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Institute of Special Education Studies

Faculty of Education – Palacký University Olomouc

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Content

Introduction

Dear Readers,
we are delighted that you are in favor of our magazine. Spring is not only a time of new ripening and the beginning of new fruits on awakening gardens, it is also a time for a new breath into another creative literary work. On rainy evenings, we open up our favorite books and flip through all the things that appeal to us. We believe you will sometimes find time to find interesting articles published in our Journal of Exceptional People.

For eight years our editorial team has been continuing in assessing, evaluating, reviewing and publishing review essays and scientific papers, which deal in particular with the issue of inclusion and socialization of all exceptional people. At the same time, essays give readers more insight into a broader view and insight into a certain issue, scientific studies focus more specifically and report in detail on realized research. At the end of each of our numbers, we also publish short book reviews, which should be an offer for readers to read or study.

In the current issue, firstly Slovak author S.F. Lucká introduces interesting details of the application of psychomotor therapy in the context of a multisensory environment. The author dealt with stimulation of psychomotor activity in seniors and interconnection of these activities with reminiscence memory tracks.

Another interesting contribution to the magazine was sent to us by two Ukrainian authors – A. Kurchatova and K. Shapochka. Their article contains a lot of valuable information about the professional training system of future educators for working with children with special educational needs in preschool inclusive education.

Chinese authors N. Zhang and S. Xu deal in their study with the effects of choice-making strategy on the behavioral problem in the classroom situation of children with ASD. Their article also contributes in a fundamental way to understanding the

behavior of clients with autism spectrum disorders and reveals new possibilities for therapeutic work with people suffering from ASD.

Another article by M. Protič and H. Válková from the Faculty of Science of Palacký University in Olomouc (Czech Republic) is entitled „Confirmatory factor analysis of bosnian version of behavior rating inventory of executive functions in children with intellectual disability". The authors introduce us a new comparative scale of cognitive functions in these children and demonstrate its use for school assessment as a basis for educational planning and development of executive functions.

Another Czech author, K. Tománková, focused on the field of combined disability and in her contribution entitled "Postural stabilization and postural control in visually and hearing impaired persons" acquaints readers with the issue of life of people with this disability.

Summary essays and scientific studies of the fourteenth issue of JEP are concluded by an article by P. Svoboda, which focuses on the area of inclusive education of children with special educational needs in the Czech Republic at art schools. In his contribution he analyzes especially the current state of education of these children from the point of view of their teachers and identifies the main problem areas of their pedagogical intervention.

Our magazine still contains three reviews of interesting books by reviewers M. Tichá, J. I. Vinkler and T. Houšková.

We wish you pleasant moments when browsing JEP magazine.

Pavel Svoboda, Jan Chrastina

Psychomotor therapy in the context of multisensory environment

(scientific paper)

Zuzana Fábry Lucká

Abstract: *Multi-sensory environment as a room for therapeutic intervention is currently an increasingly used method. It is possible to apply not only typical activities for the support of sensory integration and the use of therapy, but it is also an environment whose elements are also usable for other therapeutic concepts, such as psychomotor therapy. This synthesis is suited to application in every stage of lifetime, since the multisensory environment is wide-spectrum in use. As it offers space for active motor activities, it is also a space for reminiscence, evaluating in senior age. This study offers basic definitions supplemented by research samples from current ongoing research on aspects of multisensory environment in therapeutical pedagogy.*

Keywords: *multisensory environment, psychomotor therapy, expression*

1 Introduction

Human psychomotorism is an integral part of life. In order for the movement to take place, it is necessary to involve several human sensory channels, cognitive abilities and sensory perceptions. Movement is therefore a product of complex perceptions, although at first glance it looks very simple. It affects the entire personality of the person, it has significance throughout life, from the early age to the senior age. In each period, the meaning of motion is different. The meaning of movement is specific in each of the aforementioned periods. In the early age, motion is a natural component as dynamic psychomotor development takes place and the baby is gradually lying down all four limbs, standing and walking for two years. Movement is part of play, natural activities, the "work" of a child in a regular daily play.

In the next period, the importance of movement is determined in particular by the preferences of the child or in pre-school and younger school age rather than family

and family environment. In general, the children of parents for whom movement is a natural part of the day move more to the extent that the movement is a lifestyle for them. In seniors, movement is often severely restricted, in connection with illness or muscle wasting. Movement is, however, a way of memorizing, supporting cognitive functions, reminiscent of the surviving life story. In each of the periods of life, it is necessary to focus on a particular person in a complex way, given their current life situation, family survival or social status. Movement in psychomotor therapy is a therapeutic medium, but it also includes other factors. The psychomotor function of a human being is its expression, it is unique to everyone, it is an authentic and autonomous embodiment of his real physical "I". Motion is the result of cooperation between psychological and physical factors. Therefore, it also includes social factors, the movement of people shows what relationships they have with their surroundings.

The meaning of nonverbalism is indisputable both in private and in the workplace. The location of a body within a group points to a social status hierarchy. The attitude of a person presents his / her attitude towards the environment, the current situation. The surrunding has the ability to watch attentively whether they feel comfortable in the social situation or unpleasant and troublesome. Nonverbal survival is the basic pillar for the relationship of the child to one's own body. Contact with parents, especially if the child has a person with whom he/she spends more time, is one of the important needs of the child. The child already at an early age perceives:

- hug,
- touch of hand,
- vibrations coming from the mother's voice,
- smell,
- skin through a tactile system.

All of these observations come from several sensory paths. Already at an early age, the child's consists not only of mental and motor survival but is a synthesis of all the information obtained. Since, despite the fact that an early age child is still not able to speak in a verbal form, their needs are expressed almost constantly, it is more important for the mother or parents to learn to identify their child's nonverbal expressions. The range of expressions is relatively broad, and it is often the case that the child's needs can only be recognized by the person most likely to be identified with it. If the person does not identify the child's needs, it leads to the frustration of the child but also of the person in question.

Through this information, the child builds their own "me", their self-concept. They are involved in building (Zimmer, 2006):

- information obtained through sensory experience,
- experience from the effects of our actions,
- the result of comparing with others,
- the qualities attributed to us by others,
- expectations of the environment,
- experience of self-satisfaction with yourself,
- a summary of information gathered through activities – abilities, talents, possibilities, performance.

Expression through the specific means that multisensory environment offers is also appropriate with links to physical activity. For components used in this environment, a specific high degree of variability, usability, and therapist offer a wide range of therapeutically useful tools.

Multisensory, pre-prepared environment is also suitable for verbalisation of psychomotor-oriented activities. It offers security, creativity and shared experiences for a group form of interventions. In specific cases it is possible to use the individual form (Fábry Lucká, 2017):

- body stimulation through body change (swing, water bed, weighting boards),
- physical stimulation through visual stimuli (as well as visiomotor support), for example, using optical fibers or a bubble cylinder,
- body stimulation through vibrational stimuli (water bed, vibration aids, snakes).

In a multisensory environment, there is room for interviews with the client in terms of verbalization even if the communication is in a different way than usual. It offers security, creativity and shared experiences for group form.

The multi-sensory environment is a stimulating environment for psychomotor play. Multiplayer play is nothing new, traditional games involve multiple senses at the same time, but for some children it is also necessary to interfere with the environment. Without a comprehensive approach to the child and their family, this therapeutic approach is not complete. A multi-sensory environment is an environment where, at one point multiplied stimulation is provided through specific stimuli. Fowler (2007) states that in a multisensory environment there is room for a large number of sensory activities that can be performed there.

Lessner Lištiaková (2017) emphasizes the individual needs, abilities and possibilities that can be activated in a multisensory environment through child's natural activity – play. To implement multisensor therapy in the Snoezelen environment, it

is especially important to implement it in a pre-prepared environment tailored to the client and their specific needs.

Lištiaková (2014) emphasizes the importance of using the multisensory environment for clients with autism spectrum disorders, precisely because of the possibility of high variability in the use of various stimuli, which can be grasped even in the specific expression of the client.

The equipment of the multi-sensory room consists of basic components, which are tailored to the needs of a particular client.

The dark room is supposed to support the optical paths, but the components are very similar to the white multisensory room.

The playful or colorful room is closest to a typical room, a therapeutic play room designed to treat sensory integration disorders. It includes various stimulating surfaces as well as obstacle paths or space designed to support the proprioceptive system. In the play room, an expert has the opportunity to prepare obstacle lanes with different focus:

- static obstacles in space,
- balancing obstacles, bulk boards, benches, designed to maintain balance,
- changing the body position in the space through a swing, balancing plate,
- roller board intended for movement in the room lying down or sitting.

2 Methods of research and research results

The aim of qualitatively oriented research was to identify and analyze social and communication competencies in individuals with multiple disabilities in the multisensory environment combined with psychomotor therapy. For the analysis we used observations of clients in multisensory rooms and their regular environment in structured and unstructured activities.

In this case, the area of communication is crucial, as it is often not performed in a standard form. In a multi-sensory environment there is room for expression of the client as it offers diverse incentives. In the area of communication we have recorded five variables:

- interaction with the environment,
- establishment, maintenance and development of conversation in communication,
- sufficient space for communication,
- a system of alternative and augmentative communication,
- preference in communication.

Interactions with the environment are problematic especially when expression is only through neurovegetative expressions, that is, when a common form of communication is not possible. Neurovegetative manifestations include skin flushing, skin fading, acceleration – deccelaration of breathing, etc. As often these expressions cannot be identified for a person who does not know how to communicate, their needs cannot be recognized. Here is where psychomotor therapy is used as an intervention through the recognition of non-verbal expressions. Another factor is insufficient time to respond – a person with multiple disabilities often has no opportunity to respond, because the communicator assumes that if the client does not respond immediately they are not able to answer. If there is also a visual or hearing impairment in the spectrum of a person's disability, the situation is even more complicated. An alternative communication system can also lead to repetition of topics, communication does not find new themes, but repeats the so-called favorite themes, the communication dictionary is not updating. Support of sensomotorics through activities focused on the proprioceptive system has proved to be stimulating to interactions.

Establishing, maintaining and developing a conversation in communication is already an advanced way of communicating as it is about conversational competencies. According to our findings, one of the factors is the rejection of communication from both sides. Likewise, communication can be rejected by a person with multiple disabilities, as well as their surroundings, because of the fear of communicating with such a person can prevail on the basis of stereotypes. A person with multiple disabilities also has their own reluctance to communicate with a negative experience of misunderstanding from the past. If their communication is often misunderstood, they do not not tend to follow up on the new conversation themselves. The reluctance to converse can also be caused by a cognitive barrier or fear of misunderstanding. Promoting social relations and links is the basic principle of activities aimed at promoting social factors of psychomotor therapy.

Insufficient space for communication – we identified this problem mainly in the institutional environment. Spatial barriers, which are apparently only a matter of constraint, have a demotivating impact on a person with multiple disabilities. Since there is no communication about privacy, conversations that should be of an intimate nature often take place in the presence of unwanted witnesses. Another variable has also been identified as a deliberate isolation from the communication process, even though the subject of the interview relates to the other person. The decision remains for the family or the staff of the facility in which this person resides. Their fundamental human rights might be refused. Working with space is an important variable in both psychomotor therapy and multisensory environment.

A system of alternative and augmentative communication is an actively used form. But as much as it requires the intervention of the environment, and also the experts who provide the intervention, it has also proved to be a problem category

in the research work. The most common problems in this area were problems with active use outside of the training environment. What works in the institutional environment is not transferable to the real environment. Also, the range of symbols used is limited, which leads to the ritualized stereotypical repetition of the same topics. The multi-sensory environment is full of new stimuli that can be updated and this rigidity can be partially changed.

Preference in communication as a problem area involves, in particular, the selection of persons for the communication process. Even in a multisensory environment, it is the ignorance of another client present and the preference of communication only with the therapist. Another phenomenon is, for example, keeping the communication process under certain conditions – "I will be communicating, but if you are to stimulate me with a specific device, change is not possible".

3 Research vignettes

As Kováčová (2010) states that a wide range of applications in a multisensory environment can be used as a space for provoking client's expression. We were able to observe clients' activation in our research (Research Demonstration 1). In case where communication is not routined, and the child's development is not standard, multisensory environment provides a stimulating activity.

Research demonstration 1

Vanda responds to stimulation in a multisensory environment by moving her head to the sides. The absence of movement signifies the answer, consent is communicated by turning the head to the left and establishing eye contact. In addition to this basic set of expressive expressions, satisfaction is expressed by accelerating breathing, reddening in the face. Physical stimulation with optical fibers allowed for the usual way of communicating (moving the head to the sides) to be removed, as if it stopped at the moment. Her breath begins to accelerate and becomes shallower, faint in her face, and for the moment of stimulation this becomes the only expression for the therapist, expressing her satisfaction.

The child recognizes her own body, her own borders, she learns to perceive her body as a means of interacting with one another and communicating with the environment. She acquires the knowledge from the whole environment and through different sensory paths. Supporting the proprioceptive system is the basis for perceiving the physical "I" to allow the child to orientate in one's own life and to provide a feeling of security in which the child can develop safely. Awareness of the surrounding environment is a certainty for a child, as well as the fact that certain activities that a person conducts on a regular basis become a ritualized activity, a ritual that the child localizes in time and space. A multisensory environment is an area suitable

for building rituals because it has the equipment that is part of the room and a part that is portable. Ritualization may be manifested, for example, in the selection of the same components in a multisensory environment (Research Demonstration 2).

Research demostration 2

Robert turned to the water bed immediately after coming into the room. He adjusted the pillows to the right-hand side of the bed, and he did not touch them afterwards. He laughed and took a breath for a moment. After a moment, he turned to the therapist and pointed at the aid box. The therapist brought the box to him, and Robert started to crawl inside. He picked up all the items and looked at them thoroughly. Finally, he took a soft massage ball and handed it to the therapist. This activity always has the same, unchanging course.

