

Assessment: for each correct answer (yes × no) we assign one point; i.e. the maximum number of points scored in the test is 20.

Note: in case of the pairs *zus – zuz, bid – bit* always emphasize the last sound.

C. Stimulus material for the subtest of auditory memory (phonematic), subtest F of the test battery:

The pupil repeats after the teacher four groups of sounds which gradually grow in difficulty regarding auditory memory (a cluster of two, three, four and five sounds). The stimulus material is divided into two columns (I and II) of sounds. Column I is primary stimulus material, we only use the sounds from column II when the pupil is unable to repeat the groups of sounds from column I without mistakes. We begin with a group of two sounds from column I; if the pupil repeats the sounds after us correctly and without mistakes we proceed to the group of three sounds from column I, etc. If the pupil, however, makes a mistake in reproducing a certain group of sounds, we provide him or her a group with the same number of sounds from column II. If and when he or she repeats them correctly, we return to column I and continue with the next (more difficult) sound group. If the pupil is not able to reproduce the alternative group from column II, we end the test.

I.	II.
a k	n s
m v š	r b ť
p s u č	ž a t c
e ř a b t	k z e č m

Instruction: *I will be saying sounds to you and you will repeat them after me.*

Assessment:

4 points – the pupil repeats all the lines of the sounds with no mistakes (either from column I or column II)

3 points – the pupil repeats three lines of the sounds with no mistakes (either from column I or column II)

2 points – the pupil repeats two lines of the sounds with no mistakes (either from column I or column II)

1 point – the pupil repeats one line of the sounds with no mistakes (either from column I or column II)

Results of the investigation

Medians

GROUPS	nursery 5yrs	nursery 6yrs	first grade 6yrs	first grade 7yrs	second grade 7yrs	first grade 8yrs	second grade 8yrs
medians	18,0	18,0	20,0	22,5	23,0	23,0	24,0

Probabilities (for the Mann-Whitney test) when comparing the groups

GROUPS	nurs. 5yrs: nurs. 6yrs	nurs. 6yrs: first gr. 6yrs	first gr. 6yrs: first gr. 7yrs	first gr. 7yrs: second gr. 7yrs	second gr. 7yrs: first gr. 8yrs	first gr. 8yrs: second gr. 8yrs	All groups in total
p	0,02	0,00	0,00	0,01	0,20	0,00	0,000

Table 1: *Auditory segmentation (auditory differentiation figure-background)*

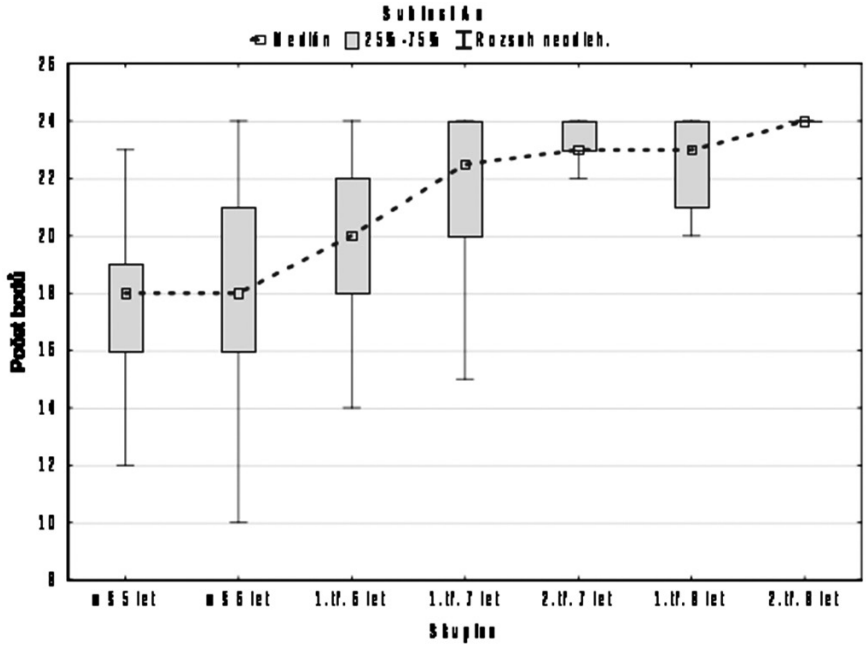

Figure 1: *Auditory segmentation (auditory differentiation figure-background)*

Medians

GROUPS	nursery 5yrs	nursery 6yrs	first grade 6yrs	first grade 7yrs	second grade 7yrs	first grade 8yrs	second grade 8yrs
medians	17,5	17,0	18,0	18,0	19,0	18,0	18,0

Probabilities (for the Mann-Whitney test) when comparing the groups

GROUPS	nurs. 5yrs: nurs. 6yrs	nurs. 6yrs: first gr. 6yrs	first gr. 6yrs: first gr. 7yrs	first gr. 7yrs: second gr. 7yrs	second gr.7yrs: first gr. 8yrs	first gr. 8yrs: second gr. 8yrs	All groups in total
p	0,05	0,00	0,70	0,03	0,06	0,01	0,000

Table 2: *Auditory differentiation of speech (phonematic discrimination)*

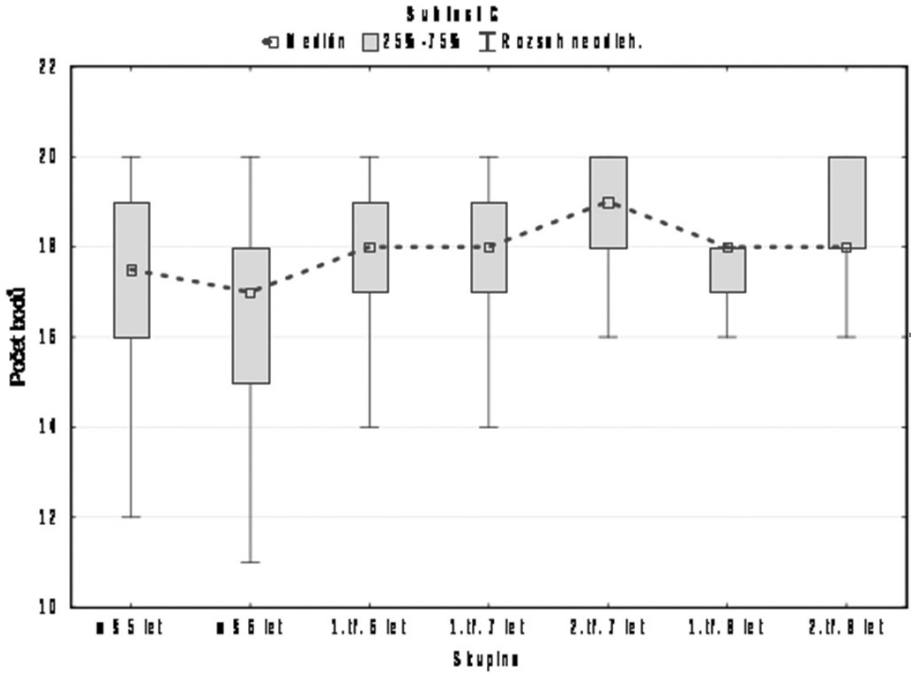

Figure 2: *Auditory differentiation of speech (phonematic discrimination)*

Medians

GROUPS	nursery 5yrs	nursery 6yrs	first grade 6yrs	first grade 7yrs	second grade 7yrs	first grade 8yrs	second grade 8yrs
medians	3,0	3,0	3,0	4,0	4,0	3,0	4,0

Probabilities (for the Mann-Whitney test) when comparing the groups

GROUPS	nurs. 5yrs: nurs. 6yrs	nurs. 6yrs: first gr. 6yrs	first gr. 6yrs: first gr. 7yrs	first gr. 7yrs: second gr. 7yrs	second gr. 7yrs: first gr. 8yrs	first gr. 8yrs: second gr. 8yrs	All groups in total
p	0,02	0,03	0,01	0,49	0,06	0,02	0,000