Rituals had an important psychohygienic function in the past. Nowadays, multisensory therapeutic rooms have become part of a variety of facilities – from school to social, to medical, with the most common type of room being a white room for relaxation. However, the trend of mobile realization, i.e. the use of only part of the means isolated, for example in the client's home environment, is also rising.

The concept of psychomotorics by Zimmer (2006) in the past referred to the part of psychology that dealt with perception, not movement. Therefore, the connection to the multisensory environment is a natural form. Movement is part of sensory processing facilitating processes, and psychomotorism itself contains the first multisensory aspects.

From the perspective of psychomotorism in the context of multisensory intervention, it is appropriate to use:

- activities to support proprioceptive system,
- activities to support vestibular perception – swinging, jumping,
- massage,
- touch activities,
- family games and rituals,
- simple motion games, non-verbal games,
- ritual play on the body,
- games with changing body position in space.

Multisensory environment is a safe environment for expression even if communication is problematic. It offers direct stimulation, which makes it is possible to realize psychomotor activities for the individual and for the group. It offers incentives directly to support the motor skills, such as a water bed, sensomotor pad, swings or

balance plates. Even relaxation as one of the major psychomotor activities (Szabová, 1998) is realizable in multisensory, even this environment offers relaxation directly. Whether on a water bed or under a "starry sky" created by light optical stimuli (Research Demonstration 3).

Research demonstration 3

Matthew relaxes in a white room despite the fact that during his usual activities his activity is excessive. He chooses a swing himself, chooses the theme of projection on the projector. In a pleasant atmosphere, after the active phase of the therapeutic session, he relaxes himself so much that he can even fall asleep.

4 Conclusions

Multisensory stimuli and materials are fully integrated into the context of psychomotor therapy as they are stimuli that promote not only motorism but also sensory pathways and their integration into the complex human personality. They are suitable to support sensomotorics, sociomotors, neuromotors and psychomotors as such through activities that can be performed in a sensitively modified environment. Psychomotor therapy is a concept much like the concept of multisensory therapy. It also focuses on supporting the complex personality of the client with regard to their current state. Motion-oriented activities are more effective and often more appealing to the client in the space which motivates them to move. The client experiences his or her own body in an experiential manner, develops their body "self", self-concept, and extends the variability of their expression to the environment.

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(reviewed twice)

Mgr. Zuzana Fábry Lucká, PhD.
Comenius University
Faculty of Education
Department of Therapeutical Pedagogy
Šoltésovej 4
813 34 Bratislava
Slovakia

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Formation of students preparedness to professional activity in conditions of preschool inclusive education

(scientific paper)

Angelika Kurchatova, Kateryna Shapochka

Abstract: *The urgent problem of formation of future educators preparedness for professional activity in conditions of preschool inclusive education is considered in this article. The authors analyze the system of professional training of future educators for working with children with special educational needs in conditions of preschool inclusive education. The concept of "inclusive education" is defined as a process of ensuring equal rights to receive educational services for preschool children with special educational needs at their place of residence in a general educational institution. The essence of the concept "professional readiness of future educators for education and upbringing of children in conditions of preschool inclusive education" is revealed. The forms and methods of preparing future educators for professional activity in conditions of preschool inclusive education are considered. Examples of forms and methods of training future specialists of preschool education for professional activities in preschool inclusive education are given.*

Keywords: *preschool inclusive education, future educators, preparedness for professional activity*

1 Introduction

An urgent requirement of the present is to provide the educational sphere with specialists of a new generation, able to carry out the educational process on a high professional level, to think creatively, to independently replenish their knowledge, to orientate and possess scientific information.

The development of inclusive education is a long-term strategy that requires patience and tolerance, consistency, continuity, step by step, and a comprehensive approach to its implementation, according to international experience. A special place

in this system is given to the teacher. It is precisely because of his or her emotional stability, readiness for acception of children with special educational needs (SEN), depends on the development of inclusive education in the education system. The emergence of inclusive education, aimed at creating for all children adequate to their capabilities and educational needs, involves the training of teachers able to carry out professional activities with children with SEN. In this connection, the problem of professional training of future specialists of preschool education for professional activity in preschool inclusive education is relevant. This requires the introduction of changes in the content of education, the modernization of organizational forms, methods and methods of training of students in a higher education institution. Given the specifics of the work of teacher of preschool education institution, the following questions need to be further explored: how should future educators be trained in a higher education institution; which interactive forms and methods can be used to prepare future specialists for a particular type of activity; if there is enough knowledge to be prepared to organize the joint interaction of children with SEN.

The aim

The aim of the article is to theoretically substantiate the peculiarities of formation of students' preparedness for professional activity in the conditions of pre-school inclusive education. Assessing the state of the studied problem of vocational training of future teachers of preschool education institution, one can state that its importance has always attracted the interest of scientists. Modern researches (L. Artemov, G. Belenka, O. Boginich, A. Bogush, N. Havrysh, G. Klovak, I. Knyazheva, R. Kondratenko, O. Kononko, Y. Kosenko, K. Krutiy, M. Mashovets, T. Ponimanska, O. Proskura, M. Sokchynska, T. Stepanova, T. Shkvarina) are characterized by a productive approach to the analysis of the training of specialists in the field of preschool education. Scientists have determined the theoretical and methodological principles of training of future specialists in modern conditions, it is proved that the essence of vocational and pedagogical training is a system of content-pedagogical and organizational-methodical measures aimed at ensuring the readiness of the future teacher to professional activity.

2 Methods

According to the vocabulary sources, the "professional activity of the teacher" is interpreted as: "the kind of continuously carried out activity, the specifics of which is psychological and pedagogical impact on children, taking into account their age and individual characteristics, requests, interests, hobbies, spiritual world and, at the same time, in purposeful management of the process of learning and personal develop-

ment "[8, p. 481]; "the characteristic of a professional on the basis of a certain set of professional tasks and responsibilities (works) performed by a specialist [2, p. 78].

Under the professional activity of the educator of preschool education institution, we understand the kind of activity of the educator, the specificity of which is psychological and pedagogical influence on children, taking into account their age and individual characteristics, requests, interests, hobbies, the spiritual world and, at the same time, in the purposeful management of the process of education and development of the individual. Professional activity of a modern teacher of preschool education is a complex, holistic, dynamic, multidimensional and multifunctional system of interaction between an educator and children, aimed at realization of the purpose and tasks of preschool education.

The analysis of scientific and methodological literature allows us to conclude that the problem of professional training of future specialists of inclusive preschool education has not yet been fully considered. Existing studies allow us to take into account the findings in developing the content of the future educators training for professional activities in preschool inclusive education.

One of the main strategic guidelines for state educational policy is recognition of the training of pedagogical staff for activities under the conditions of inclusive educational model; modernization of the education management system [5, p. 172].

The logic of the study has necessitated the disclosure of the basic terminology concepts in the system of inclusion. According to the Encyclopedia of Education, inclusive education is a "system of educational services based on the principle of ensuring the basic right of children to education and the right to study at the place of residence, which envisages the education of a child with SEN, in particular a child with peculiarities of psychophysical development, in a general education institution "[1, p. 11]. The chief scientist of Ukraine in the field of special pedagogy A. Kolupayeva believes that inclusive education involves the creation of an educational environment that would meet the needs and capabilities of each child, regardless of their psycho-physical development peculiarities [3, p. 13]. I. Kuzava considers the system of inclusive education of preschool children as a holistic pedagogical process aimed at creating a suitable environment, adapting it to the needs of all children and providing the necessary psychological and pedagogical support for the purpose of common education (upbringing) of children with both normal and special development [4, p. 12].

Ukrainian scientists (L. Budyak, L. Grechko, A. Kolupayeva) among the conditions that support the effective provision of inclusive education for children with special needs determined the appropriate training of teachers of general education institutions.

In recent years, a number of studies have been carried out, in which the theoretical and methodological foundations of the problem of training teachers of preschool and primary school education for providing psychological and pedagogical

support for children with SEN (B. Bondar, O. Vorobiova, A. Kolupayeva, S. Mironova, N. Nazarova, V. Siniov, T. Pyatakova, N. Shmatko); formation of professional competence of future teachers in the process of professional training (I. Khafizullina, Y. Shumilovska); preparation of specialists for working with children in inclusive preschool education (A. Kolupaeva, I. Kuzava, L. Savchuk, O. Samsonova, O. Martynchuk, I. Yukhymets).

I. Kuzava identified the main components of the professional preparedness of educators for inclusive education, which are its structure:

1. personality-content (the teacher's acceptance of the idea of inclusion, motivation);
2. cognitive (a complex of vocational and pedagogical knowledge, skills, skills for the implementation of inclusive education for preschool children with SEN);
3. technological (practical skills of educators in the application of technologies of inclusive education, in particular the creation of an inclusive environment);
4. creative (creative activity and personal qualities of the educator);
5. evaluative-productive (analysis of the methods and techniques necessary for the introduction of inclusive education) [4].

3 Results and Discussion

On the basis of the generalization of the results of the analysis of psychological and pedagogical sources, the training of future educators for professional activity in the conditions of preschool inclusive education as part of a holistic pedagogical process in the institution of higher education was determined, which is aimed at developing the student's motivational and value attitudes towards the education and upbringing of children with different levels of psychophysical development, use of achievements of modern psychological and pedagogical science and practice for increasing the efficiency of the process of education and upbringing of children with SEN.

The result of the educational process in the higher education institution is the professional preparedness of future educators for the education and upbringing of children in preschool inclusive education, which is considered as the integral quality, which combines the motivational, theoretical and practical components. Such preparedness is based, first of all, on the recognition of the importance of inclusive education, the system of knowledge about the nature of education and upbringing of children with SEN, and the methodology for carrying out the specified type of activity, practical skills and skills that provide high results in solving professional tasks in the education and upbringing of children with different levels of psychophysical development.

In our opinion, the process of formation of preparedness of future specialists for professional activities in preschool inclusive education will be effective if:

a) provides psychological, correctional (special) orientation of the training of future educators, based on a deep knowledge of the peculiarities of working with children with SEN;
b) motivates students to work with children with SEN;
c) uses pedagogical practice at school, district, regional levels using developed models of work of teachers with children with SEN.

For professional and personal training of future preschool education specialists, it is necessary to understand what inclusive education is, what its difference from traditional forms of education is; knowledge of psychological regularities and peculiarities of age and personal development of children in conditions of inclusive educational environment; knowledge of the methods of psychological and didactic designing of the educational process for the common and equal education of all children; ability to implement various methods of pedagogical interaction between all subjects of the educational prosess (with children separately and in a group, with parents, colleagues-educators, specialists, administration).

In our opinion, for the successful formation of students' preparedness for professional activity in preschool inclusive education, it is necessary to use the potential of the content of psychological and pedagogical disciplines for the formation of positive motivation to inclusive education. For this purpose, the educational disciplines "Fundamentals of speech therapy and special pedagogy", "Fundamentals of correctional pedagogy", "Fundamentals of inclusive education" were introduced into the curricula of Bachelors of Preschool Education.

In order to form students professional competence in the field of development, education and upbringing of children with special needs, it is important to include in the content of the students' program of education the special course "Inclusive education in the preschool education institution" which, in addition to the knowledge, skills and abilities of the future educator, will ensure the formation of professional competences, in particular:

– to be prepared for tolerant perception of children with special educational needs;
– to know the individual peculiarities of psychophysical development of children;
– to know the special methodology for teaching children with special educational needs, including the purpose and tasks, principles, methods and techniques, as well as organizational forms and correctional orientation of inclusive practice;
– to be able to work in a team of specialists on the implementation of psychological and pedagogical support for children with special educational needs and their parents;

– to be able to conduct diagnostic work on the identification of individual peculiarities of children;
– be able to create an individual educational plan/program for a child with special educational needs.

Effective forms and methods of training of future specialists of pre-school education for professional activity in preschool inclusive education are:
– lectures with interactive teaching methods;
– practical and seminar sessions ("Organization of education and upbringing of children with special needs by means of inclusive education", "Organization of psychological and pedagogical support of inclusive education", "Interaction of Preschool education institution and family on the issues of organization of inclusive educational process", etc.);
– individual and independent work of students;
– disputes ("Inclusive Education as a Social and Pedagogical Phenomenon", "Ukrainian Experience of Inclusive Education of Children with Special Educational Needs");
– master class "Creating adaptive educational environment for children with special educational needs";
– round table talks ("The role of inclusive education in the development of a child of preschool age: pros and cons", "Inclusive practice as an innovative pedagogical activity");
– business game "Inclusive competence of a preschool education institution teacher".

During the class future teachers will get acquainted with the general theoretical issues that provide a holistic understanding of the key issues of the inclusive educational process. At practical and seminary classes, students study the experience of organizing an inclusive educational process, study how to develop a model of the subject-developing environment of the inclusive group, learn to interpret the received knowledge in the field of inclusive education, and create individual educational programs for children with special needs on the basis of diagnosis.

Since the formation of students' ideas about the inclusive education of children with SEN and the awareness of the importance of this problem depends on the effectiveness of the work in the specified field, then work with students begins with a series of lectures with interactive techniques, the purpose of which is to familiarize future preschool education specialists with the basic rules of the theory of integrated and inclusive education, conceptual apparatus, scientific and methodological principles; to give an idea of inclusive education as an important socio-cultural phenomenon of general and special education; to form positive attitude towards the development of

inclusive activity among students, a deep personal interest in the implementation of pedagogical activities in the context of including children with special educational needs in peer education.

We recommend the following lectures: 1. General characteristics of inclusive education of children with special educational needs. 2. Regulatory and legal, ethical bases of inclusive education management. 3. Theoretical basis for the formation of inclusive education. 4. Models of inclusive education. 5. Organization of inclusive education in the institution of preschool education. 6. Psychological and pedagogical support of subjects of inclusive preschool education. 7. Psychological-pedagogical bases of formation of a professional culture of the teacher of inclusive preschool education.