Table 3: *Auditory memory (phonematic) subtest*

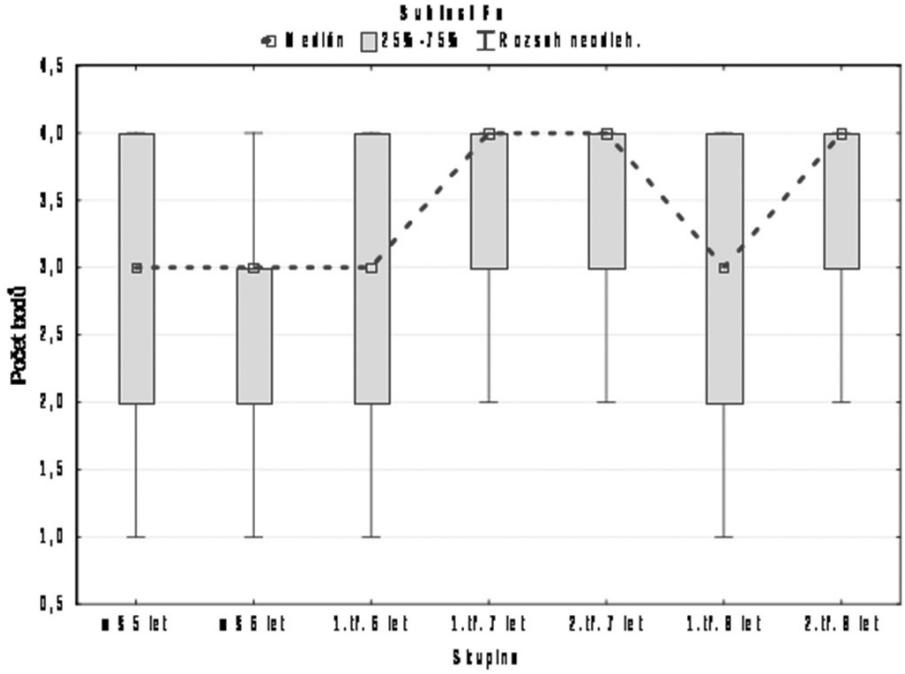

Figure 3: *Auditory memory (phonematic) subtest*

Discussion of the investigation results

The quartile graphs above demonstrate in a relatively clear way the data distribution in samples which focused on auditory partial functions; the Mann-Whitney test tables then indicated the statistical significance of differences on the level of significance 0.05. The dynamics of the observed functions are evident from the graphs with the fact that:

- in case of an auditory differentiation figure-background there is – on the level of vowels – a clear rising trend in the function in time with a certain retardation in 8-year-old pupils in the first grade (the comparison with 7-year-olds in the first grade also did not show a statistically interesting difference) which might be explained by potential issues in the area of school readiness (and deferred entry to primary school).
- there is also a similar situation to the previous function in the case of phonematic discrimination with the difference that the retardation (even regression) of the function took place with 8-year-old first graders and second graders in relation to 7-year-old pupils (see U-test second grade 7yrs vs. first grade 8yrs and 6-year-old vs. 7-year-old first graders).

– concerning the phonematic auditory memory, a general increase is also apparent with a drop and stagnation when comparing 7-year-old vs. 8-year old pupils (in case of 8-year-old first graders the potential cause might again be related to starting school attendance and its subsequent deferral).

3 Conclusion

In conclusion, we can reject (under the entire sample) the null hypotheses of all three hypothetical statements.

The above stated results represent the first published part of an extensive investigation. In subsequent research reports we will gradually focus – with a sample of intact children and pupils of the age range in question – i.e. nursery school – second grade of primary school (the most sensitive period from the point of view of development of partial functions related to academic skills) – on the dynamics of such partial functions as auditory differentiation of the figure and background on the level of consonants, auditory memory and differentiation of speech on a verbal level, visual memory and visual differentiation, intermodal function, visual motor skills, spatial orientation and seriality.

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Therapeutic benefit of sandplay and work with symbols in clients with disrupted communication ability

(scientific paper)

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Abstract: *The objective of the paper is to examine the use of sandplay therapy and work with symbols in treating clients with disrupted communication ability. A possible therapeutic benefit is shown on two case studies: 30-year-old woman after a car accident involving extensive craniocerebral trauma and consequential memory loss, treated by a speech-language therapist for anomic aphasia and acalculia. The second case involves a 47-year-old woman with mild anomic aphasia and dysarthria. At the beginning of therapy, both clients had difficulty identifying their own feelings, concerns and wishes. The benefit of sandplay and work with symbols lies primarily in the fact that clients with disrupted communication ability need not communicate their feelings, wishes and attitudes verbally, but choose a symbol that evokes these feelings. A very helpful aspect of the therapy is visualization, because they have a chance to see the image from a different perspective and try to find a solution.*

Keywords: *sandplay therapy, symbolic work, aphasia, dysarthria, speech-language therapy, communication disability, special education*

1 Introduction

Sandplay (or sandtray) therapy as a form of expressive therapy relates to art and playand originated in 1940 by combining Eastern and Western therapeutic techniques. It is based on the ancient traditions of Navajo sand drawing, creating sand mandalas in Tibet, building miniature sandbox gardens in Japan, etc. The Western tradition builds on the earlier work of M. Lowenfeldback in 1920s, who focused on supporting non-verbal thought and expression (Eberts & Homeyer, 2015). The term sandplay was first used by D. Kallf, who was a colleague of C. G. Jung. She applied Jung's analytical psychology and his perspective of the study of symbols (Kallf, 2003;

Steinhardt, 2007). The basic pillar of the therapeutic process is the development of a safe and protected environment for the client.

Sandplay therapy is uncontrolled and is based on free expression of an individual during a few sessions in a safe environment of the therapeutic sandpit, where problems might be recalled from the client's unconscious at a pace acceptable for the client. In contrast, the use of symbols is controlled by the therapist, who defines the theme and the form. Usually, one session focuses on a specific problem. The role of the therapist is to support the client in discussing the client's concerns and feelings. In a safe environment, the client can concentrate on internal imagination using sand, water and objects. Verbal and non-verbal techniques are combined through meaning. Artistic activity helps in coping with traumas during an early stage (Pearson & Wilson, 2001; Friedman, Mitchell, & 2008; Rubin, 2010). Sandplay techniques are mostly used in individual therapy, in the school environment, and as a secondary prevention in children exposed to violence, discrimination and war. It is also used to detect emotional problems in child refugees aged 4 to 8 years (Porat & Meltzer, 1998). Sandplay is an intervention method that helps individuals with tension, loneliness, differences in self-conception, and visualization of trauma and unprocessed memories. Problematic experiences are integrated through collective unconscious, which is transformed into internal experience and is manifested through external adaptation (Hwang, 2007; Yang, 2009; Loue, 2016).

In recent years, sandplay therapy has been used by numerous professionals working with persons with disrupted communication ability or related deviations. These are persons who do not speak or have minimum or severely disrupted verbal communication, whose difficulties might also be associated with their intellectual or mental disorders or autism spectrum disorder and other primary difficulties (e.g. Ben-Amitay, Lahav, &Toren, 2009 or Stagnitti & Pfeifer, 2017).

Language, non-language, verbal, non-verbal and cognitive communication deficits, which to various extent accompany acquired neurogenic disorders such as aphasia and dysarthria (or apraxia of speech) (Rampellocet al., 2016), are often linked with for example acquired disorders such as alexia, agraphia or acalculia (Von Gunten & Wertheimer, 2000; Rosca, 2010) and mnestic difficulties ([Sánchez-Cortés, Reyna-Cervantes, & Poblano, 2013; Fonseca, Ferreira, & Pavão Martins, 2017, e.g.). They even intensify the resulting difficulties and communication competence disruption of a person who requires at least interdisciplinary or transdisciplinary intervention, in which an important role is played by a speech-language therapist, often in cooperation with a neurologist, psychologist and other professionals in order to provide a comprehensive rehabilitation or therapeutic programme.

The two case reports below concerning persons with disrupted phatic functions use sandplay therapy as part of speech-language intervention aimed at persons with acquired phatic and cognitive disorders.

2 Material and methods

The objective of the research was to examine the use of sandplay therapy in adults with acquired neurogenic communication disorder. Two women were selected (speech-language therapy clients) aged 30 and 47 years, who are currently subject to speech-language intervention, the first woman due to anomic aphasia and acalculia; the second woman due to anomic aphasia and dysarthria.

The following two research questions were formulated:

1. What is the overall benefit of sandplay therapy for clients with disrupted communication ability and limited expressive communication skills in the context of speech-language therapy?
2. What changes in communication competence and overall participation of clients with disrupted communication ability will be observed in their communication behaviour?

The research objectives and research questions were based on an analysis of the current state of knowledge, available publications, comparison, and deduction To produce case reports (based on case studies) the authors used the methods of direct participant observation, analysis of spontaneous activity products, diagnostic interview, explanation, diagnostic testing, description, induction, comparison, deduction, and synthesis.

The clients underwent three therapeutic sessions during which sandplay therapy was used. During the sessions photographs were taken, which illustrate the activity products analysed and are included in both case reports.