An example of lecture with interactive methods "Inclusive Education in the Developed Countries of the World and the Post-Soviet Countries"

Plan

1. Stages of the attitude evolution of the West European state and society towards people with disabilities. Formation and development of inclusive education in the countries of Western Europe.
2. Formation and development of inclusive education in the countries of North America.
3. Inclusive tendencies of education system development in post-Soviet countries.
4. Trends and prospects for the development of preschool inclusive education in Ukraine.

During the lecture it is advisable to use interactive methods.

1. The beginning of the lecture. There were such thoughts about children with disabilities. The philosopher Seneca asserted: «We kill the freaks, and we seduce children who are born to the false and distorted. We do so not because of anger and annoyance, but guided by the rules of the mind: to separate the unworthy from the healthy. "

   The meaning of Socrates lies in the fact that the decision, about the necessity and useless, and accordingly, the end of life, must be taken by the man himself and nobody else. The society has no right to decide this question.

   – Was unequivocal the attitude towards children with physical and mental deficiencies in society during all its existence? Why could not precedents of active charity arise in an antique state? When did the legal principles of protection of persons with disabilities begin to emerge? So, the theme of our lecture.
2. Problematic questions: There is such an opinion that at the end of the twentieth century Western Europe and Ukraine are experiencing different periods of

evolution in relation to children with disabilities and, accordingly, are at different stages of the development of special education systems. Is this statement true? What do you think?

3. Reception retrospection: Remember if you have witnessed in a lifetime negative or indifferent attitude towards people with disabilities or incorrect expressions at their address? Tell us about it.
4. Analysis of the positive experience of inclusive education, the opinions of experienced teachers, the views of parents of children with special educational needs attending educational institutions, real examples of the successful inclusion of children with special needs in the educational process.
5. Watch videos of classes with children.

Preparing students, you need to use active and interactive methods and forms of learning: design, training discussions, problem-activity games, analysis of production situations and simulations, solutions of situational tasks, heuristic conversations, case studies that allow you to imagine a professional experience to be mastered by children in the form of a system of cognitive and practical tasks. The content of the classes is characterized by the presence of a system of purposeful and pre-thought-out actions and roles, which reflect the real-life problems of practical activity of teachers of inclusive education. Inclusion in the process of preparation for the workshop allows you to systematically develop professional skills.

Tasks for preparation for a seminar session

Students are divided into subgroups (max. 5 students) and perform one of the tasks. Each subgroup chooses one task:

– Draw a diagram of the periodization of the evolution of the state and society relations with children with disabilities. Title each of the five periods and indicate chronological terms in relation to Western Europe and Ukraine. Do the terms coincide?
– Make a multimedia presentation: «The Origins of Inclusive Education in Special Education: Moving from Integration to Inclusion.»
– Write a lecture or report on the use of movies or cartoons for solving the problems of forming a tolerant attitude in society for children with disabilities.
– Make a program of leisure activities for older children, which involves the interaction of children with different educational needs.
– Analyze the materials of the periodical on tolerance issues and make a selection of articles on tolerant attitudes towards persons with disabilities.

Tentative plan of the seminar

The subject: History of the development of the system of individual support for the development of children in Ukraine and abroad.

1. Formation and stages of the development of the system of special education.
2. The first period of evolution: from aggression and intolerance to awareness of the need for contempt for the disabled.
3. The second period of evolution: from the awareness of the need for contempt for the disabled to realize the possibility of training deaf and blind children; from shelters through the experience of individual training to the first special educational institutions.
4. The third period of evolution: from the awareness of the possibility of teaching children with sensory impairments to recognition of the right of abnormal children to education. The formation of the system of special education.
5. The fourth period of evolution: from the awareness of the need for special education for certain categories of children with developmental deviations to understanding the need for special education for all who need it. Development and differentiation of the system of special education.
6. The fifth period of evolution: from equal rights to equal opportunities; from "institutionalization" to integration.

Tasks for independent extra-curricular work

1. To collect scientific and methodological literature on the problem of inclusive education.
2. To create a chronological card: «Inclusive education».
3. To compile and arrange the dictionary of terms «Inclusive education».
4. Summarizing articles on inclusive education.
5. Make a model of educational program for an inclusive group.
6. To find a diagnostic complex for studying problems in the families of children with special needs.
7. Based on the results of the diagnosis, develop a program of individual work with the child in an inclusive learning environment.
8. To draw up a blueprint/plan for conducting consultations of the family members of child with SEN.
9. Prepare for the round table talks: "The main barriers in the education of children with SEN."

During their independent extra-curricular work, students study international documents and national legislation on meeting the educational needs of children with

SEN, the principles of inclusive education, and the psychological characteristics of children with special needs.

It is advisable to make a creative laboratory for the formation of pedagogical skills of students to develop individual programs of correction and development work; to carry out correctional and pedagogical activity in conditions of inclusive education; advise parents of children with SEN. Forms and methods of formation of pedagogical skills were: counseling hours in the institution of preschool education with educators and methodologists; solution of pedagogical situational tasks, discussion of problem issues, pedagogical situations.

For better orientation during fulfilling tasks, future educators were asked questions for observation, conversation and analysis, tests, charts of the characteristics of children development, diagnostic materials for studying the problem of education of children with SEN.

The analysis of pedagogical situations at the meetings of the creative laboratory

The method of group discussion was effective. Here is an example.

Situation: A child of 5 years with a syndromic form of mental retardation, walking in the yard with mother (grandmother), approaches a sandbox where children 2–3 years old play and aspire to engage in the process of playing with sand. Two of the five parents of younger children come to the sandbox and take their children away, preventing contact with a mentally retarded child.

Question: To offer several variants of constructive solution of the situation on the basis of psychological detailed analysis of the situation.

Express your opinion about existing thoughts and situations:

1. Children with disabilities – in future, people who cannot afford themselves are unprofitable and unnecessary for society.
2. Some parents themselves are trying to «isolate» their children from society because of the fact that in the country, disability is often associated with disadvantages, the problems of families with persons with disabilities.
3. Are you ready to interact with disabled children? If so, then how?
4. Do you consider coeducation of children with SEN and ordinary children to be beneficial or harmful to ordinary children and children with SEN?
5. A society considered friendly when ... (to continue the opinion).

It is good to hold among students a business game-training on the topic "It's easy to be different from others." Such a business game-training is aimed at forming a tolerant attitude towards people with special needs.

At practical lessons it is desirable to use visual materials that cover the peculiarities of the development of various categories of children. At practical classes on special psychology, students were offered to independently pick from the Internet materials that illustrate various aspects of mental development of children with different degrees of mental retardation, learning disabilities, visual and hearing impairment, pathologies of the musculoskeletal system, and autism disorders.

Specially organized extra-curriculum work, conducted by students, envisaged their familiarization with video materials, which featured both artistic and documentary films that depict different aspects of the lives of people with special needs. These materials should pay attention of future educators of empathy, emotional adoption of children with special needs, sympathy for their problems.

When organizing and conducting an educational process in a higher educational institution, special attention should be paid to the formation of professional-value orientations, professional and personal qualities, skills and professional competences of future educators. It is necessary to form skills of psychological support of children with peculiarities of psychophysical development (with SEN); ability to organize non-conflict social interaction of children with different levels of psychophysical development; ability to cooperate with different types of families; skills of interaction with colleagues.

4 Conclusions

The analysis of the problem of forming the preparedness of future educators to work with children with special educational needs in the general education area has shown the need for future scientific research with the aim of further studying the peculiarities of preparing students for the effective support of these children in preschool establishments, the formation of professional competence of preschool education in the field of development, education and upbringing of children with SEN. Preparation of students for vocational and pedagogical activities in the context of inclusive education is a complex, long-term, multi-stage process. Purposeful modernization of the content of the study of normative disciplines and disciplines of choice, possibility to choose the most appropriate forms and methods will definitely contribute to the positive dynamics in the development of professional competence of future specialists in preschool education.

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(reviewed twice)

Angelika Kurchatova
PhD, Associate Professor of Preschool Education Department
Faculty of Preschool and Elementary School Education
V. O. Sukhomlynskyi National University of Mykolaiv
Ukraine
e-mail: kurchat67@mail.ru

Kateryna Shapochka
PhD, Associate Professor of Pedagogy and Inclusive Education Department
Faculty of Preschool and Elementary School Education
V. O. Sukhomlynskyi National University of Mykolaiv
Ukraine
e-mail: shapochka1111@gmail.com

The effect of choice-making on behavioral problems of children with autism spectrum disorder

(overview essay)

Nan Zhang, Sheng Xu

Abstract: *Affected by biological and environmental factors, the problem of children with autism spectrum disorder (ASD) have become more serious and received more attention. The reversal design of the single-subject research was used to study the effects of choice-making strategy on the behavior problem in the classroom situation of the children with ASD whether has influence or not and the effectiveness of intervention. The results show that the intervention of choice-making strategy has positive effects on the behavior problems of the study subject, and choice-making strategy intervene the avoidance and attention behaviors of the study subject effectively; and choice-making strategy had a good maintenance effect on the behavior problems of the study subject.*

Keywords: *children with ASD, choice-making, behavioral problems, intervention effectiveness*

1 Introduction

Behavioral problem is one of main negative influencing factors on development of children with ASD, which may be caused by their own social disabilities, special sensory stimulation needs (Jingquan Wei, 2011). Behavioral problems are seen as negative behaviors, but may be an effective way for individuals to meet needs, avoid tasks, and draw attention (Zhentang Hou, 1999). Now the concept of dealing with behavioral problems advocate using Functional Behavior Assessment to understand the antecedent, the consequences and the function of the behavioral problems of the ASD, and then giving prevention strategies, instead of dealing with the behavior after it happened.

Choice-making is an essential component of self-determination, and mastery of the skills of choice-making will lead to greater motivation in learning, play an important role in the development of self-determination in the future, and improve the quality of life with ASD. In 1984, the scholar Mayer Shevin & Nancy K. Klein (1984) wrote about the importance of choices for severely disabled students. In 1998, Lee Kern et Al. demonstrated that severely disabled people could improve their expressive abilities by learning the skills of choice-making. Kathleen Dyer et al. studied the effects of choice on behavior problems in severely disabled children in 1990 (Kathleen Dyer, 1990). Through a reversal design, the study showed that students were given the opportunity to choose between courses and enhancements. It reduced aggression and self-injury behavior problems. From the above research, we can see that choice-making is a strategy to intervene the behavior problems by changing the antecedent, so it can solve the behavior problems effectively.

Foreign countries began to carry out selection-related researches in succession from the 1980s. The research objects were mainly focused on severely disabled children (Marie Van Tubbergen, 2007). At present, there are few researches on behavior problems of autistic children using choice-making in China. This study will analyze the impact of "choice-making" strategy on the behavior problems of ASD through Functional Behavior Assessment and development of the content of choice-making to provide theoretical basis and practical experience for the effective intervention measures of their behavior problems.

2 Participants

Sen, an 11-year-old male, was diagnosed with mild autism by a hospital in Chongqing when he was 6. His uncle is mainly in charge of his studies and he is studying in an autism institution in Chongqing. Through the observation records of the subject, it found that he had serious behavior problems in class, which showed as follows: 1. Clap the desk with the palm frequently and with high loudness; 2. Say something unrelated to the Teacher's question in Class; 3. Do something unrelated to study: Play with erasers, exercise books, pencils, etc. It also happens when he communicates with his parents at home. Observation records show that the high frequency and loudness of the act of slapping the desk with the palm of the hand has seriously affected the learning process and social communication with his family smoothly. Therefore, the target behavior is that the palm of the hand hits the desktop during instructional sessions.

3 Experiment Design

In this study, the reversal design of the single-subject research was used. This experiment design includes two cycles of baseline-intervention, and confirmed the intrinsic validity of intervention strategy (Zhengzhi Du, 2012). It mainly included four stages: Baseline phase, intervention phase 1, reversal phase and intervention phase 2.

The independent variables provide choices, including: 1. preference scale, which is used by the individual to choose reinforcement; 2. presentation task is used to choose which task to complete first; 3. choice is done with the teacher or independently. After the independent completion, may obtain the reinforcement. The dependent variables are the number of times that the act of slapping the surface of the desk with the palm of the hand occurs.

Regarding the instructional sessions as the observational situation, and using the method of the whole-interval recording **w**ithin a minute, the target behavior was recorded as [√], and did not appear as [–], using the data as the indicator of the immediate effect of the "choice" strategy.

The content of the " choice-making " strategy

The intervention effect of "choice-making" strategy on behavioral problems of children with ASD was explored. The strategy of "choice-making" develops the content for individual choice by evaluating the target behavior's Functional Behavior Assessment.

The simple functional analysis method was used to implement the test situation and controlled situation separately. If behavioral problems are observed to increase in one of the test situations, a postvalidation exchange is implemented to confirm the hypothesis.

The results indicate that the highest frequency of the target behaviors was found in the post-effect avoidance situation, which occurred 19 times and made the post-effect exchange, and let the study subject express the avoidance correctly (I don't want to do it), the behavior was reduced to 1 time. When they returned to the original avoidance situation, their behavior problems increased to 15. The result shows that the target behavior of the study subject is to avoid the task or request, and the behavior problem occurs 5 times in the contingent attention situation, which indicates that the behavior will attract the teachers' attention. In conclusion, the main function of behavioral problems in study subject is to avoid task demands and arouse attention.