3 Results

3.1 Case report 1

The first case study involves a woman aged 30 years with completed secondary education with school leaving qualification. She was referred to the speech-language pathology office by a psychologist due to suspected disrupted communication ability of aphasia type. The client came accompanied by her mother, who provided support and was a source of information during the initial examination. At the end of December 2017 the client was involved in a car accident. In a collision of two vehicles she suffered an extensive craniocerebral trauma. From the scene of the accident she was transported by a helicopter to the university hospital and was operated on immediately. In the accident the client suffered damage to the right part of the frontal and temporal lobe, damage to the right eye including deformation of the orbit, and damage to the nerves on the right side of the face. The client was hospitalized for one and a half months, of which she spent 14 days in ICU. When she woke up she did not

know where she was, did not remember her name or other information concerning her life. She did not recognize her parents visually or by voice. Everything was strange and new to her. She also suffered damage to the short-term and long-term memory; the damage has remained up till now to some extent. In the hospital she started intensive rehabilitation followed by physiotherapy. The client was also referred to a psychologist. She took three sessions with the psychologist. She came to the speech-language pathology office in June 2018. During the initial examination she said that she did not remember anything before the accident, during the accident and almost nothing after the accident. Her memories are associated with strong emotional perception. The client's first memory is when she looked in the mirror for the first time after the accident.

During the examination, which included an interview, diagnostic tests and tasks, the diagnosis of anomic aphasia and dyscalculia was identified. A very helpful aspect during the therapy was the client's preserved writing ability. The client is unable to say a word verbally, but can always write it and read it. She can describe various pictures in writing, is able to add information in a text but mostly does not know what the information means. According to the client, the most serious problem is her memory, which limits her private and professional life. Following the initial examination and diagnosis, the client was offered sandplay therapy and work with symbols. The aim of the first session was to become familiar with the therapeutic sandpit in order for the client to focus on herself. Slowly and calmly the client familiarized herself with the sand and focused her attention on her body, particularly her hands. The second session focused on the topic My various parts, which was impossible to carry out. During the session the client focused on free work with the sand. The third session focused on the family and family relationships. In all three sessions the client worked with the topic of independence and dependence on other people. Pictures of the session are not provided because the client did not give her consent.

First session

As stated above, during the first session the client became familiar with the sandpit, sand and symbols. During sandpit therapy it was necessary to provide a very calm environment without disturbing elements (window closed, telephone disconnected, Do not disturb sign on the door, etc.) The client sat near the sandpit, closed her eyes, rested her hands on the edges of the sandpit, closed her eyes and took a deep breath for several times. The first contact with the sand was very shallow, gentle, only by the tips of the client's fingers in the central part closer to the lower edge of the sandpit. The client gently touched the sand, gradually extended her movement to the sides, but did not approach the edges. Her hand movements were centred around the lower edge of the sandpit throughout the whole period of the first session. She worked with the sand for about 20 minutes. Her hand movements resembled drawing a heart.

During fine movements in the sand the client started to see diverse and momentary images. The client wanted the images to stay for a longer period of time but as she poured the sand from her hands the images quickly disappeared. According to the client, she was disturbed in her concentration by the sound of the moving sand, but when she stopped the movement the image disappeared. The client became stressed by the quickly changing images and by being unable to maintain them. At the same time, the images did not resemble anything from her life. The thematic structures of all images that the client saw included the car, truck, road, coldness, sand, flickering of colours, etc. There is a certain link with the car accident, which the client does not remember but which changed her life considerably. The client interrupted work in the sand due to incipient headache resulting from the sound of the sand. At the end the client added that it had taken her considerable effort to withstand the sound of the sand for so long. The images that she created in the sand made no associations. There were three small islands on the sand connected by a path. Then the client chose some of the symbols. The selection was random, quick, without visual examination of the symbols. After selection the client suggested that she did not know why she had chosen the symbols. She put three symbols in the sandpit. In the lower right corner she placed a small van, on the middle island in the centre of the sandpit she placed a rock with a grassy surface, and in the lower left corner she placed a tom cat, who is according to the client self-confident and knows what he wants. The process of positioning of the symbols was very quick without deliberation. Again the client did not know why she had made such image. She did not see any association with her life. By means of guiding questions she concluded that the image was her journey through life after the car accident symbolized by the van. The rock and nature represented the need for calmness, which the client has failed to reach so far, and the tom cat symbolized what she wanted to be like. Reconciled with everything, self-confident again and independent. At the end of the session no integration process was applied. The client refused painting and photography. She did not want to remember the image or work with it again.

Second session

For the second session the client was well-tempered and determined to try out new tasks. The interval between the first and second session was three weeks. Upon arrival the client informed about a slight improvement of her memory, which had been noticed primarily by her mother. She can now remember things for a longer period of time and remembers some situations that happened and some of her activities. At home she goes through old photographs, but they do not bring up any recollections. She even does not recognize her parents in some of the older pictures. The client no longer feels anxious when looking at photographs, she is calmer and it is easier for her to breathe. She now more concentrates on everyday activities and herself. She

looks for new hobbies because she does not remember what she used to do in the past. The client started painting, cooking by recipes, watching TV. She does not look for old friends or other people; she is worried of being hurt. For the second session the therapist chose an activity called My various parts, which was eventually not carried out due to the client's sensitivity to various sounds. When any record was played, the client started suffering from headache after a short period of time and the activity had to be interrupted. The client suggested that she would prefer working with the sand and seeing more images. When she is in the sand, she feels that 'something has remained in her head and she is not empty'. She puts her hands in the sand with a great deal of determination and confidence. She uses whole palms, grasps the sand and releases it. She works across the whole surface of the sandpit, but mainly in the central area. She moves her hands down until she reaches the bottom of the sandpit and uses depth. By moving her hands she again makes a heart, which is always reshaped into an uncertain shape. After a while the client starts to work very firmly or even convulsively and tries to capture the image, but everything seems to disappear quickly. The whole body gets into tension and there are signs of anger and aggression. No image is displayed for a longer period than a few seconds. She gives up work in the sand after about 15 minutes and she is very disappointed and angry because she was unable to see anything this time. She came to the second session with great expectations and believed that she would be able to recall something from the past and finally improve her memory. Again, the images in the sand do not make any associations, she refuses to use the symbols and continue working with the sand. During the interview the client makes clear that she needs to become independent of her family. At the moment the client is dependent on her mother, father and sister. Not always do her family members provide help that she asks for or needs. Despite improved expression, memory and other areas, she has very negative feelings and concerns about further improvement. After the interview she again approaches the sandpit and plays with the sand in a dynamic way. After a while her movement become calm and her body relaxes. As an integration process the client herself selected work in the sand. She refused painting, photography and other activities available.

Third session

So far the last sandplay session with the client focused on the topics My family and My life. The topics were selected deliberately based on the course of the second session. The client has very negative perceptions concerning her current family situation and at the same time wishes to become independent of the family at least partially. This is however not completely possible as a result of her health condition. The client drew a circle on a piece of paper and was supposed to draw a dot to represent her. She placed herself to the right side of the circle in the middle. Above the circle she wrote the name of the activity: My family. Then she was asked to close her eyes, relax and

take a deep breath. In her thoughts she was supposed to move into her home environment, imagine her family and individual family members. After imagination the client chose a figure from the symbols available that should represent her. After she selected a substitute figure, she started picking figures to represent individual family members. The figures were selected more carefully compared with the first session; the client thought carefully what her family members should be represented by. For herself she chose the tom cat from the first session. For her mother she picked a gentle doll with a baroque dress and an umbrella, her father was represented by a boy with a casual posture. The figure to represent her sister was selected very quickly; it was a monkey with a baby. She noticed the baby monkey only when she worked with the circle and was very surprised. She identified the baby monkey as her small niece. The client returned to the circle she had drawn and now her task was to position the figures on the picture in the way she perceives the relationships in her family. To position the figures she drew lines symbolizing the relationships between family members. Then the client described why she had positioned the figures in this way and how she had drawn the lines. She did not want to change anything about the picture; in her opinion the positions were ideal. During the interview it was revealed that she had used her idea of the family rather than the current family situation. When looking at the image the client made sure that she needed more space and time for herself, become independent of the family and prove to her family members that she is ready to return to her life without dependence on other people. At the end of the session, drawing with pastels was used as an integration process. Using colours, the client visualized her feelings concerning the family.

3.2 Case report 2

The second case study included a woman aged 47 years who works as a business manager. Currently she looks after her mother who suffers from Alzheimer's dementia. In December 2013 she sustained haemorrhagic cerebrovascular attack. She was referred to a speech-language pathologist with suspected aphasia. During the initial contact no symptoms of aphasia were observed, but in stressful situations significant symptoms of mild anomic aphasia and dysarthria were manifested. Subjectively, the client feels tingling and paralysis on the right side of the face and in the right upper extremity. She has fits of panic and is concerned about another cerebral attack. The client took her mother to the first session because she wanted to improve her cognitive functions and also wanted to work on herself. The first session was oriented primarily on the client's mother. Therefore, she was advised to come to the second session alone. The aim of the second session was to reduce stress and fear leading to dysarthric speech manifestations. Tension was visible in the muscles of the face, neck and hands. The main problem is Mary's mother, who needs to be taken care of 24 hours a day. She does not yet consider placing

her mother in a home for people with Alzheimer's disease. She is exhausted both physically and mentally. It bothers her that she has no time for herself; she has no hobbies or a boyfriend. That's why I decided to use sandplay. The client was excited about sandplay. She has a very positive attitude to sand, because she played volleyball professionally and has good memories.

First session

The first sandplay session took an hour – the task for the client was not to think about anything. During the first 30 minutes the client took sand in her hands and released it slowly. She breathed deeply and audibly. In her face, tension and relaxation alternated. When she was in tension, she pressed sand in her hands (at the end of the session she explained that in the course of sandplay she had various thoughts which quickly disappeared). She picked the symbols quickly without thinking. The first symbol was the pig, sheep and monkey (she likes the way they laugh). Further symbols included the dog (she likes dogs), two shells (nature), bird on a pyramid (represents freedom according to the client), camel (holidays, sand, relaxation, lightness), bell (Christmas), horse (friend from university), and cow (university).

She divided the sandpit into three parts (client's description):

- University – horse, cow and donkey (happy memories of her study, years in university, experiences with friends)
- Childhood – pig, sheep, monkey, dog
- Son, experiences – camel, bird on a pyramid, shell, bell (she was in Egypt with her son; the bell reminds her of Christmas when her son was little; shells represent the sea, memories of her holidays, oasis of piece, relaxation zone, no stress).

She added the horse later when she was asked if the image was completed and if there was something she would like to add. The horse is symbol of a friend, who taught her to ride a horse. Before that, she had been afraid of horses. According to the client, she created what she liked. The image gives her energy, she wants to focus on herself, and have some enjoyable experiences. She was surprised by the image that she had created. Apparently, she has forgotten what she liked. She looked at the image in disbelief and smiled. She would appreciate not having to follow rules so much and experience some beautiful moments. 'I reassured myself about what I had wanted for a long time, to live again." The client left in a good temper. The integration process was photography and drawing (she used a yellow and orange crayon and drew the sun).

Figure 1: *Merry memories*

Second session

The client came and explained that she had applied for her mother to be placed in a home for persons with Alzheimer's disease. She was sad but on the other hand was no longer able to take care of her mother, she was exhausted. After the first sandplay therapy her days were happy. She also started sorting things at home (toys after her son, clothes from when she was young, etc.) She had postponed this for a long time and now was happy about herself. The client decided to put her life in order. At home the client still applies elements of voice movement therapy, now for integration purposes automatic writing was added. She needs to tear up what she writes because she has a tendency to accumulate everything.

The second sandplay session focused on the family. The client's task was to think about her family. Playing with the sand was short, she breathed deeply when she manipulated with the sand, and her whole body was in tension. She chose the symbols carefully and slowly. The symbols she selected included the following: beads, two hearts, rocking horse (according to the client this represents life on a roller coaster), praying woman, angel (this symbol was chosen additionally). In a circle made of beads were the two hearts and the praying woman. The rocking horse was outside

the circle. She was not happy about the image. The client placed the praying woman outside the circle (the woman represents her and she feels to be outside the circle because she placed her mother in a home for persons with Alzheimer's disease). The only symbols remaining in the circle were the hearts (which represent the family according to the client). When she was asked if she wanted to change something she responded with hesitation, but then she brought the angel and placed it inside the circle (according to the client she wants this to happen. This symbolizes her mother's death). She was still not happy with the image; she completely removed the praying woman from the sandpit. After that she took the symbol of the laughing donkey and placed it in the middle of the circle. She would like things to be this way. Now she was happy, the image is clear, her life is cleared up and has only good memories of her mother.

At first the client created an image of the current family, but was not happy; it did not reflect how she would like to live. A very important step that took place in the sandpit was bringing the angel as a symbol of her mother and reconciliation with the fact that her mother will die. For the client this brought relief. According to the therapist, this combines three themes: sadness caused by placing her mother in the home for the sick, uncertainty concerning the rightness of the decision, and on the other hand, concerns about being happy about placing her mother in the home. Photography was used as an integration process.

Figure 2: *My family as it is now*

Third session

The client's mother has been in a home for persons with Alzheimer's disease for a week. The client's clothing had new colours and the client felt very well. She said she had started a new life. She has found a new boyfriend, they go for long walks, and she visits her mother regularly. She does not want to speak about her mother any more. She would like to take a retraining course to become a masseur and start working again. The task for the client during the third session was again not to think about anything. She played with the sand for a long time; again she breathed deeply and poured the sand from one hand to the other. When the client finished shaping the sand she said that the image was finished. She did not want to select any symbols; she only wanted an empty sandpit as a symbol of a new start, a blank sheet of paper. By doing this the client completed the therapy in our establishment. According to her, the new start also means not seeing any doctors.

Discussion

The authors present two case studies of women with anomic aphasia, where speech-language therapy was combined with sandplay therapy and work with symbols. As far as the responses to the above mentioned research questions are concerned, each woman found herself in a different situation and had different difficulties, but they had one thing in common. Both focused on people around and on their families instead of themselves. By using the sand and the symbols, both women realized that they had to focus more on themselves, on their needs, hobbies, wishes, and learn to be a little selfish to their surroundings. The first woman stopped worrying about the past, which she does not remember, and concerns about the future. She now concentrates on the presence and near future. Her aim is to become independent of her parents, go to work again, and search for new friends. She is more motivated for speech-language therapy, improvement of vocabulary and recollection, and strengthening of short-term and long-term memory. The second woman has focused on herself, found a new boyfriend and started to change her whole life. The change also includes termination of speech-language therapy and focussing on personal and professional life.

4 Conclusion

According to the authors, the main contribution of sandplay therapy and work with symbols is that clients who have difficulty with verbal communication can express their feelings, wishes and opinions by means of a symbol. They can visualize an image that they have in mind and explain to others how they feel but at the same time

look at things from a different perspective. This often results in releasing the clients' tension, which usually prevents verbal communication. The mental condition of the clients improves, which is crucial to therapeutic effect. As a result of these changes, the communication competence in persons with disrupted communication ability improves. In this respect, the authors agree for example with a research study aimed at the use of sandplay therapy in children and adolescents with traumatic brain injury (TBI) by Plotts, Lasser, Prater (2008), who in spite of their limitations caused by a small research sample and subjective variables on the part of the research cases confirmed the importance of sandplay therapy as a technique of individual expression supporting communication and overcoming limited social skills, executive function disorders and impulsiveness in this group of persons.

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The list 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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Impact of teaching assistants on children's adaptation to the school environment

(scientific paper)

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Abstract: *The paper deals with children's adaptation to the school environment in the context of the impact of teaching assistants and school club lecturers from the perspective of headteachers and employees of selected schools in the Olomouc Region. The research was carried out under the following project: 'Inclusive education for the Olomouc Region' (Ref. No. CZ.02.3.61/0.0/0.0/15_007/0000183) a part of which focused on children's adaptation to the school environment. The first section presents the theoretical information concerning adaptation, inclusive education, and the position of the teaching assistant; the second section focuses on the methodological survey aimed at headteachers, teachers and teaching assistants. The objective is to identify the impact of these specialized personnel, reflect on their work content, and describe the level of their involvement in the teaching process and their overall usefulness. In the conclusion section the authors emphasise that their role is indispensable for many schools and supports pro-inclusive tendencies in working with children with special educational needs and children from different socio-cultural environments. Being of an informative nature, the paper is intended not only for the lay public, but also for a wide range of students and professionals, mainly of a primary, special and social education background.*

Keywords: *adaptation, inclusion, teaching assistant*

1 Introduction

Adaptation of children with special educational needs (referred to as SEN) and children from socially disadvantaged or different socio-cultural environments is the core issue in the process of inclusion. Adaptation is considered a process of getting used to changes that people encounter in their current environment. As a result, these

people are subject to stressful situations that they need to react to. This is a lifelong process and children leaving preschool education and entering primary education need to handle a number of stimuli and cope with many changes, not only from an educational but also emotional perspective (homesickness, separation from the parents, accepting a new authority). As suggested by Vágnerová (2012), adaptation to the school environment requires the child's emotional maturity and experience. Therefore, it is not mere passive adaptation, but rather active participation in the changes in the specific life environment (Paulík, 2017, Vágnerová, 2012).