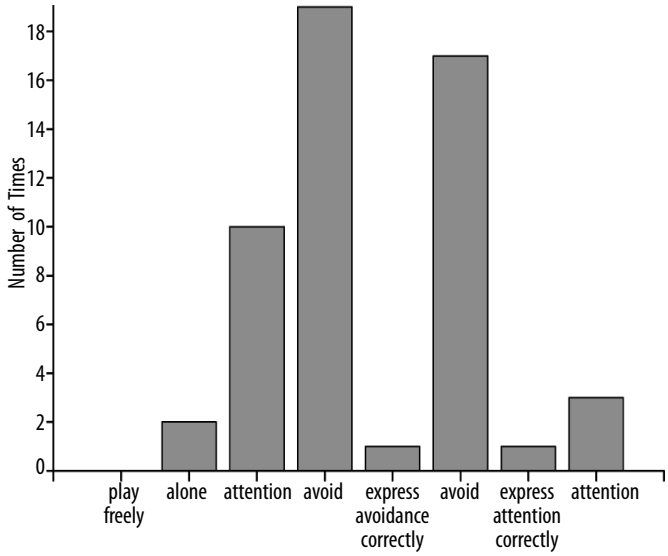

Figure 1: *Functional Analysis of Target Behaviors*

Through the functional analysis, we can see that the function of the individual behavior problem is evading the task requirements and drawing attention, so how to ensure that two completely opposite interventions are provided at the same time: giving task prompts and removing attention from the study subject. According to the results of functional analysis, the choice should be offered before the presentation of the task, which includes: completing the task with the teacher; getting the reinforcement after completing the task independently. The first option gets attention while avoiding the demands of the task; the second gets preference. Assuming that the individual prefers objects, the choice not only reduces the individual's behavioral problems, but also increases the completion of the task.

4 Research Tools

Reinforcement Questionnaire

It divides into two items: like and dislike, mainly by parents, teachers or primary caregivers to fill in used to understand the preferences of the case, as a preliminary survey data.

Stimulus preference rating scale

In this paper, we use two pairs of stimulus preference scale, which is designed by the Development Research Center for Applied Behavior Analysis of National Changhua University of Education (Zhengzhi Du, 2012). We need to prepare the following

items: 1. 5–12 kinds of stimulus preference including food, non-food items, picture cards to show the activities, etc.; 2. record form.

Functional Behavioral Assessment Interview Form

Adopt the form of Taiwan scholar Wenying Niu, mainly interview with family members, teachers and primary caregivers and observe the situation under the teaching routine, record the detailed content of the interview and observational information.

ABC Behavior Record Form

The main purpose of the study was to record all the observed antecedents, behaviors, and consequences of the behavior problem at the baseline stage, and to record the antecedents, behaviors, and consequences of the target behavior in detail after identifying the target behavior.

Behavior Problem Frequency Record Form

The table is a self-made scale, which records the number of behavior problems per day in each phase of the experiment. The table can record the number of behavior problems per minute.

Results

Based on the design of the experiment, we can get the percentage of the goal behavior in the different intervention, which is shown in figure 2.

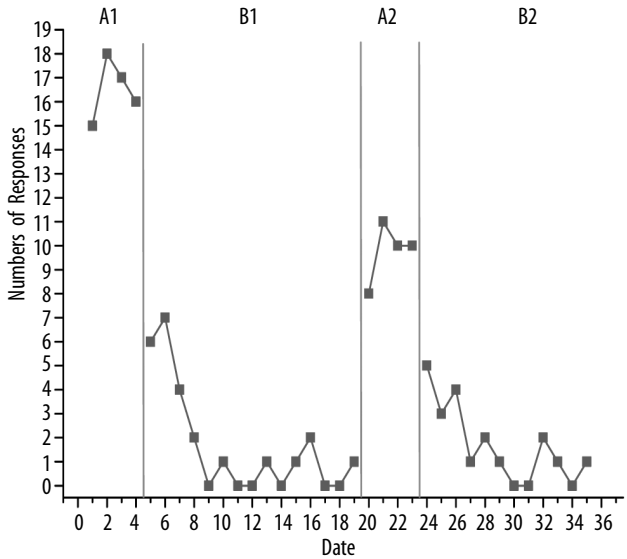

Figure 2: *Sen's performance at baseline, intervention 1, reversal and intervention 2*

At baseline, the time of the palm of the hand hits the desktop ranged from 15 to 18, with a stage mean of 16.5. Stable trends and stable levels were observed. After the choice-making intervention the stage mean was 1.2 times, and the trend stability was 93%. Compared with the baseline, the trend was down and stable. From this, we know that the level range of intervention phase 1 is lower than that of baseline phase1. We know that through intervention of choice-making strategy, it does affect the performance of the target behavior of the case, making the performance of intervention phase1significantly different from that of baseline phase 1. It also resulted in a lower incidence of target behavior at the treatment phase 1 than at the baseline phase 1.The overlap percentage between baseline phase I and treatment phase I was 0%. From the C Statistics, Z Value was 3.93, which was very significant. It showed that choice-making strategy was significantly helpful in the case of target behavior.

After the intervention was removed, the percentage of target behavior in the reversal phase was between 0–6, and the average value of this phase was 9.8, which was obviously higher than that in intervention phase 1. So this phase shows an increase in target behavior. The overlap percentage between baseline phase II and treatment phase I was 0%, and from the C Statistics, Z Value was 3.71, reaching significant level.

During the treatment phase II, the percentage of the subject smacking the desktop decreased, the average value of the stage was 1.58, and tended to be stable. The level range of intervention phase II was lower than the baseline 2. Therefore, the intervention of choice-making strategy did affect the performance of smacking the desktop, and made the frequency of smacking the desktop at treatment phase 2 lower than that at baseline. The percentage of overlap was 0% between baseline phase II and treatment phase II, and from the C Statistics, Z Value was 3.67, reaching significant level. The frequency of target behavior was stable and decreased.

During the whole experimental phase, the number of behavioral problems the treatment phase II decreased, the baseline II increased slowly, and the treatment phase II decreased to 1.58 times, showing better effects of intervention. The level variances of intervention phase II and intervention phase II were positive value, which indicated that the intervention was effective and well maintained. The results showed that the frequency of behavior problems of ASD was significantly reduced by making choice strategies.

5 Conclusion

The behavior problem of children with ASD has seriously affected their healthy growth and other children's education. In order to seek effective intervention measures to reduce the bad behavior of children with ASD, this study was based on the single-subject research ABAB reversal experiment design. Through simple functional

analysis, the effect of "choice-making" on behavioral problems of ASD was analyzed, and the main conclusions were as follows:

1. The intervention of choice-making strategy has positive effects on the behavior problems of the study subject.

From the experimental data and analysis results, we can see that the behavior problem of the study subject smacking the desktop, decreased from 16.5 times in the baseline phase to 1.58 times in the treatment phase II. It indicated that the target behaviors have improved significantly. The design of this experiment is the cycle of the baseline phase and the treatment phase, that is to show the copy of the intervention effect, more sure for the internal validity of the choice-making strategy. Reports from parents and teachers found that the behavior of smacking the desktop was significantly reduced in both home and school settings, the intervention has a certain maintenance validity and learning efficiency was improved.

2. Choice-making strategy can intervene the avoidance and attention behaviors of the study subject effectively.

Through the functional analysis, we found that the main functions of the behavior problems were avoidance behavior and attention behavior. Through the intervention of choice-making strategy, the behavior of the study subject was improved obviously. The results of data analysis show that the results of the study have a good maintenance effect and effectiveness.

3. Intervention strategies based on functional behavioral assessment can effectively solve behavioral problems.

In this study, the function of behavior was obtained by the functional behavior assessment, and the choice was considered by the function. In 2001, Ervin et al. were pointed out that the intervention strategy based on the functional behavior assessment may be more effective than the arbitrary intervention strategy in finding out the function of behavior occurrence and intervening behavior problems from the behavioral function. We understand the function of what happens, and what it means to change behavior for the better. Through this research, we can also see that the choice-making strategy based on the functional behavior assessment has a better effect.

Recommendations

In this study, a child with mild ASD was used to assess the causes of behavioral problems and to develop a "choice-making" strategy. The research indicated that the study subject had a 90 percent reduction in behavioral problems, and the effect of intervention was significant. Here are some suggestions for future research.

1. It should be good at using Functional Behavior Assessment, analysis of the root causes of behavioral problems in study subjtect.

Ervin & Iwata et al have proved the validity and necessity of Functional Behavioral Assessment, and the results of this study have proved its importance. Therefore, the future research should first find the function of the target behavior, the root cause of the behavior, and then develop intervention strategies. It can get more effective solutions.

2. Increasing the number of research subjects so as to make the research more convincing.

Because of the time and other factors, there is only one research subject in this study, in the future research increasing the number of research subjects, using cross-subject experimental research, will make the paper more convincing. Different types of barriers can also be selected as the study subject to verify the effectiveness of the choice-making strategy.

3. How to apply choice-making to one-day activities in Special education to improve behavior problems.

This research is conducted in a single classroom situation, we can see that making choice is a simple and effective method, the content of choice is also relatively simple, and easy to operate, not limited by time and place, easy to promote, and more effective. How to apply making choice to Special education activities, what choices to make, and when to make choices during the day to improve behavior problems in children with ASD.

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(reviewed twice)

1st Nan Zhang, 2nd Sheng Xu
Leshan Normal University
No. 778 Binhe Road, Central District
Leshan City, Sichuan Province
ZIP Code, City: 614000
China
1st Author's e-mail: 245020769@qq.com
Project name: Research on Autism spectrum Disorder Social Curriculum
Project number: S16002

Confirmatory factor analysis of Bosnian version of Behavior Rating Inventory of executive functions in children with intellectual disability

(scientific paper)

Mladen Protic, Hana Válková

Abstract: *The purpose of the study was to assess factor structure of Bosnian version of Behaviour Rating Inventory of Executive Function (BRIEF). This instrument is a rating scale used for assessment of executive functions in children and adults of different ages and sample category. Executive functions are crucial for early development of cognitive and social capacities, which are very important for children with intellectual disabilities and very often serve as a basis of their future integration into society. However, benefits of well-developed executive functions, its relationships and effects to different aspects of life in this population, have started to be investigated relatively recently. Therefore, beside increasing knowledge about executive functions in children with intellectual disability, the study aimed to test feasibility and stability of BRIEF in this population with future goal of its application in schools for development of educational plans for children of this population.*

The sample consisted of 104 children with intellectual disability (62 boys and 42 girls) from 7 to 18 years of age. There were 49 children with mild and 55 with moderate intellectual disability. The BRIEF – teacher version was completed by 15 special education teachers of children participating in the study. The goal was to examine factor structure of 8 BRIEF scales: inhibit, shift, emotional control, initiate, working memory, organization of materials, plan/organize and monitor. Teachers were not considered to be participants, but only supporters of its implementation.

The study confirmed original two factor structure of the BRIEF with 80.6 % of total variance explained. It has shown that BRIEF is feasible and reliable in application with this population and it can be used for school assessment as a basis for educational planning and development of executive functions.

Keywords: *intellectual disability, executive functions, behaviour rating inventory of executive functions, factor analysis*

1 Introduction

Executive functions have become a very popular topic among the scientists, and studies on executive functions (EF) in children have grown significantly over the past few decades.

Executive functions are often connected with school readiness and school achievement (Morrison, Ponitz, & McClelland, 2010), successful work (Bailey, 2007), social functioning (Diamond, 2012) and the quality of life (Brown & Landgraf, 2010). They begin to emerge in infancy (Diamond, 1988), with improvements across toddlerhood and the preschool period (Hughes, Ensor, Wilson & Graham, 2010). Improvement continues during school-age years (Huizinga, Dolan & van der Molen, 2006), and some aspects of EF continue to develop throughout adolescence (Luciana, Conklin, Cooper & Yarger, 2005) with decline in later life after 50's (Best & Miller, 2010).

There is a lot of different definitions and classifications of EF due to many theoretical backgrounds, but many authors agree that the core EF are working memory, inhibition and cognitive flexibility/shifting (Diamond, 2012). The model that was chosen for this study explains EF as a collection of processes that are responsible for guiding, directing and managing cognitive, emotional, and behavioural functions, especially during new, problem-solving situations (Gioia, Isquith, Guy, & Kenworthy, 2000). In this study we will further investigate model of EF developed by Gioia et al. (2000).

Although the concept of EF was first defined in the 1970s, the concept of a control mechanism was discussed as far back as the 1840s when a railroad construction foreman, Phineas Gage was pierced with a large iron rod through his frontal lobe (Ratiu & Talos, 2004). This accident destroyed a majority of his left frontal lobe, but he survived and after a period of recovery, changes in Phineas' behaviour and personality became apparent. Phineas was described as "disinhibited" or "hyperactive," which suggested a lack of inhibition often found in those with damage to the prefrontal cortex (Pribram, 1973). This case and others prompted researches to start investigating concept of EF which led to development of different theories and models of EF. For more information on this, see review of Chan, Shum, Toulopoulou, and Chen (2008).

One of those theories that have shown in theoretical and empirical literature is distinction between hot and cool EF. Cool EF are defined as the goal-directed, future-oriented skills that tend not to involve much emotional arousal and are relatively "mechanistic" or "logically" based (Burgess, Veitch, de lacy Costello, & Shallice, 2000). Examples of cool EF are planning, the ability to sustain attention, working memory, inhibitory control, mental or cognitive flexibility and monitoring of actions (Chan et al., 2008). On the other hand, those EF involving more "emotional", "belief" or "desires" such as the experience of reward and punishment, regulation of

one's own social behaviour, and decision-making involving emotional and personal interpretation, are regarded as "hot" components (Chan et al., 2008;).

An important debate in the evolution of the EF construct concerned whether a unitary or multifactorial view on this domain was a more accurate representation. Some researchers have found that at younger age EF are unitary construct and that they differentiate into factors only later in adolescence (Wiebe, Sheffield, Nelson, Clark, Chevalier & Espy, 2011). One of the most influential structural models of EF, developed from an adult sample, demonstrated both the unity and diversity (three factors of working memory, shifting, and inhibition) of EF (Miyake, Friedman, Emerson, Witzki, Howerter, & Wager, 2000). Many scientists today have accepted multifactorial concept of EF including the authors of model chosen for this study (Gioia et al., 2000).