The purpose is to help children with SEN but also children from different socio-cultural environments to enrol in primary education (first grade of elementary school) by means of a targeted support educational programme. As was already mentioned in the context of adaptation, starting primary education is a big change not only in the life of the child, but also of the child's family. A successful start of the educational process is affected not only by the educational staff (teacher, assistant teacher, teaching assistant, after school club educator), but also the family and the environment in which the child grows up. Recently, a number of educational programmes have been proposed that should facilitate children's adaptation to the school environment. However, it very much depends on how these proposed programmes are implemented.

The fundamental aim of today's educational concept is to provide equal conditions for lifelong learning, which has the potential to transform our society into the so-called learning society. During the process of transformation of Czech education over the last thirty years, there have already been three waves of change:

1. Transformation of the concept of education from encyclopaedic learning to the development of required competences (after 1989),
2. Integration, as a result of which special schools were closed and replaced with open schools (in 2008 a total of 47.1 % of all children with health disability were integrated in mainstream schools),
3. Development and support of inclusive schools – current trend in Czech education (Provázková Stolinská, Rašková, Šmelová, 2016).

The third wave of the transformation of Czech education responds to the visions defined in Strategy for Education Policy until 2020 and is legally regulated by the amendment to the Education Act in the Czech Republic (1 September 2016) focusing on the application of inclusion in real school settings. As suggested by Pastieriková, Regec (in Šmelová, Souralová, Petrová et al., 2017) in the context of the global effort to implement inclusive education, there are two groups with opposing opinions (not only in the Czech Republic) – advocates of inclusion and advocates of special education. This fact also results from an insufficient preparation of the concept of inclusive education and the speed of its implementation

including insufficient staffing and funding (assistant teachers, teaching assistants, special education teachers, etc.) Following the amendment to the Education Act and the demand for professional support in the field of inclusive education, the Faculty of Education, Palacký University Olomouc started an initiative called Equal access to high-quality pre-primary, primary and secondary education and launched a project entitled 'Inclusive education for the Olomouc Region' (Ref. No. CZ.02.3.61/0.0/0.0/15_007/0000183), which is based on 6 key activities and its objective is to provide specialized staff (teaching assistants, inclusion coordinators and others), establish school counselling centres, develop a specialized methodological network, implement courses, and provide the necessary support to schools and teachers in the implementation of inclusive education, particularly in the context of educating children with SEN and socially disadvantaged children.

2 Process of children's adaptation to the school environment – inclusion in practice

The right to education is granted to every child, as defined by the fundamental human rights. In children with specific needs, the process of adaptation is even more noticeable and is closely associated with the so-called social inclusion, which means that a child, person or pupil with health disability is accepted by society with such disability. Inclusion means acceptance of diversity and it appears that the required conditions should be implemented already in preschool age, during which school maturity is decisive for inclusion of the child in subsequent educational paths (Finková, Langer et al., 2014). Education of children with SEN in a mainstream class is a fundamental right of every child in the process of inclusion (Opatřilová, Vítková, 2012). Inclusion is therefore a higher degree of integration (Požár in Lechta 2010) and requires preparation and a change of mind-set of the majority society, and a shift in the perception of the presence of persons with health disability, which essentially means that to be 'different' means to be normal.

Enrolment of a child in school and success of the process of integration and subsequent adaptation are affected by numerous factors, including the parents, environment, or social conditions. Inclusive tendencies are based on cooperation and a sense of belonging while minimising exclusion (Bartoňová, Vítková, 2012), i.e. 'exclusion of a person from usual social life and impossibility to be involved as a result of an unfavourable social situation' (Act No. 108/2006 Coll.) In this process, the central role is played by the parents, who are often distrustful of the institution, are referred to a counselling centre, have a higher degree of social uncertainty, etc. (Valenta et al., 2003). This can be prevented already at the very first contact with the school, during which the parents have an opportunity to learn about the educational staff, equipment of the school, and its overall accessibility, whether in terms of infrastructure

or barrier-free provisions (Michalík, 2001 in Šmelová, 2017). The situation can also be directly affected by the teachers. In foreign countries, inclusion in schools is supported primarily by assistant teachers, teaching assistants, or auxiliary teachers (Webster, Russell, Blatchford, 2015; Fox, 2009; Giangreco, Doyle, 2007; Groom, Rose, 2005). They provide support to children with a variety of special educational needs. Inclusion can only be effective if schools provide their educational staff and pupils with conditions favourable to an individual approach, openness, and overall development (Arnoldová, 2015). However, mutual cooperation is not successful in all cases. Sometimes parents believe that everybody learns to read and write in school. But only after their child starts to show problems or fall behind, the parents start to resolve the situation. It is therefore very important to inform not only the parents but also the lay public about the fact that if parents place their child in the educational process despite the child's immaturity diagnosed by a specialist, they cause their child's school failure to some extent. The consequences of this decision are then reflected in feelings of failure, lack of motivation for learning, emotional instability, and other educational problems (Fasnerová, 2018). The school therefore has the major role in the process of children's socialization, because this is the place where they spend most of their time in a certain period of their life. This is a specific social occasion which becomes an integral part of life. The negative consequences, which might be caused by various factors including family problems (children in alternating custody of divorced parents), organizational issues (difficult time management as a result of a demanding job and the need to prepare the child for school in the morning), and social pressure (parents' requirements, expectation from the child and the school as an institution, etc.) may have an effect on the child's emotional experiencing and increased anxiety and stress, which makes adaptability more difficult (Vágnerová, 2012; Langmeier, Krejčířová, 2006; Klégrová, 2003).

To outline the current situation concerning the above, the following tables show the numbers of children with special educational needs in the Olomouc Region. In 2017/2018, elementary schools in this region had a total of 6,669 children with special educational needs, of whom 5,129 were educated in mainstream elementary schools and 1,540 in elementary schools established under Section 16, Sub-section 9 of the Education Act (formerly known as special elementary schools).

Table 1 *Total number of children with SEN in elementary schools in the Olomouc Region (Bělíková, 2017)*

	Number of children	Of whom girls
Children with SEN	**6,669**	**2,181**
Health disability (Section 16, Sub-section 9 of the Education Act)	5,921	1,848
With another health disadvantage	912	394

Other *)	414	173
With extended length of education	94	33
With adjusted educational requirements	665	249

Table 2 *Children with SEN in mainstream elementary schools in the Olomouc Region in 2017/2018 (excluding schools established under Section 16, Sub-section 9 of the Education Act) (Bělíková, 2017)*

	Number of children	Of whom girls
Children with SEN	**5,129**	**1,620**
Health disability (Section 16, Sub-section 9 of the Education Act)	4,398	1,291
With another health disadvantage	778	335
Other *)	303	135
With extended length of education	18	11
With adjusted educational requirements	276	99

**) Children with SEN including children from different socio-cultural environments or other living conditions*

2.1 Effect of teaching assistants on the process of adaptation

One of the objectives of projects with pro-inclusive tendencies is to respond to the visions of school modernization. To insure a smooth process of inclusion, schools need various specialists including teachers, school psychologist and assistant teachers available for children with special educational needs. Assistant teachers represent one of the tools of inclusive education. Their role is to provide direct support to the teacher in working with children with SEN. Assistant teachers are educational staff, whose methodology and expertise is defined by numerous legislative regulations (Decree No. 27/2016 Coll. on education of children with special educational needs and talented children); this position is defined in the amendment to the Education Act No. 82/2015 Coll. As suggested by international studies, assistant positions are required in schools, but looking for example at assistant teachers or teaching assistants in the UK, they are mostly available to children with physical disability (Maher, 2016; Hemmingsson, Borell, Gustavsson, 2003). Regarding the necessity of the position and the amendment to the Education Act, one of the objectives of the present project was to establish a new specialized position identified as the teaching assistant in mainstream elementary schools.

The position of teaching assistants in the educational programme is defined as follows. Through play, teaching assistants develop children's visual, auditory and tactile perception at all levels (analysis-synthesis, differentiation, figure and background, memory and rhythm). This places requirements not only on the skills of the teacher

but also of the teaching assistant, as was already mentioned in the context of enrolment in the first grade. These skills include working with children's variability, initial diagnosis of perception in reading and writing, and also using children's motivation for learning, which has an effect on a number of activities (family background, attitude to reading, etc.) (Fasnerová in Šmelová, Souralová, Petrová et al., 2017). In the context of this programme, teaching assistants develop children's fine motor skills with a focus on graphomotor skills, muscle relaxation and a correct tripod grasp in order to avoid tension while using a writing utensil. The educational programme also includes games the objective of which is to include children in a group of other children of the same age and their socialization in the group. During these activities, children's communication skills and correct speaking habits are developed. Teaching assistants help with preparation for classes, arrangement of the workplace, organization of the day, provision of formative feedback to children, and children's motivation for learning. As suggested by Langmeier, Krejčířová (2006), this type of work should be as entertaining or serious as play, which is a reminder of the known motto 'school by play'. At the same time, one can speak of play, which is the school of life.