This model for assessment of EF is called Behaviour Rating Inventory of Executive Functions (BRIEF) and according to this approach, EF are composed of 8 subdomains as follows:

- inhibit (control impulses, self-control, resisting temptations);
- shift (cognitive flexibility, flexibly adapt to new situation or activity depending on circumstances; problem-solve flexibly, switch or alternate attention);
- emotional control (modulate emotional responses appropriately);
- initiate (begin task or activity, generate ideas independently, responses, or problem-solving strategies);
- working memory (hold information in mind for purpose of completing a task),
- plan/organize (anticipate future actions, set goals);
- organization of materials (keep workplace, play areas and materials in order) and
- monitor (check work, assess performance during and after task). Monitor includes two functions, a self-monitoring and a task monitoring function, but for the purpose of this study it will be regarded as single subdomain.

The BRIEF (Gioia et al. 2000) has been developed as a response to great challenges in assessment of EF. Given the importance EF have for children's development, the issue of their assessment has been recognized a long time ago (Denckla, 1994). Barkley (2012) argued that the main problem in assessment of EF is the absence of clear operational definition of this domain. In the time of developing of BRIEF, most of assessment methods of EF relied on traditional performance measures that potentially can lead to incomplete measures (Gioia & Isquith, 2004). Rabin, Barr, and Burton (2005) surveyed 747 neuropsychologists about their test usage patterns regarding executive functioning. Many respondents appeared to be using the Wisconsin Card

Sorting Test (75.5%), Rey–Osterrieth complex figure test (41%) and Halstead Category Test (40%). All these tests fall into category of so-called performance-based tests. It has been discussed that performance-based tests capture individual components of the executive function system over a short period of time and not the multidimensional, decision making that is often demanded in real-world situations (Goldberg & Podell, 2000).

For this reason, and in order to systematically compare clinical observations with real-world observations, the BRIEF authors recognized the potential efficacy of gathering structured observations of children's everyday self-regulatory functioning from parents and teachers.

It was one of the first attempts to measure EF via self-reports, and today, proven to be psychometrically sound and standardized rating scale used by parents or teachers to assess EF of children in everyday, real world setting (Roth, Erdodi, McCulloch, & Isquith, 2015).

With regards to clinical population it has been mostly used in children with ADHD, Tourette syndrome (Mahone, Cirino, Cutting et al., 2002), and traumatic brain injury (Anderson, Anderson, Northam, Jacobs, & Mikiewicz, 2002), but not so much in children with intellectual disability (ID). From the studies that have been done with population of children with ID, most of them have been focused on disorders related to ID such as Williams syndrome (John & Mervis, 2010), Prader-Willy syndrome (Jauregi, Arias, Vegas, et al., 2007), Down syndrome (Lee, Pennington & Keenan 2010) or Autism Spectrum Disorder (Chan et al. 2008). Moreover, most of these studies have typically used a narrow range of tests, targeted specific aspects of EF, rather than a comprehensive test battery. One of the first studies with this population using BRIEF (Pratt & Chapman, 2000) has shown that children with ID are having significant deficits in working memory, while the remaining BRIEF scales were rated similarly to controls. However, the authors of this study used parent version of the BRIEF and they often may not have fully objective view of their children condition. Relatively recent study with children with ID using BRIEF have shown that they demonstrate impairments in all BRIEF scales when comparing results with BRIEF normative sample (Memisevic & Sinanovic, 2014). The same study also showed great feasibility and reliability in administration of BRIEF in children with ID.

The objective of this study is to perform factor analysis of BRIEF in children with ID from Bosnia and Herzegovina (B&H) and to expand body of knowledge on EF with this population.

2 Material and Methods

2.1 Procedure

After obtaining the written approvals for data collection from Ministries of Education at different government levels of B&H and from all the schools where data collection took place, the meetings with schools' staff and parents/caregivers of children with ID about research project, goals and expectations have been organized. Parents/caregivers who agreed for their children to participate signed the informed consent at the same meeting. BRIEF scales about children's EF have been completed by 15 teachers and altogether there were 126 BRIEF scales done. After analysis of data 22 BRIEF scales were removed from research because of improper completion or data missing. Therefore, 1 teacher was completing BRIEF for more than one child. Twelve teachers were special education teachers, whereas 3 of them were physical education teachers.

2.2 Participants

One hundred and four children took part in this study (62 boys and 42 girls with ID) from seven special schools and two special classes on primary and secondary school level in six larger cities in Bosnia and Herzegovina. There were 49 children with mild ID (IQ range from 50–69; 29 boys and 20 girls) and 55 children with moderate ID (IQ range from 35–49; 33 boys and 22 girls). Information about children's IQ were based on World Health Organization (1992) and it was taken directly from the school's records. The children were included in case they were not diagnosed with Attention Deficit Hyperactivity Disorder, Autism Spectrum Disorders, Down syndrome or other comorbid disorder. The age range of the children was from 7 to 18 with mean age of 14.0 (SD 3.3) years. Teachers were not treated as participants in the study but rather as assessors of the children. The idea of BRIEF is to be completed by someone who knows the subject very well, like teachers in our case. Therefore, there were 15 teachers altogether that were completing BRIEF scales.

2.3 Materials

Behaviour Rating Inventory of Executive Functions ([BRIEF]; Gioia et al., 2000) is a questionnaire for assessment of EF behaviours in home and school environments. It has a parent and a teacher version and it is designed to be used among children ages from 5 to 18. BRIEF allows assessment of EF from the perspective of daily basic behaviour and presents them in a more realistic everyday condition. In our study, the authors used a teacher version of BRIEF – which means that teachers were filling in the questionnaire under condition that they have known the child(ren) for at least 6 months. BRIEF contains 86 items in eight theoretically and empirically derived clinical scales that measure different aspects of executive functioning: inhibit, shift,

emotional control, initiate, working memory, plan/organize, organization of material and monitor. Factor analysis of both versions of BRIEF supported two-factor model. The first factor was identified as Behavioural Regulation Index (BRI), which consists of scales inhibit, shift and emotional control. The second factor called Metacognition Index (MI) includes five remaining scales. The two factors demonstrate moderate correlation between each other and they are used for calculation of the Global Composite Index (GEC) score. BRIEF has two validity scales: Inconsistency – the extent to which respondent answers similar BRIEF items in an inconsistent manner; and Negativity – the extent to which respondent answers selected BRIEF items in an unusually negative manner. In our study, only two scales showed elevated inconsistency scores and they are excluded from the analysis, together with other inadequately completed BRIEF scales.

The BRIEF was translated into the Bosnian language for one of the earlier studies performed by Memisevic and Sinanovic, (2014) using bilingual translation method. The instrument was not standardized and validated for Bosnian cultural environment but it is shown to be feasible in population of children with ID.

BRIEF teacher version was normed for 720 children and Cronbach alpha as measure of internal consistency ranged from 0.84 to 0.98.

2.4 Data Analysis

BRIEF results are presented as *T* scores based on raw score calculated from respondent's answers. *T* scores (M = 50, SD = 10 – based on normative sample) are used to interpret the child's level of EF as reported by teachers on the BRIEF rating form. If *T* is at or above 65 it represents the 1.5 SD above the mean, which is recommended threshold for interpretation of a score as abnormally elevated or clinically significant. Lower scores indicate better functioning.

Confirmatory Factor Analysis (CFA) was performed with principal component analysis on 8 BRIEF main sub-domains using the oblique rotation and 2 fixed factors with delta = 0.58, that was applied because of high correlations between T scores of individual sub-domains.

Reliability analysis of each given factor was performed with Cronbach alpha as measure of internal consistency.

2.5 Ethical Concerns

The present study was written by the principals of the Helsinki Declaration, as revised in 1975, of the World Medical Association which regulates the obligatory nature of the informed consent. Moreover, Ethical Commission of Faculty of Physical Culture, Palacky University Olomouc approved the study as part of first author PhD research project.

Therefore, only children that accepted to participate were included in the study and their parents or caregivers signed an informed consent to participate. All children and their parents/caregivers were informed about the purpose of this study, its risks and procedures and that they can withdraw from the study without any further obligations. The project was explained and all doubts were clarified during series of meetings with schools' staff, children and parents/caregivers.

3 Results

Table 1 shows descriptive statistics of 8 BRIEF scales for which the factor structure has been assessed. It is visible that each BRIEF scale has score above 65 which shows clinically significant result.

For sample adequacy, Kaiser-Meyer-Olkin (KMO) measure was applied and result obtained was "excellent", KMO = 0.88. It is based on Kaiser's index of factorial simplicity (Kaiser, 1974): KMO ≤ 0.5 – unacceptable; 0.5 < KMO ≤ 0.7 – mediocre; 0.7 < KMO ≤ 0.8 – good; 0.8 < KMO ≤ 0.9 – excellent; and KMO > 0.9 – superb.

Table 1: *Mean T-scores of children with intellectual disability on the BRIEF scales*

Variable	BRIEF *T*-score, mean	Standard Deviation	Number of cases
Inhibit	**66.2981**	17.68433	104
Shift	**78.0577**	20.85820	104
Emotional control	**69.5769**	18.83690	104
Initiate	**71.1923**	14.84422	104
Working memory	**74.2404**	18.71840	104
Plan/organize	**67.5288**	13.09855	104
Organization of material	**67.2500**	23.36072	104
Monitor	**70.4615**	16.37185	104

The results of CFA have shown two factor structure of BRIEF in children with ID and together they explain 80.60% of total variance. First factor explains 69.82% (MI) of total variance, while second one explains 10.77% (BRI) (Table 2). Table 3 shows coefficients of correlation between individual variables (BRIEF scales) and two extracted factors. High correlations of individual variables with each of two factors are visible. Inhibit, Shift and Emotional control correlate stronger with second factor (BRI), whereas Initiate, Working memory, Plan/organize and Organization of materials correlate stronger with first factor (MI). An interesting thing happened with Monitor scale that correlated strongly with both factors, but with small advantage to BRI.

Table 2: *Results of Confirmatory Factor Analysis – Total Variance Explained*

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5.586	**69.819**	69.819	5.586	**69.819**	**69.819**	5.186
2	0.862	**10.770**	80.589	0.862	**10.770**	**80.589**	4.709
3	0.646	8.072	88.660				
4	0.333	4.158	92.819				
5	0.206	2.576	95.394				
6	0.158	1.974	97.369				
7	0.117	1.466	98.835				
8	0.093	1.165	100.000				

In order to better present separation of variables into factors, Pattern matrix table was used with regression coefficients of variables for each factor from rotated space (See Table 4). Separation of variables into factors is much clearer, namely difference in regression coefficients for individual factors is much bigger. For example, for Inhibit we have: βMI = 0.153 vs βBRI = 0.790, so it is clear that Inhibit has to go under BRI factor. The difference is high for all other variables except monitor where the difference in coefficients is still small, but again in favour to BRI: βMI = 0.44 vs βBRI = 0.546.

Table 3: *Coefficients of correlation between individual variables (BRIEF scales) and two extracted factors*

	Component	
	1- MI	2- BRI
Inhibit	0.736	**0.903**
Shift	0.635	**0.702**
Emotional control	0.517	**0.921**
Initiate	**0.935**	0.576
Working memory	**0.954**	0.664
Plan/organize	**0.916**	0.688
Organization of material	**0.797**	0.739
Monitor	**0.845**	**0.872**

Note: MI – metacognition index; BRI – behavioral regulation index

In Table 5 authors present reliability analysis with use of Cronbach alpha as a measure of Internal consistency. The goal of this analysis was to better understand extracted factors, so Table 5 shows Cronbach alpha for both factors with and without monitor scale.

Table 4: *Pattern Matrix- Regression coefficients for each variable on each factor*

	Component	
	1- MI	**2- BRI**
Inhibit	0.153	**0.790**
Shift	0.258	**0.512**
Emotional control	–0.359	**1.186**
Initiate	**1.120**	–0.250
Working	**1.019**	–0.088
Plan/organize	**0.898**	0.025
Organization of material	**0.553**	0.330
Monitor	**0.441**	**0.546**

Note: MI – metacognition index; BRI – behavioural regulation index

It is visible that BRI factor without monitor has smaller alpha (0.815) from BRI with monitor (0.876), whereas MI factor is overloaded with monitor (0.924), while without it, is closer to the higher limit of acceptance for Cronbach alpha (0.905).

Table 5: *Cronbach alpha as a measure of Internal consistency for both factors*

Factors	**N of items**	**Cronbach's Alpha**
BRI: Inhibit Shift Emotional control	3	0.815
BRI: Inhibit Shift Emotional control Monitor	4	0.876
MI: Initiate Working Plan/organize Organization of material Monitor	5	0.924
MI: Initiate Working Plan/organize Organization of material	4	0.905

Note: MI – metacognition index; BRI – behavioural regulation index

4 Discussion

The purpose of this study was to assess factor validity of Bosnian version of BRIEF by using confirmatory factor analysis. Additional goal was to expand body of knowledge on EF in children with ID.

The results of our study have shown that original two factor version of BRIEF is applicable to population of children with ID. The scales that loaded significantly to second factor Behavioural Regulation Index were Inhibit, Shift, Emotional control and Monitor. The first factor Metacognition index was significantly contributed by 4 remaining scales: Working memory, Initiate, Plan/organize and Organization of materials. However, unlike in the results of original BRIEF version our findings have shown that monitor scale corelated strongly with both factors, but it is classified under BRI as correlation with BRI was stronger.

The reason why monitor scale contributed significantly to both factors could be explained in a fact that this scale can be divided in two parts: self-monitor (allows a person to monitor its own behaviour, and what effect has on others) and task-monitor (ability to assess own work or tasks during or after performance). This new classification of monitor scale was found by Gioia, Isquith, Retzlaff, and Espy (2002) in study with clinical populations (e.g. children with autism spectrum disorders, learning disabilities, etc.) where original factor structure of BRIEF was re-examined and new three-factor model (BRI, MI and Emotional regulation index) with nine scales was proposed. The self-monitor scale contributed significantly to BRI factor, whereas task-monitor was more related to MI factor, which explains monitor loading strongly on both factors in our study.