Teaching assistants are invaluable non-educational staff, whose role is irreplaceable also because they mediate communication between the family and the school and the non-profit sector concerning children from socially disadvantaged backgrounds; they also support children's regular attendance, extracurricular activities, etc. Generally, the position of teaching assistants (including assistant teachers) is considered beneficial, but also as a potential obstacle to children's activities ensuing from a close relationship and possible dependence on an adult person, detachment from classmates, or loss of personal control. The presence of an assistant often makes children seek help only from the assistant, not from the classmates or the teacher (Ainscow, 2000; Hemmingsson, Borell & Gustavsson, 2003; Feiler & Gibson 1999; Giangreco et al., 1997). Studies presenting the role of assistants (at all levels) emphasize their significant effect on inclusion of children with special educational needs in education in mainstream schools. Most of them present the results of case studies, which provide a description of qualities that affect the way of providing assistance. These studies conclude that an important aspect in providing efficient and flexible support to children with SEN is the significance of social meeting with peers (Maher, 2016 Webster, Russell, Blatchford, 2015; Fox, 2009; Giangreco, Doyle, 2007). For this reason, the research study verified the importance of the position of teaching assistants in elementary schools.

3 Methodology and research goals

The main research objective was to identify whether teaching assistants and school club lecturers were actively involved in the educational process in school (with re-

spect to their specified job content) and to identify their usefulness as seen by school headteachers.

Methods

Qualitative research methods were used, namely interviews with headteachers of selected school involved in the project, document analysis (work reports, activity reports), and analysis of ongoing reflexive activities.

The objective of the interviews was to analyse the work content of teaching assistants and school club lecturers; to analyse the degree of staff involvement in the educational process in the first stage of elementary schools and overall workload of teaching assistants for school purposes.

Additional data were obtained and processed according to qualitative analysis methodology and data processing principles (Juklová in Skutil, 2011) in line with the following structure:

STAGE 1: Text editing

STAGE 2: Segmentation

STAGE 3: Coding

STAGE 4: Categorization

STAGE 5: Structuring and interpretation

The sample

The research sample was recruited by means of deliberate sampling and included 11 headteachers of elementary schools involved in the project and having children with SEN and children from disadvantaged socio-cultural backgrounds, where the number of these children did not exceed 40% of all children and having the below specified staff employed as part of the project.

The following staff were employed as part of the project (key activity):

- Teaching assistants (different from assistant teachers), whose responsibility is to work in classes in the morning or afternoon, help children with organization of the day, preparation for classes, development of self-care activities, manipulation with new objects, and involvement in unknown activities as a result of the child not having attended pre-primary education and having been educated at home, often in a socially non-stimulating environment.
- 'First grader school club' lecturers, who work in afternoon school clubs for first graders in order to support smooth inclusion and adaptation of socially disadvantaged children in the group of classmates and in the after school club. Through play, the lecturers strengthen children's competences acquired during morning classes. This also involves deliberate socialization of selected children to facilitate their successful enrolment in education and to develop positive motivation. The

most frequent methods included individualized teaching, teaching in didactic units, critical thinking, project training, teaching with elements of drama education always respecting the children's interests and abilities, etc.

During the first few months of compulsory school attendance, attention was paid to the process of adaptation to the school environment (i.e. learning about the school conditions, observing the rules, meeting one's duties, etc.) At the same time, the staff were provided with practical methodology including examples, illustrations, etc. supporting children's adaptation and positive acceptance of the role of a schoolchild.

The activities of specialized staff are continuously monitored and evaluated throughout the period of the project. Teaching assistants have an opportunity to consult their work not only with the regional coordinator but also with elementary grade teachers. Another significant aspect is establishing cooperation with the family (in the context of the non-profit sector and the People in Need organization). The results of the present research study reflect the data obtained throughout the almost two-year activity of teaching assistants and one-year activity of school club lecturers in selected schools in the Olomouc Region.

Interpretation of Results

According to the project conditions, the research study involved a total of **11 teaching assistants** with various degrees of education – secondary school with school leaving qualification, completed assistant teacher course, higher vocational school, university. The average length of experience in education was 5 years. The average number of children with SEN taken care of by the teaching assistants was 10. The research involved a total of **8 first grader school club lecturers** whose opinions complemented the results.

The interviews involved a total of **11 headteachers** of selected schools.

The interviews with the headteachers suggested the following. All headteachers appreciated the teaching assistant position as part of the project. They used teaching assistants in various primary classes, although the main focus was on the first grade and children's adaptation in the group of classmates and especially in the educational process. After enrolment in the first grade, some children were unable to follow the procedures and organization as required by the school. In this area the teaching assistants were of great help. In the implementation of adaptation programmes, for which the assistants had been trained, it was revealed that some children were not sufficiently prepared for school in terms of social aspects, but particularly in terms of their knowledge and skills. In this area the teaching assistants helped not only in the morning classes but also assisted with home preparation during children's afternoon

stay in schools and after school clubs. The headteachers believe that the presence of the teaching assistant facilitated children's adaptation and inclusion in the group of classmates. Through play, the differences between children were overcome. Regarding the large number of different children in a class, the presence of the teaching assistant proved necessary in order to achieve successful inclusion of some children in the educational process. Teachers required an increase in the number of teaching assistants in the framework of the present project because the teaching assistants were trained in children's adaptation to the school environment and were an invaluable support. The teaching assistants also helped the teachers accompany children to various extracurricular events aimed at leisure activity development and provided support in administrative and organizational activities. The teaching assistants developed children's communication skills and through the adaptation programmes and play helped develop their vocabulary and correct speaking habits. As suggested by the headteachers, although the non-educational position of the assistants also included communication with the family and overcoming barriers between the family and the school, this happened rarely and this issue was mostly addressed in cooperation with the above mentioned non-profit organization, which has field employees trained in communication with problem families.

Regarding the school club lecturers, the headteachers were again very positive. The lecturers (mostly students of the Faculty of Education, Palacký University Olomouc) worked with selected children in after school clubs. They also focused on the adaptation of children from excluded socio-cultural environments and children with SEN in the group of schoolchildren through play and extracurricular and leisure activities. In the school clubs the lecturers also focused on tutoring children and on home preparation in order to minimize the workload in their families. Also in this area, the teachers through the headteachers appreciated the presence of the lecturers.

An analysis of documents and reflexive activities suggested the following conclusions presenting the opinions of the teaching assistants and school club lecturers about the real job content in the school environment. The following categorization is based primarily on the vivo codes generated during the process of document reflection ('coding').

Table 3 *Reflection on the impact of teaching assistants*

Categorization *	Note taking	Identification of the relationship between categories
Activity	• Presentation of the school building and classroom environment with the teacher and teaching assistant • Communication topics – effort to alleviate shyness in the new environment • Supervision assistance provided to first grade teacher – organization of rest time during brakes and clean-up of the workplace • Engagement of children with SEN in various activities and extension of activity time	Selection of basic but relevant activities supporting the adaptation of children in the first grade in the school environment
Time allocation	• During the day • Controlled activities and spontaneous activities • Individual activities	Avoidance of stereotypical activities within a single time frame
Purpose	• Individualization in working with children • Supporting children's adaptation to the school environment • Diagnosing children's skills	Wide range of applications
Procedures and risks	• Interiorization of usual activities (especially in children who are not independent) • Frequent alternation of activities • Required cooperation with the teacher (or other actors – school psychologist, special education teacher, school counsellors, etc.) • Occasional repetition of activities • Absence of task evaluation – entertainment • Development of portfolios of children with SEN in order for them to see their own products – motivation	Possible evaluation of interiorized activities – beneficial for children, their parents and teachers
Conditions	• Children in class with various dispositions, including children with SEN • Material and didactic aids commonly available in elementary schools • Special material and didactic aids • Natural unstructured material and didactic aids • Classroom environment – comfortable and natural, supportive climate • Environment outside the school building (school grounds) • Rhymes and songs • Imagination of movements using assimilation • Imitation	The teaching assistants managed to apply the knowledge contained in applicable methodology, regularly consulted the procedures and reflected on their effectiveness, and reacted to various situations in a natural and intuitive way.

Table 4 *Reflection on supporting education of children with SEN*

Categorization *	Note taking	Identification of the relationship between categories
Period of adaptation of children with SEN	• Supporting the activities of teaching assistants (by providing an individualized approach) did not extend the adaptation period as per applicable standards (3–4 months)	A significant positive effect of teaching assistants in schools for the purposes of supporting an inclusive approach
Positive aspects of teaching assistants in school	• Supporting an individualized approach according to the needs of a child with SEN • Attractiveness of activities beyond the teacher's responsibilities • Working with the whole class (not only with one child with SEN) • Closer cooperation with parents and their participation in the child's adaptation to the school environment	The teaching assistants (and in their opinion also the teachers) consider the inclusive approach beneficial in supporting communication with the parents and effective socialization of all children attending their school
Negative aspects of teaching assistants in school	• A large number of children in class decreases or limits the possibility of an individualized approach • Limited time allocation • Increased amount of administrative activities (associated with project implementation, not teaching assistant activity)	The teaching assistants also mentioned some negative aspects of the inclusive approach but their opinions were dominated by positives for the school
Opportunities	• Development of heterogeneous classes • Supporting socialization and personalization in the real environment both for intact children and children with SEN	Elements supporting the application of an inclusive approach
Conditions, risks	• Individual or small group activities • Activities aimed at automation and respecting the classroom regime • Activities aimed at respecting the teacher's authority (and adults in general) • Activities aimed at separation from the family (social readiness for school) • Activities aimed at inclusion of children with SEN in the group of classmates • Repetition of activities to achieve successful interiorization • Being close to children when they need it • It is advisable to produce children's portfolios (motivation purposes) • Clear observance of work procedures – habits affect school performance • Respecting individual pace and providing individual care • Required cooperation of all parties involved	Necessary components that need to be observed for successful implementation of an inclusive approach

Table 5 *Education in informal first grader clubs*

Categorization *	Note taking
Activity and objectives	• Supporting trust and encouragement for work – feeling of safety • Increasing children's self-confidence • Children's feeling that a 'strange person' cares about them • Better marks and understanding of the learning content • Inspection of children's work • Assistance • Graphomotor training • Revision and fixation of school knowledge (especially mathematics and Czech language) • Walks in nature in order to revise basic humanities and natural science • Development of learning materials (especially worksheets) • Assistance with homework • Aesthetic, cognitive, working and social activities
Notes and recommendations	• Tolerating children's interest in learning throughout the week proved to be useful – didactic games on Monday and Wednesday (smaller interest in learning), worksheets and homework on Tuesday to Thursday • Activities were selected according to children's interest and current mood • Children need to acquire a sense of responsibility – each activity must be completed • It is crucial to win the parents' favour (general disregard for education, disregard for cooperation with the school, mutual parents' aversion, etc.)
Advantages of lecturer's activities for the children	• Personal approach • Individual care • Improvement of learning outcomes
Advantages for the school	• Help provided to teachers • Improvement of children's learning outcomes • Help provided to after school club leaders
Disadvantages for the school	• Administration • There were no other disadvantages – only advantages!

Table 6 *Reflection on educational programmes for the development of children's key competences and literacies*

Categorization *	Note taking	Identification of the relationship between categories
Activity and objectives	• Activities supporting motivation for learning • Activities supporting understanding and respect for differences • Activities aimed at elimination of prejudices and stereotypes • Activities supporting the development of communication skills – e.g. to facilitate interethnic dialogue • Activities aimed at open sharing of feelings, strengthening vocabulary • Activities aimed at strengthening respect for human rights and openness to other people • Activities aimed at the development of visual and auditory perception, gross and fine motor skills, graphomotor skills	Necessary components for children's adaptation to the school environment and supporting school achievement
Procedures and risks	• It is important to map each child's situation – their abilities, possibilities and cultural environment • It is important to work with all children (with the whole group) – not only individually with a child with SEN	Conditions for effective setting of socialization and personalization support in the real school environment with aspects of an inclusive approach
Purpose	• Understanding the importance of education • Preventing school failure	According to the teaching assistants, a great advantage is the possibility to consult professionals and other colleagues in order to make sure that their procedures are correct Understanding the complex importance of individual activities Great importance of the sequence of activities – often suggested as a new piece of information

The text below is based on the job content of a teaching assistant as defined by the Czech Ministry of Education (see Definition of the position of teaching assistants for the purposes of using this position within OP RDE approved by the managing board for inclusion of the MEYS CR as of 16 October 2015). The analysis of the impact of teaching assistants suggests that the mentioned structure of activities is used in the whole extent and has significant positive effects. Schools use the role of teaching assistants to ensure the following functions:

- Supporting direct non-educational approach to children and pupils;

- Supporting an individualized approach for the purposes of children's adaptation;
- Supporting children's socialization and personalization in the real school environment;
- Supporting children's (and parents') trust in the school;
- Supporting children's preparation for classes;
- Administrative and organizational support provided to the teacher;
- School-family cooperation mediator – this function is rather theoretical, schools and teaching assistants are interested but so far have limited experience.

4 Conclusion

In conclusion, the authors would like to mention some risks that emerged throughout the project. At some schools some teaching assistants and school club lecturers were replaced due to low financial compensation (FTE 0.5 in the project) and impossibility to cover the remaining part by the school or from other resources, which could have slightly affected the headteachers' assessment. It should also be noted that all teaching assistants and school club lecturers have had a very responsible approach to their work and understand their contribution for the school.

The results of the present research study carried out as part of the following project: '*Inclusive education for the Olomouc Region*' (Ref. No. CZ.02.3.61/0.0/0.0/15_007/0000183) and one of its key activities focusing on adaptation to the school environment with the help of teaching assistants as an essential prerequisite for school success suggest that the position of non-educational assistants is very desirable and indispensable, both from the perspective of headteachers and other staff. Positive relationships were developed between the school and the assistants, and between the assistants and teachers, which brought a positive effect on the inclusion of children with SEN or children from disadvantaged socio-cultural environments. All headteachers would appreciate the presence of teaching assistants and school club lecturers in the next school year. Regarding the fact that the position of a non-educational assistant proved to be indispensable to successful inclusive education in some schools, the headteachers seek for various resources to cover teaching assistants, possibly by means of follow-up projects under further OP RDE calls.

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Disability and disaster: explorations and exchanges

KELMAN, I. & STOUGH, L. M. (2015)

Reviewed by Bianka Hudcová

Crises and crisis situations are a normal part of life. These situations, despite their common nature, may cause various reactions of the affected individual, ranging from for example freezing, loss of orientation, crying, or, on the other hand, attack, escape, stereotypical behaviour etc. In order to mitigate the impact of crisis situations on the affected individual, various crisis intervention or psychosocial approaches may be applied. In post-modern society, most approaches to controlling the behaviour and perception of persons affected by a crisis event are those aimed at intact individuals. The following publications are good examples: *The Johns Hopkins Guide to Psychological First Aid* (Everly & Lating, 2017), *Community-based psychological first aid: a practical guide to helping individuals and communities during difficult times* (Jacobs, 2016), *Psychological first aid: Guide for field workers* (World Health Organization, 2011). These are detailed handbooks describing the procedures of providing psychosocial first aid in crisis situations. These are undoubtedly top-quality and highly beneficial publications that facilitate practical application of knowledge. Unfortunately, they lack a detailed analysis of the topic concerning persons with health disability (referred to as HD). Regarding the increasing number of crisis situations, it should be noted that these situations also commonly affect persons with HD. The approaches to these persons might differ from the intact population with regard to the specifics of various HD categories. The problematic aspects that persons with HD might encounter in crisis situations are described for example in *Preparing for Disaster for People with Disabilities and Other Special Needs* (FEMA, 2013), *IS-368: Including People With Disabilities in Disaster Operations* (FEMA, 2014) or *Crises, Conflict and Disability: Ensuring Equality (Routledge Advances in Disability Studies)* (Mitchell & Karr, 2015), etc. These publications provide information concerning readiness of persons with HD for resolving crisis situations, obstacles preventing

crisis management by persons with HD, the needs of these persons resulting from the specifics of various HD categories, etc.

An outstanding and unique publication concerning the issue of crisis situations in persons with HD is ***Disability and disaster: explorations and exchanges*** written by **Ilan Kelman** and **Laura M. Stough**. To achieve authenticity and practical applicability of the publication the authors cooperated directly with persons with HD and workers in helping professions across the globe. In a retrospective way, these persons shared their experiences with various crisis situations in the form of **twenty authentic stories**.

The publication consists of **three parts**. **The first part** consists of three chapters that in a comprehensive manner explain the reasons for writing the publication, social construct of HD, and crisis situations and disasters. The second chapter provides an overview of the fundamental principles necessary for understanding the issue. By making References to international publications and relevant research-based findings, the authors emphasise the specifics and importance of the issue. This chapter discusses the categories of HD, specifics and problematic aspects and risks, which persons with HD could be exposed to in crisis situations during evacuation. The chapter also includes an insight into the area of documenting and international legislation concerning the issue. The last chapter of the first part includes basic information about the management, control and planning in crisis situations (on a micro-, meso-, and macro level), readiness of persons with HD for crisis situations, and barriers that may prevent effective solutions of a crisis situation involving persons with HD. In this chapter, the authors emphasise the need for modification of all levels of crisis management in order to match individual needs and specifics of persons with HD covering all HD categories.