Moreover, the monitor scale in our study actually correlated more strongly with BRI than with MI, which is not the first time this is happening as the same was found in some other studies with clinical populations (Egeland & Fallmyr, 2010; Gilotty, Kenworthy, Wagner, Sirian, & Black, 2002; McCandless & O' Laughlin, 2007).

Generally, there are not many studies that used BRIEF to assess EF in children with ID, and to our knowledge, only one focused on investigating its factor structure in this population. The author of that study also confirmed two-factor structure of BRIEF with exemption of inhibit scale that correlated strongly with both factors (Memisevic, 2015). As author explained, the probable cause of this is that results of inhibit scale depend on some other scale under Metacognition index factor. Unfortunately, beside this study authors have not found any other study that examined facture structure of BRIEF in population of children with ID to discuss this topic in more detail. However, there are also other studies on this topic performed with children from other clinical populations. For example, Slick, Lautzenhiser, Sherman, and Eyrl (2009) supported re-examined version of BRIEF by Gioia et al. (2002) with three factors and nine scales in children with epilepsy. Furthermore, in

study of verification of French version of BRIEF using confirmatory factor analysis and structural equation modelling, three-factor model and division of monitor scale was also supported in combination of healthy children and adolescents (Fournet, Roulin, Monnier, et al., 2010).

Our study additionally supports diverse concept of EF and its multifactorial structure. It further supports stability and feasibility of BRIEF in assessment of EF with different clinical samples with specific contribution to population of children with ID. There are few limitations in our study – such as possible influence of additional variables on EF such as socioeconomic status of children (parental education, income level, etc.) that has not been included in the study. Additionally, there are some limitations for BRIEF related to objectivity and inter-rater reliability because different teachers might perceive certain behaviours differently. In order to avoid this, the authors provided teachers with clear instructions and also monitored data collection by checking potential concerns about completion of the BRIEF via e-mail and phone.

5 Conclusion

This study confirmed an original version of BRIEF developed by Gioia et al. (2000), but also expended the literature on EF in children with ID. Even though it can be said that BRIEF has shown very good reliability and feasibility in population of children with ID, future studies may focus on its standardization to this population specifically, as normative sample for standardization of the BRIEF have not included subjects with any developmental or acquired disorders (Strauss, Sherman & Spreen, 2006).

Taking into consideration stability of the results in this population so far, its application across the life span, as well as importance of EF for children, the BRIEF should be considered as valid and reliable assessment instrument for development of individual educational plans for children with ID in schools. Adding assessments of EF skills to the repertoire of evaluation tools used in early childhood programs would not only provide important data for program planning but would also encourage attention to this critical domain of skill development.

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Mgr. Mladen Protic; prof. PhDr. Hana Válková, CSc.
Palacky University
Faculty of Physical Culture
Tř. Míru 117
771 47, Olomouc
Czech Republic
e-mail: mladenprotic@yahoo.com; valkova@fsps.muni.cz

Postural stability and postural control in visually and hearing impaired persons

(overviewed essay)

Kristína Tománková, Vojtech Regec

Abstract: *This article proposes a basic knowledge and selected research surveys in issue of the postural stability and postural control in visually and hearing impaired people. Postural stability is influenced by integration and evaluation of visual, vestibular and somatosensory information. Visually and hearing impaired people are a potentially weakened target group with regard to the disturbed keeping of the postural stability, posture and balance. Postural Feedback Training would allow increasing the neural adaptability. Biofeedback method is based on the biomechanical measurement and physiological body system mechanisms.*

Keywords: *postural stability, postural control, feedback, balance, visual impairment, hearing impairment*

1 Introduction

There are many terminological and factual discrepancies in the issue of postural stability, balance and postural control. Definitions and opinions vary across a variety of specialists – biomechanics, medics, physiotherapists and others (Bizovská, Janura, Míková & Svoboda, 2017).

In biomechanical studies, the basic concept of "postural control" is testing of the process of maintaining a vertical posture in fall protection, most often in various modifications, when is a quantified the postural deviations (so-called titubation). In a broader sense, "postural control" is perceived not only as a control of position, but also as a control of the movement of the entire system (human body) in the external environment, in solving various movement tasks and situations. From the kinesiological point of view, this is a function of postural and locomotive motor skills, declaratively (Véle, 2006).

"Postural stabilization" (used term "balance") is a functional complex motor ability that is related to the processes of so-called "postural control" (Figure 1). "Postural control" is understood as a neural mechanism that is responsible for maintaining the position and allowing for a purposeful movement in the gravitational field. Nervous system plays key role, while stability detects (feedback) and instability predicts (feedforward) (Bizovská, Janura, Míková & Svoboda, 2017).

2 Selected research surveys in the issue

Biofeedback (BF) is known to improve postural control and reduce postural sway. However, the effects that different BF modes (coding for more or less complex movement information) may have on postural control improvement are still poorly investigated. In addition, most studies do not take into account the effects of spontaneous motor learning from repetition of a task when investigating biofeedback-induced improvement in postural control. In study of Dozza et al. (2011), they compared the effects of four different modes of audio-biofeedback (ABF), including direction and/or magnitude of sway information or just a non-specific-direction alarm, on the postural sway of 13 young healthy adults standing on a continuously rotating surface. Compared to the non-specific-direction alarm, ABF of continuous postural sway direction and/or amplitude resulted in larger postural sway reduction in the beginning of the experiment. However, over time, spontaneous postural motor learning flattened the effects of the different modes of ABF so that the alarm was as effective as more complex information about body sway. Nevertheless, motor learning did not make ABF useless, since all modes of ABF further reduced postural sway, even after subjects learned the task. All modes of ABF resulted in improved multi-segmental control of posture and stabilized the trunk-in-space. Spontaneous motor learning also improved multisegmental control of posture but not trunk-in-space stabilization as much as ABF. In conclusion, although practice standing on a perturbing surface improved postural stability, the more body sway information provided to subjects using ABF, the greater the additional improvement in postural stability (Dozza et al., 2011).

ABF for postural control is widely used to improve postural stability. However, the effective sensory information in BF systems of motor learning for postural control is still unknown. The purpose of study of the Hasegawa et al. (2017) was to investigate the learning effects of **visual versus auditory BF** training in dynamic postural control. Eighteen healthy young adults were randomly divided into two groups (visual BF and auditory BF). In test sessions, participants were asked to bring the real-time center of pressure (COP) in line with a hidden target by body sway in the sagittal plane. The target moved in seven cycles of sine curves at 0.23Hz in the vertical direction on a monitor. In training sessions, the visual and auditory BF groups were required to change the magnitude of a visual circle and a sound, respectively, according

to the distance between the COP and target in order to reach the target. The perceptual magnitudes of visual and auditory BF were equalized according to Stevens' power law. At the retention test, the auditory but not visual BF group demonstrated decreased postural performance errors in both the spatial and temporal parameters under feedback condition. These findings suggest that visual BF increases the dependence on visual information to control postural performance, while auditory BF may enhance the integration of the proprioreceptive sensory system, which contributes to motor learning without BF. These results suggest that auditory BF training improves motor learning of dynamic postural control (Hasegawa et al., 2017).

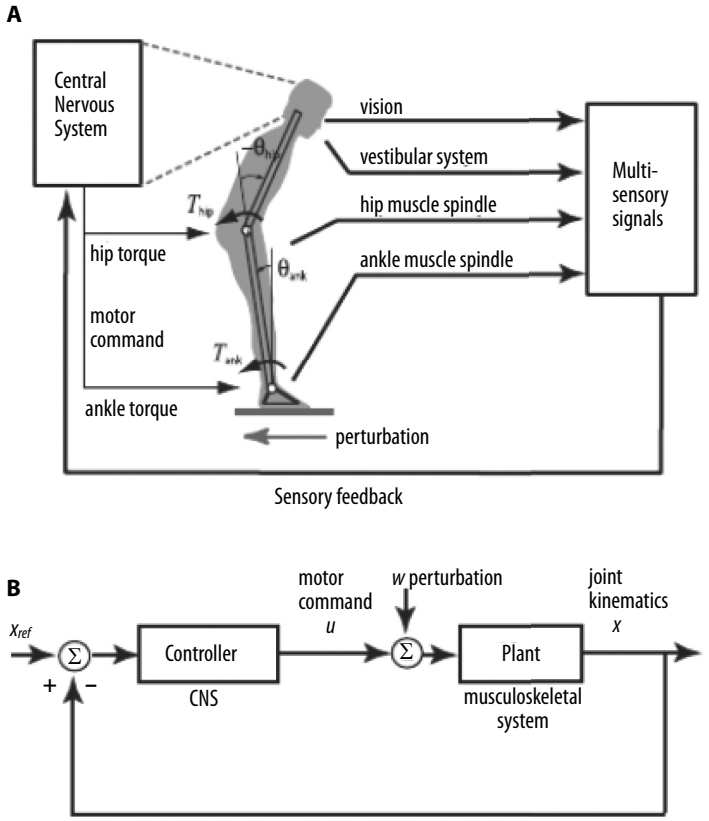

Figure 1: *Postural control. A: schematic model of long-loop human postural control by the CNS. Sensory information of body states are measured by vision, the vestibular organ and muscle spindles, and then sent to the CNS to be processed. Based on an estimate of body kinematics, appropriate control plans are selected and then corresponding motor commands are produced as joint torques. B: the feedback control of the body posture can be modeled by a feedback control system. Plant represents the musculoskeletal system, sensor describes the multisensory system, and the controller represents the CNS (Kim et al., 2009).*

Vision and touch rapidly lead to postural stabilization in sighted subjects. Is touch-induced stabilization more rapid in blind than in sighted subjects, owing to cross-modal reorganization of function in the blind? Schieppati et al. (2014) estimated the time-period elapsing from onset of availability of haptic support to onset of lateral stabilization in a group of early- and late-onset blinds. Eleven blind (age 39.4 years ±11.7 SD) and eleven sighted subjects (age 30.0 years ±10.0 SD), standing eyes closed with feet in tandem position, touched a pad with their index finger and withdrew the finger from the pad in sequence. EMG of postural muscles and displacement of centre of foot pressure were recorded. The task was repeated fifty times, to allow statistical evaluation of the latency of EMG and sway changes following the haptic shift. Steady-state sway (with or without contact with pad, no haptic shift) did not differ between blind and sighted. On adding the haptic stimulus, EMG and sway diminished in both groups, but at an earlier latency (by about 0.5 s) in the blinds ($p < 0.01$). Latencies were still shorter in the early-than late-blinds. When the haptic stimulus was withdrawn, both groups increased EMG and sway at equally short delays. Blinds are rapid in implementing adaptive postural modifications when granted an external haptic reference. Fast processing of the stabilizing haptic spatial-orientation cues may be favored by cortical plasticity in blinds. These findings add new information to the field of sensory-guided dynamic control of equilibrium in man (Schieppati et al., 2014).

Subjects with **low vision** often use a cane when standing and walking autonomously in everyday life. One aim of study of the Sozzi et al. (2018) was to assess differences in the body stabilizing effect produced by the contact of the cane with the ground or by the fingertip touch of a firm surface. Another aim was to estimate the promptness of balance stabilization (or destabilization) on adding (or withdrawing) the **haptic input** from cane or fingertip. Twelve blind subjects and two subjects with severe visual impairment participated in two experimental protocols while maintaining the tandem Romberg posture on a force platform. In one protocol, subjects lowered the cane to a second platform on the ground and lifted it in sequence at their own pace. In the other protocol, they touched an instrumented pad with the index finger and withdrew the finger from the pad in sequence. In both protocols, subjects were asked to exert a force not granting mechanical stabilization. Under steady-state condition, the finger touch or the contact of the cane with the ground significantly reduced (to 78% and 86%, respectively) the amplitude of medio-lateral oscillation of the centre of foot pressure (CoP). Oscillation then increased when haptic information was removed. The delay to the change in body oscillation after the haptic shift was longer for addition than withdrawal of the haptic information (1.4 s and 0.7 s, respectively; $p < 0.001$), but was not different between the two haptic conditions (finger and cane). Similar stabilizing effects of input from cane on the ground and from fingertip touch, and similar latencies to integrate haptic cue from both sources,

suggest that the process of integration of the input for balance control is initiated by the haptic stimulus at the interface cane-hand. Use of a tool is as helpful as the fingertip input, and does not produce different stabilization. Further, the latencies to haptic cue integration (from fingertip or cane) are similar to those previously found in a group of sighted subjects, suggesting that integration delays for automatic balance stabilization are not modified by visual impairment. Haptic input from a tool is easily exploited by the neural circuits subserving automatic balance stabilization in blind people, and its use should be enforced by sensory-enhancing devices and appropriate training (Sozzi et al., 2018).

Walking is an important component of daily life requiring sensory motor integration to be successful. Adding haptic input via light touch or anchors has been shown to improve standing balance; however, the effect of **adding haptic input** on walking is not clear. The scoping review of Oates (2014) systematically summarizes the current evidence regarding the addition of haptic input on walking in adults. Following an established protocol, relevant studies were identified using indexed data bases (Medline, EMBASE, PsychINFO, and Google Scholar) and hand searches of published review articles on related topics. 644 references were identified and screened by a minimum of two independent researchers before data was extracted from 17 studies. A modified TREND tool was used to assess quality of the references which showed that the majority of studies were of moderate or high quality. Results show that adding haptic input changes walking behavior. In particular, there is an immediate reduction in variability of gait step parameters and whole body stability, as well as a decrease in lower limb muscle activity. The effect of added haptic input on reflex modulation may depend on the limb of interest (i.e., upper or lower limb). Many studies did not clearly describe the amount and/or direction of haptic input applied. This information is needed to replicate and/or advance their results. More investigations into the use and design of the haptic tools, the attentional demands of adding haptic input, and clarity on short-term effects are needed. In addition, more research is needed to determine whether adding haptic input has significant, lasting benefits that may translate to fall prevention efforts (Oates, 2014).