The second and most extensive part of the publication was written by the authors in cooperation with persons with HD and workers in helping professions. Based on mutual collaboration and using personal experiences of these persons, a total of twenty realistic stories were produced that describe various crisis situations in the lives of persons with HD. These stories correspond with the twenty chapters of the publication. They are short retrospective stories told by persons with HD or workers in helping professions concerning their experiences, specifics, challenges and concerns that they have experienced in the context of crisis situations. The readers are informed about a large amount of new and crucial information about the frequently neglected or even deliberately disregarded issue, about problematic aspects that persons with HD are faced with in crisis situations. The stories 'feature' persons with visual impairment, persons with limited mobility (quadri-, di-, hemiparesis/plegia, meromelia), persons with multiple disabilities, persons with hearing impairment (with cochlear implant), persons with Asperger syndrome, persons with chronic inflammatory demyelinating neuropathy, epileptic persons, or the actual

crisis interventionists. The stories do not describe just the experiences of persons with HD in crisis situations, but also of those who became disabled as a result of crisis situations. The second part of the publication describes crisis situations such as fires, floods, terrorist attacks, accidents, etc.

The third part of the publication summarizes the importance and urgency of the issue. In the form of a discussion this part presents various questions and topics that need to be addressed by research and science, but also their practical applications. Some statements are aptly supported by other resources (papers, studies, etc.)

In a convenient and readable way, the authors of *Disability and disaster: explorations and exchanges* emphasise a topical and often neglected issue. The attitudes to persons with HD in crisis situations are presented in a structured and authentic way and are suitably supported by other studies and publications. The publication, also by involving persons with HD and workers in helping professions, represents a human insight into a difficult issue with exacting solutions and procedures aimed at persons with HD in crisis situations, as well as their specifics, perceptions and concerns. The added value of the publication is represented by the authentic statements and stories of persons with different categories of HD, as a result of which the publication is considered exceptional, original and unprecedented domestically or globally. However, there are also minor deficiencies such as absence of persons with intellectual disability in the stories, which could undoubtedly bring other interesting findings, topics and stimuli for a deeper examination and understanding of the issue. Unfortunately, the publication only focuses on the stage of evacuation of persons with HD from the epicentre of a crisis situation and fails to address the mental state of the individuals shortly after such situations. Crisis situations may influence the mental state of affected individuals in various ways, which often results in unpredictable reactions of these persons (irrespective of the presence of HD). Any analyses of persons with HD in crisis situations require a comprehensive consideration of the specifics of their HD. Placing more emphasis on the deficiencies mentioned above could be of great benefit for further scientific and research work as well as practical applications.

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Cosas que vengo diciendo

Naranjo, Claudio. (2015) *Cosas que vengo diciendo*. Barcelona, Spain

Reviewed by Veronika Mužná

The author of „*Cosas que vengo diciendo*" is Claudio Naranjo, a Chilean psychiatrist, writer, teacher and speaker. Naranjo is one of three direct followers of Fritz Perls (founder of gestalt therapy). He is dealing with the combination of psychotherapy and spiritual traditions; he also developed the psychology of the enneotype and established the SAT Institute, a school of psychospiritual integration. Claudio Naranjo believes that there is a need to change the world and the patriarchal focus of society and thinks that the only way to achieve this is through the transformation of education.

The book consists of 183 pages and it is divided into a prologue and five chapters, summarizing the author's basic ideas on the values of the western, patriarchal-oriented society and the need for a reform that should be implemented on a universal basis through the education system. At the end of the book, after the bibliography, the author's life and career are described on several pages. The chapters do not directly relate to one another, as it is a sum of Claudio's transcripts of lectures on various topics that are key to his learning.

I consider it important to describe the first chapter in more detail, as it presents the basic principles of Naranjo's thinking from which the book and all his learnings are based. The first chapter is called *Tres amores y tres cerebros* (Three loves and three brains). In this chapter, the author develops his love theory, explaining the conception of three brains and three types of loves:

The reptilian brain, which is the oldest part of the brain, including erotic and inward wishes culminating in the desire to be happy. Naranjo also calls it „inner reptile". This brain is **instinctive** and it is embodied by a **child**.

The middle brain is the seat of **love** and **emotion**, in which it is embodied by the **mother**, as it is the part of brain that cares and gives. According to Naranja, this love culminates in compassion.

The Neocortex is a part of the brain that is the most applicable in today's culture, as it is the youngest. Naranjo therefore calls it **intellectual**. It suppresses the other two brains and is embodied by the **father's** figure. This concept is attributed to love – friendship, and this love culminates in admiration, that lies in the perception of the other as divine.[1]

In education, we are still very much focused on performance in intellectual and schooling skills (intellectual brain) for which pupils are evaluated, and much less emphasis is placed on social skills (emotional brain) and real support for individuality (reptilian brain), which a disadvantage for people with special educational needs. In my opinion, if more emphasis was placed on education in emotions and feelings, the concept of inclusion would be much more practical to work with, but it would have already begun with the teachers themselves.

Naranjo says that the Christian culture despised the body, the instinct and the search for pleasure and joy; and the culture which our present-day Western world arose in, despises compassion. According to the author, the fundamental problem of Western society lies in the imbalance that arises between the three brains for the benefit of the intellectual brain. He believes that the key to contentment is the fulfillment of the human being, which stems from the equilibrium of the mentioned 3 components and in the knowledge and conscience of oneself through them. This is the imbalance, according to him, which has led to the world to be in a crisis, and the only way to remedy is through education.

So these are the basic ideas which the author works with and further develops them in the following chapters: *Ciencia y conciencia de la conciencia (Science and awareness of the conscience), La dimension espiritual de la psicoterapia y el nuevo chamanismo (The spiritual dimension of psychotherapy and the new shamanism), El potencial salvifico de la educacion (Tthe salvific potential of education).*

The disadvantage of such a publication is the fact that some topics and some thoughts are repeated throughout the chapters, but the author's way of expression is so keen, clear and creative that he is not boring, yet on the contrary, the repeatedly conveyed idea is seen in a different light.

I noticed the author's incredible intellect from the fact that his thoughts are based on a large number of primary sources, which he uses in a natural, yet non-confrontational manner (and it is a long list, for example: Sigmunde Freud, Friedrich Nietzche, George Gurdjieff, Rof Carballo, Wilhelm Reich, Stuart Mill, Teresa de Ávila, Hubert Benoit, Konrad Lorenz, Aristoteles, Christus...). I see this as very beneficial in view of the possible controversy that may occur. Because as he says: „*It can be recognized that the word love is a true taboo – a term that can be used in art, in literature and in*

[1] I think this culmination could be accurately illustrated by quoting one Celestine excerpt:
Sempronio: „Are you not a Christian?"
Calixto: „I'm Melibeo / And I love Melibea / And I love and believe in Melibea." (Rojas de, 1913)

religion, perhaps, but not in science – that the academic world is the criterion of the true." (Naranjo, 2015, p.146)

In conjunction to this, Naranjo criticizes the values of today's Western society, where war values prevail above the values of love, and the competition over the co-operation. I approve of this idea and it seems to me that these oppressed values would be very beneficial in today's inclusive education. What is inclusion really about? I think it is about **accepting** that even people with disabilities who have difficult living conditions are part of our world and society. Naranjo, in his work, represents love in a similar way, it is about the **acceptance** of oneself and of the other person with everything, without conditions, included his shortcomings. I think, in order to be able of inclusion, we should first be able to love.

I think the publication is beneficial for those who would like to learn about Claudio Naranjo, whoever it is, and it could be specially beneficial for those who have the power to change things – teachers of primary, secondary and tertiary schools.

A little disadvantage is that the book does not originate in the Czech translation, however, if the reader understands Spanish, it is not only an intellectual but also an excellent literary experience.

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Information for authors

Basic information about the JEP

Journal of Exceptional People (JEP) is be based on twice a year publishing period in both electronic and traditional – printed form. To guarantee professional standards of the Journal we have chosen special needs teachers, psychologists, therapists and other professionals from the U.S., Finland, Spain, Slovakia, Hungary, China, Russia, Poland and other countries. Above mentioned the 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 has been 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 12 **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 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]).

It is highly recommended to spend the necessary time correcting the paper – every mistake will be multiplied. Posted papers unsuitable for printing will not be published! Ensure appropriate division and balance between the various parts of the contribution and aesthetic placement of pictures and diagrams as well as their quality. Terminological correctness and formality are required.

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- Text will be published
- Text will be published after minor modifications
- Text will be published after reworking
- Text will be reviewed again
- Text will not be published

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