Good balance, an important ability in controlling body movement, declines with age. Also, balance appears to decrease when **visual input** is restricted, while this has been poorly investigated among visually impaired very old adults. The objective of study of the Chen et al. (2012) is thus to explore whether the **balance control** of the very old differs with varying degrees of visual impairment. This cross-sectional study was conducted in community centers and residential care homes. Thirty-three visually impaired (17 = low vision; 16 = blind) and 15 sighted elderly aged 70 years participated in the study. All participants were assessed: 1. concentric isokinetic strength of the knee extensors and flexors; 2. a sensory organization test to measure their ability to use somatosensory, visual, and vestibular information to control standing

balance; 3. a perturbed double-leg stance test to assess the ability of the automatic motor system to quickly recover following an unexpected external disturbance; 4. the five times sit to stand test. Compared with low-vision subjects, the sighted elderly achieved higher peak torque to body weight ratios in concentric knee extension. The sighted elderly showed less body sway than the low vision and blind subjects in sensory conditions where they benefited from visual inputs to help them maintain standing balance. The sighted and low-vision subjects achieved smaller average body sway angles during forward and backward platform translations compared to the blind subjects. Low vision and blindness decrease balance control in elderly (Chen et al., 2012).

Recent experiments have shown that the **visual channel of balance control** is susceptible to cognitive influence. When a subject is aware that an upcoming visual disturbance is likely to arise from an external agent, that is, movement of the visual environment, rather than from self-motion, the whole-body response is suppressed. Guerraz & Day (2005) ask whether this is a principle that generalizes to the vestibular channel of balance control. They studied the whole-body response to a pure vestibular perturbation produced by galvanic vestibular stimulation (GVS; 0.5 mA for 3 sec). In the first experiment, subjects stood with vision occluded while stimuli were delivered either by the subject himself (self-triggered) or by the experimenter. For the latter, the stimulus was delivered either without warning (unpredictable) or at a fixed interval following an auditory cue (predictable). Results showed that GVS evoked a whole-body response that was not affected by whether the stimulus was self-triggered, predictable, or unpredictable. The same results were obtained in a second experiment in which subjects had access to visual information during vestibular stimulation. We conclude that the vestibular-evoked balance response is automatic and immune to knowledge of the source of the perturbation and its timing. We suggest the reason for this difference between visual and vestibular channels stems from a difference in their natural abilities to signal self-motion. The vestibular system responds to acceleration of the head in space and therefore always signals self-motion. Visual flow, on the other hand, is ambiguous in that it signals object motion and eye motion, as well as self-motion (Guerraz & Day, 2005).

Studies in visually deprived animals, in blind humans, in cataract patients and cochlear implanted children have provided converging evidence for the hypothesis that a large number of **multisensory processes** are not innate but depend on multisensory experience during early life. Research in congenitally blind humans has suggested that **vision** might play a special or even essential role for the emergence of multisensory functions. Studying blind humans is an excellent opportunity to investigate how experience might shape **auditory processing**. In everyday life, blind humans rely more on auditory information than sighted humans to recognize people, localize events, or process language. A growing number of studies have provided evidence

that the increased use of the auditory system results in compensatory behavior in the blind. Blind humans perform better in perceptual auditory tasks, like pitch or duration discrimination, and in auditory language and memory tasks. Neural plasticity at different levels of the auditory processing stream has been linked to these behavioral benefits. In everyday life, many events stimulate more than one sensory system. Multisensory research has cumulated evidence that the integration of information across modalities facilitates perception and action control. Neurophysiological correlates of multisensory interactions have been described for various subcortical and cortical areas. There is evidence that vision plays a pivotal role in setting up multisensory functions during ontogeny (Hötting & Röder, 2009).

Conclusion

Vision loss and blindness are almost always accompanied with feelings of imbalance and disturbed gait. Similarly, with congenital visual impairment can be recorded in some individuals fear of movement or worry while walking in an unknown space, accompanied by an unsteady walk. The body posture and walking quality are subsequently connected with complex lifestyle, as well as with question of different visual perception of body in space. Increased incidence of balance between people with hearing impairment is primarily on deaf who have sensory-neural hearing loss. Fault accuracy of kinetic features of foot, static (standing upright stance) and dynamic (movement, walking) leads to significant changes of gait stereotype and individual modifications of the motor assumptions. Throughout the life of impaired persons is required to take care of the spatial orientation and movement in space, upright body posture training. Also stability problems of people with hearing impairment are not rare because adequate postural stability requires the integration and evaluation of visual, vestibular and somatosensory information. Healthy body posture and gait has unimaginable importance in terms of quality of life and social integration of the individuals.

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Assist. Prof. Kristína Tománková, Ph.D.
Palacký University
Žižkovo nám. 5
77140 Olomouc
Czech Republic
e-mail: kristina.tomankova@upol.cz

Assoc. Prof. Vojtech Regec, Ph.D.
Palacký University
Žižkovo nám. 5
77140 Olomouc
Czech Republic
e-mail: vojtech.regec@upol.cz

Children with special educational needs in the context of artistically focused education of the Czech Republic

(scientific paper)

Pavel Svoboda

Abstract: *This article reports on action research that is realized and financed in close association and with the support of European structural and investment funds and operational programme Research, Development and Education in the Czech Republic. The above mentioned research provides the methodological base of the survey focused on equal access to high-quality preschool, primary and secondary education, on fight against all forms of discrimination and enforcing equal opportunities as well as on the support of social integration and fight against poverty. Realization of these aims is the target of realized project IMUZA which is in progress in the Czech Republic between the years 2017–2020. This project is focused on the support of children, pupils and students with special educational needs in teaching artistic disciplines and in artistic education. It covers a wide network of elementary and secondary schools and vocational colleges. The aim of IMUZA project is the optimalization of work of current and also future "artistic" teachers in the context of their work with unique artistic production of children, pupils and students with special educational needs.*

Keywords: *action research, artistic disciplines, social integration, special educational needs*

1 Introduction

With the modification of school legislation which is in progress in the Czech Republic in the last decades, there have been significant positive changes in organizational conditions for common education of all students with special educational needs at schools of so called educational mainstream. The financing of aids for integrated pupils and students has got better, the number of supporting workers (especially school assistants) has increased and the accessibility of special pedagogical care as well as

the frequency of above-standard special pedagogical interventions has increased too. How has this situation reflected in relatively variable and complicated system of artistically focused schools in the Czech Republic? What are the attitudes and reflections of teachers of artistic subjects and also of children with special educational needs?

The answer to these questions should be given by the action research which has become the backbone and basis of collecting and evaluation of data of the IMUZA project.

2 The plan of action research and the outline of subsequent activities

The first and the basic task of the selected action research was to gain a representative sample of schools in the Czech Republic including all age categories of students attending these schools and including also all types of school that teach artistic disciplines (except universities). The category "artistic disciplines" included especially teaching music, art and dramatic education.

Schools meeting the basic criterion concerning the existence of teaching artistic subjects and teaching children and students with special educational needs have been electronically approached, the aim of IMUZA project was explained to them and they were also offered to participate in the project actively.

The design of so called action research has become the basic tool of the research. It was focused on identification of facilitators and obstacles of inclusive artistic education. Its realizers were not only the workers of a research team of IMUZA project but also teachers and other experts who use artistic tools in educational process participated in it. The framework of their research activity included cyclic, repeated search and setting factors that influence required changes leading to optimalization of the present state.

The main aim of the action research was to determine the most important facilitators and to identify the obstacles of inclusive education of artistic subjects at above mentioned types of schools.

The plan of the action research included following phases:

1. summary (evaluation and reflection) of their own experience;
2. identification (classification and description) of a potentially solved problem;
3. suggestion of possible solutions – processes;
4. practical performance of a process – intervention (with data collection);
5. evaluation (analysis and interpretation of data);
6. adjustment of an action plan with respect to ascertained results.

Furthermore it was set that necessary changes will subsequently be derived from current needs of research practice, at the same time it was supposed to monitor personal, social, material and intervention factors (the most important facilitators and obstacles). From the methodological point of view it was a mixed type of research and triangulation of methods that included:

- selection of a research sample: it was an intentional selection according to an institutional key
- data collection: the data were gained using the work with focus groups and they were stored in the form of verbatim forms (transcription of communication in terms of focus groups)
- analysis and interpretation of gained data: the data were processed using contrasts and comparisons, using the method of distinguishing of relationship, making tufts and searching for gestalts.

Partial aims also included:

- research, description and categorization of inclusion facilitators in terms of teaching artistic disciplines at particular types of schools;
- research, description and categorization of inclusion inhibitors in terms of teaching artistic disciplines at particular types of schools;
- research, description and categorization of the most effective forms and approaches of supervision for teachers of given schools;
- the comparison of gained partial results and their systematization at given types of schools and the generalisation of universal methodological principles of inclusion in terms of teaching artistic disciplines.

Another assumed issue was the analysis of methodological processes in order to make the methodological principles more accurate – from the perspective of:

- teachers;
- students with special educational needs;
- intact schoolmates;
- parents.

The realized action research has also become the topic of the first arcticle of the project designed this way.

3 Action research

The data collection was realized in terms of focus groups of teachers of Art and Music Schools, elementary schools, kindergartens, secondary schools and conservatoires in spring and autumn 2018. A research team indicatively prepared an outline of basic topics which were supposed to be problematic and urgent. The participants of focus groups were given the opportunity of individual preferences and also to focus on topics and questions that were the most attractive to them. Therefore researchers intervened in conversations and discussions only minimally. Three focus groups were chosen where the participants were divided according to the types of schools.

All three focus groups were shot by video cameras and a sound recording was subsequently transcribed into verbatim forms. From these verbatim forms (each verbatim form contained about 120 pages of the text) researchers chose the most important topics on the basis of contrasts, overlapping, comparison, marking relations and making tufts. The most frequently occuring and the most urgently perceived topics were subsequently evaluated using Likert scales. In this way the urgency of problems that had appeared in focus groups was repeatedly evaluated. Evaluation this way created a first stage and a springboard for interventions that are supposed to improve a current state of educational work and teaching children with special educational needs artistic subjects at Art and Music Schools, elementary schools, kindergartens and conservatoires in the Czech Republic and pursued especially qualitative improvement of teachers' work in terms of inclusion of these children.

Likert scales containing clearly formulated categories of the most frequent topics OS enabled a well arranged and illustrative representation of serious problems and using a numerical grading also the rate of perceived urgency. In order to do an evaluation two Likert scales were created. Firstly they reflected the difference of perceived problems at elementary schools and kindergartens and on the other hand also at conservatoires and Art and Music Schools. The analysis of verbatim forms realized by OS has proved the existence of common problem areas but also an expected variability which is derived from specific conditions at these schools. The results of respondents' evaluation have been averaged (see indexes below). Likert scale contained altogether 9 evaluating degrees with a neutral centre – degree 5.

Analysis of results

Kindergarten and elementary school (N = 18), the number of categories = 16
to initiate the elimination of excessive administration index: 8,61
to find and specify the boundaries for placement of a child with special educational needs to the educational process index: 8,61

to improve special-pedagogical training of teachers in the context of their work with children with special educational needs index: 8,16
to improve material equipment and security of schools index: 8,11
to provide the presence of a psychologist – teaching artistic subjects with children with special educational needs index: 7,88
to engage more actively in the context of exceptionally talented students index: 7,83
to favour "child's experience" rather than adhering to the syllabus index: 7,66

Conservatoires and Art and Music Schools (N = 20), the number of categories = 24
to initiate the elimination of excessive administration index: 8,15
to favour "child's experience" rather than adhering to the syllabus index: 7,80
to support the involvement of graduates in cooperation with stem schools index: 7,80
problems with artistic practice (see LŠ) index: 7,65
to engage more actively in the context of exceptionally talented students index: 7,60
to enable the presence of another teacher in subjects of common specialized basis and work experience index: 7,35
to improve material equipment and security of schools index: 7,15
to specify the methodology of evaluation of children with special educational needs at Art and Music Schools index: 6,95
to adjust showing of artistic practice – e.g. teachers at concerts index: 6,85

Notes: Bold – topics collectively considered to be urgent (in both groups), bold italics – the only topic of a higher index value at the group of respondents from conservatoires and Art and Music Schools.

4 Interpretation of results

Logical data analysis of both Likert scales showed the difference of perceived urgence of monitored and assessed problems not only at particular respondents but also at both groups. Teachers of kindergartens and elementary schools asseseed obviously more actively than their collegues from conservatoires and Art and Music Schools. The percentage of their positive options (preffered degrees of Likert scale of value 6–9) reached 83% which was exactly the same value as at teachers of conservatoires and Art and Music School, however at those there was distinctly higher percentage of undecided (that is ticking a neutral option). N = 18 … 63 neutral options, N = 20 … 88 neutral options.

The most burdensome problem of teachers is the excessive administration. This item of Likert scale "won" in both groups. However if we look at the overal assesssment of teachers in both groups, then we can see a bigger accent of urgency expressed at teachers of elementary schools and kindergartens by the value of particular indexes. Only one case was an exception – the item "to favour child's experience rather than adhering to the syllabus". In this case the teachers from conservatoires and Art and Music Schools were more emphatic and strongly expressed their wish to do something about this problem.

In the above mentioned overview of Likert scales common categories of problems are written in bold. These are problems consired to be burdensome for both observed groups. Specific categories that did not meet any common analogical topics are written in normal script and the case of above mentioned topic preference which was preferred by the teachers from conservatoires and Art and Music Schools and which gained surprisingly bigger indexation in comparison with the first group of teachers from elementary schools and kindergartens is written in bold italics.

However the final results are not surprising at all. When discussing the results of Likert scales teachers agreed that one of the most efficient factors of high-quality teaching of artistic subjects is the quality of teachers themselves. They also pointed to the importance of creation of a collaborating teacher team. The matter of availability of experts should be solved by a headmaster very circumspectly. Some teachers proposed that the probationary period for new teachers should be prolonged.

During the discussion of focus groups it was also discussed the normal functioning of schools which seemingly did not concern children and students with special educational needs. However the participants of the discussion concluded that "normal" school functioning is the basic condition for the creation of surroundings of common high-quality teaching of children and students with special educational needs. Some participants of the discussion also mentioned a special role of artistic disciplines which often bring handicapped children the opportunity to show off in front of their peers and consequently to boost their self confidence. They also highlighted the importance of after-school activities that are especially public concerts, exhibitions, theatre performances, selling of self-made artistic artefacts at the market etc. At the end of IMUZA project gathering teachers discussing together in focus groups as well as in following debates appreciated the special occasion for consulting and exchanging opinions as well as for gaining inspiration and new enthusiasm for their work at school. This is probably another positive benefit of the realized focus groups and the whole project.

5 Another phase of the action research

After the assessment of Likert scales all participants of focus groups were informed about the results of Likert scales and they were repeatedly allowed to take part in the process of evaluation and also to add some topics, which were according to them missing in the overview of topics. The character of action research enabled that. However the potential addition of topics had to be expertly justified enough and initiated especially by teachers who took part in previous focus groups and who also participated in evaluation realized using Likert scales. In this phase of action research it was newly recommended to accept only topics which were not present in terms of focus groups and crystallized during the research and subsequent discussions. In terms of these initiatives the realization team of the action research made slight modifications and specification of observed categories.

6 Prediction of future steps of the action research

In a following phase of the action research the realization team will focus on a more detailed analysis of topics and requirements concerning innovation of school educational programmes (ŠVP) and other most proposed modifications. In terms of this analysis certain topics have been selected. These topics should be consulted in detail at following meetings during planned focus groups. These focus groups should be moderated sensitively in order to clarify some problematic areas and also to remove potential unrealistic requirements and associated expectations. However the participants of focus groups that will take place in 2019 will be able to introduce new incentives.

In the following phase of the action research another analysis of its results will be carried out. On that basis there will be suggestions for modifications of syllabus, didactic methods, forms and tools and also artefiletics in the broad sense including expressively-therapeutic procedures. Furthermore they will design and check the efficiency of above mentioned innovations in inclusive teaching of artistic disciplines.

In terms of preliminary results it is possible to state that the main goal of the action research is being successfully fulfilled. The beneficial effect of the whole IMUZA project will be proved only in case of the realization of proposed interventions which will stem from the most urgently perceived topics gained in terms of informal conversations, analyses of verbatim forms of focus groups and also indexation of subsequent Likert scales.

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(reviewed twice)

Mgr. Pavel Svoboda, Ph.D.
Palacký University in Olomouc
Žižkovo nám. 5
77140, Olomouc
Czech Republic
e-mail: dan.bibagedentrum.cz

Family of a disabled child

Dokoupilová, I., Hanáková, A., Kmentová, S., Potměšil, M., Soldanová, J., Štěpničková, N., Urbanovská, E. (2017)

Reviewed by Michaela Tichá

The publication "Family of a Disabled Child" can be seen as a specialised theoretical and practical text of transdisciplinary nature, providing up-to-date information regarding the issue of families caring for children with disabilities.

The first chapter deals with definition of the term of family, functions of family and significance of the family bonds in general, regardless of the fact whether there is a healthy or disabled child in the family and the changes occurring in the last century in the theoretical notion in the specialised literature but mainly statistically. What is significant is mainly the data recording the increasing divorce rate, growing number of children born outside the wedlock, higher age of mothers when giving birth to the first and second child and lower number of children in families. In terms of special education, the data regarding decreasing number of stillborn children is significant. This is an evidence of progress in medicine; however, this data can also mean a certain increase of the number of children that would not have survived in the past, either due to premature birth, low birth weight or congenital malformations. It is the number of children in the family, age of parents and family completeness that have a significant impact in the event of birth of a disabled child and determine the further functioning of the family and success of intervention.

Chapter Two is dedicated to family after the birth of a child with disability. The first sub-chapter analyses in detail the process of dealing with the crisis which the disability in a child represents. Since every type of disability has its own specifics and completely different impact on family, there is an extra space dedicated to the basic characteristics of a family of a child with visual disability, hearing disability and a child with cerebral palsy. Chapter Three, which is no less important, is dealing with the relationship of the parents of a disabled child and professionals in the field of pedagogy, special education, medicine and psychology. The reader is provided

with a relatively detailed characteristics of individual team approaches. In conclusion of the chapter, the starting points of pre-natal and paediatric care are described, followed by evaluation of the team approaches solved by several foreign research works. Chapter Four, which along with the two previous ones can be considered as the pivotal part of the publication in terms of significance of the information needed for good navigation through the issue focused on the family of a disabled child, is dedicated to the options of system support to these families by individual resorts.

The penultimate Chapter Five sums up the knowledge about the family of a disabled child in the contemporary foreign and Czech literature. For us, this chapter can be a guide for solving various issues related to the family of a disabled child and the need of support. What we can find here is the basic overview of the publications by authors dealing with the topics such as acceptance of a disabled child, burden of the carer, need for support, education of the child and so on.

The final Chapter Six presents the results of research focusing on parenthood, family relationships and evaluation thereof. The introductory part of the Chapter contains definition of the risks impacting the family environment the disabled child is growing up in, which can negatively influence both the child and the family's co-operation with a team of professionals. This is followed by a sub-chapter focusing on diagnostics of the family and family approach using the Parental Acceptance-Rejection Questionnaire PARQ/Control intended for diagnostics of the family relationships and parental educational style. This Questionnaire is used on an international level. The Questionnaire is created in the variant for parents or other carers and in the variant for children aged 9 to 15. In the Czech Republic, the research was attended by total of 440 children, whereof 56% were children with special educational needs and 44% were intact. It follows from the interpretation of the research results that perception of the family environment in children with special educational needs basically does not differ from the perception of intact children. By disabled children, the notion of family and the parenting style is seen as favourable, supportive and open, which can be reflected positively also in the result of intervention and thereby in the process of education of these children.

The publication in hand is a suitable guide for all professionals dealing with the issue of families caring for a disabled child. It brings up-to-date information concerning the family of a disabled child and the support options. What can be assessed very positively is the extensive list of literary sources related to individual topics as well as the comprehensive comparison of the domestic and foreign specialised studies in every chapter.

Mgr. Michaela Tichá
Institute of Special Education Studies
Faculty of Education

Palacky University Olomouc
Žižkovo náměstí 5
771 40 Olomouc
Czech Republic
e-mail: misak.ticha01@upol.cz

Poetotherapy: theory and practice

Mazza, N. (2017) Poetotherapy: theory and practice

Reviewed by Jan Ivoš Vinkler

The author is a professor at the Florida State University where he established the programme of specialized studies for art and community practice. He also works as a psychologist in clinical social work and in marriage and family counselling. He is also known as a poet and publicist.

He is an editor and also a charter member of *Journal of Poetry Therapy: Interdisciplinary Journal of Practice, Theory, Research and Education,* he publishes in *Journal of Family Social Work, Journal for Specialists in Group Work, Social Work and also in Journal of Sociology and Social Welfare.*

Mazza introduces this book which is a groundbreaking piece of work not only in psychology but also in special pedagogy, in therapy and also in social work. At the beginning of the second edition a reader is lured by the mention of RES model which is applied in many age groups, clients of different backgrounds and those with various problems.

The book is devided into four main parts, each part is devided into several chapters. The first part includes an introductory issue of the basics of poetotherapy. In the first part we learn about its historical aspects. Mazza uses comprehensible, technical language, though the reader should be able to get basic information about psychology, psychotherapy, sociology, special pedagogy and medicine. If a reader of this book does not understand at least one of above-mentioned scientific disciplines, he will be either slightly disorientated or disappointed or he will check every other sentence and look for defintions and names on the internet.

The second chapter depicts theoretical basics introduces the field of psychology and psychotherapy. Particular psychotherapeutic specializations enable us to view poetotherapy. Names such as Adler, Jung, Freud or Perls are also introduced in this chapter.

RES model is a part of the name of the third chapter which brings us to the most important matter of this book. It is a way of working with poetry which was invented by the author. **RES** is an abbreviation of initial letters of words that show us all the things this model works with. **R**eceptive part of the model includes the use of literature in practice -working with existing literature. **E**xpressive part is characterized by the process of writing of texts by a client. The last **S**ymbolical part is created by rituals, metaphors and reading out to others.

The second part of the book is focused on working with clients – individuals, family, group and community. The author introduces illustrative studies in all four mentioned groups. Mazza shows a way of working, gives examples of clients' poetic texts that were created during therapeutic sessions. It is possible to say he enables us to "keep an eye on him" during his work so that we can get the picture of the methodology he uses.

The third part is called "development phases" and it is focused on the description of possible difficulties and risks in children and early adolescents, adolescents, young adults, adults, older adults and it also deals with the topic of a loss and death. In this part of publication Mazza again in detail describes not only his way of working but also his colleagues' way of working. Doing this and using examples and studies he enables a reader to get a grasp of working with individuals in mentioned development phases.

In the fourth part of the book we learn about the research realized by e-mail questionnaires with quite exceptional number of 240 respondents from English speaking countries all around the world. The research shows that poetry ranks among three most commonly used modalities together with music, diary writing and working with a story in artetherapeutic work with individuals or groups. These 240 respondents underwent quite strict selection procedure. All of them are professionals who can be counted as workers using principles of psychotherapy. Issues such as education, competence and supervision necessary for doing poetotherapeutic practice are embodied in this part of the book.

This fourth and also the last passage of the publication includes also appendices that I consider to be one of the most important and the most highly-valued part of the book. Here we can find enrollment forms, tables, described practical methods, in short everything that is missing in other publications dealing with these topics. In the appendices there are also full texts of used poems written during therapeutic sessions or poems by respected authors.

The author refers to studies, authors from foreign countries, case studies which are stated as an example to illustrate the situation and-consequently-to connect theory and practice in accordance with the name of the book. I personally consider this book as a crucial and well-written guide not only for beginning poetotherapists but also for experienced ones.

Mgr. Jan Ivoš Vinkler
Institute of Special Education Studies
Faculty of Education
Palacky University Olomouc
Žižkovo náměstí 5
771 40 Olomouc
Czech Republic
e-mail: JVinkler@seznam.cz

Aggressive child? Systemic solution to problem behaviour

Hergenhan, A. (2015) Agresivní dítě? Systemické řešení problémového chování

Reviewed by Tereza Houšková

Aggression is one of the common human qualities, which from time to time manifests in everybody. But what if aggression is uncontrollably frequent and is a learned defence mechanism of situation management? A German psychologist and therapist Anton Hergenhan has analysed the issue of child aggression for over 20 years, and thanks to his psychotherapeutic background in systemic psychotherapy comes with progressive ideas concerning possible solutions.

The book is divided into ten chapters, some of which are theoretical and accurately describe the exact systemic-oriented special education thought process in addressing specific situations. In one of the chapters the author describes the symptom as a motive for therapy. The author aptly explains why it is very important to find what is good about each symptom and to be able to transform every problem into an object of further client development. In the following chapters, specific situations are presented as short case reports. These case reports point to each, even the slightest phenomenon that occurs during a conversation with a client. Anton Hergenhan emphasises the words that the participants use in the situations, and places them in the context of their internal perception of reality. He does not refrain from using and repeating swear words that children use in expressing aggression towards other children. On the contrary, the author describes these situations as follows: *"I believe that our children are the seismographs of the communication climate of the world of adults and the world of the media. They are a reflection of how the world works, how people think, how they speak, and what they consider important."*

Also for this reason the book encourages teachers not to avoid swear words. The author claims that the teacher should be able to explain the word and through a discussion make clear to the child why it is inappropriate to use these words and the problems that they can cause in their relationships. It is enriching to read case reports that do not try to avoid the most difficult situations that occur in groups of children.

These mainly include swear words, offensive language, or physical aggression. The book presents all possible strategies and perspectives concerning these phenomena.

The case reports published in this book made me curious as a reader as to how the situations will end up, and mercilessly made me think about my own competence to address similar situations. But I am not negative about this fact; on the contrary, I consider it very beneficial for every teacher who wants to improve one's professional competences. The text includes a number of scientific articles on the issue and references to relevant publications.

The book is written in a scientific but comprehensible style and is accessible to all professionals in special education, psychology, or psychotherapy. In this I see a minor disadvantage of the publication. I dare say that the book could seem relatively inaccessible to the parents of aggressive children who lack relevant professional background.

Hergenhan very aptly added the question mark in the title "Aggressive child?" Thanks to the author's systemic guideline, teachers can reveal the mystery of interviews that have the potential to eliminate children's aggression in a suitable way.

In conclusion, I would like to use the author's words that describe the immense potential of the interview as a tool for change: *"Our children show that they are really able to give up both verbal and physical aggressions. Whether you dear readers believe it or not: Ever since we have used the above described systemic approach in our institution, swear words or fights are no longer a means reaching an agreement. Understandably, in exceptional cases relapses do occur. However, the children themselves are usually able to cope with them."*

Mgr. Tereza Houšková
Institute of Special Education Studies
Faculty of Education
Palacký University Olomouc
Žižkovo nám. 5
771 40 Olomouc
Czech Republic
e-mail: houskovat@seznam.cz

Information for authors

Basic information about the JEP

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

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

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

Instructions for authors

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

The file should be saved under the same name with the surname of 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.

Please note that publication of papers in the Journal will be free of charge.

Section headings should be numbered and written, as described in following manual: standard signs, symbols and abbreviations are to be used only. Monosyllabic preposition are ought not to figure at the end of the line, but at the beginning of the next line – they can be shifted using the "hard returns" CTRL + SHIFT + SPACE.

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

Completed contribution shall be sent in an electronic form to the mail address: **dan.bibaged@centrum.cz**. In the subject line of the email note: JEP – contribution.

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Recommendations – Editors conclusions

- 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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