

**„BABEȘ-BOLYAI” UNIVERSITY
FACULTY OF PSYCHOLOGY AND EDUCATIONAL SCIENCES
DEPARTMENT: EDUCATIONAL SCIENCES
"EDUCATION, REFLECTION, DEVELOPMENT" DOCTORAL
SCHOOL**

PhD Thesis Summary

**PREPARING TEACHERS AND STUDENTS WITH
AUTISM SPECTRUM DISORDERS FOR
INTEGRATION INTO MAINSTREAM SCHOOLS**

Scientific leader:

Univ. Prof. PhD. Cristian Stan

PhD student:

Sălăgean Simona Cristina

CLUJ-NAPOCA
2022

CONTENT

INTRODUCTION

PART I

CHAPTER I. Theoretical Foundations: The Autism Spectrum Disorder

CHAPTER II. Adaptive behaviour

CHAPTER III. Scientifically validated methods of intervention according to the principles of Applied Behaviour Analysis

CHAPTER IV. Inclusive education

CHAPTER V. Self-efficacy of teachers teaching in classes where students with ASD are included

Part II

CHAPTER VI. A study on factors related to the development of adaptive behaviour in students with ASD

CHAPTER VII. The effect of using methods adapted according to the principles of Applied Behaviour Analysis on the development of language and learning skills in children with Autism Spectrum Disorders - case studies

VII.1. Case Study 1

VII.2. Case Study 2

VII.3. Case Study 3

VII.4. Case Study 4

VII.5. Case study 5

VII.6. Conclusions

CHAPTER VIII. Linguistic adaptation and validation of the “Teachers’ Self-Efficiency for Autism Spectrum Disorder Inclusion” Scale (TSE-ASDI)

CHAPTER IX. Final conclusions

IX.1. Research value and personal contributions

BIBLIOGRAPHY

INTRODUCTION

The number of children diagnosed with Autism Spectrum Disorder (ASD) appears to be growing exponentially. According to the latest report by the CDC - Center for Disease Control and Prevention, approximately 1 in 54 children has been diagnosed with ASD in the United States (Maenner et al., 2020).

Due to the increasing number of children diagnosed with ASD, the need for scientifically validated assessment tools, assessment methods, intervention or teaching and training on Autism Spectrum Disorders is growing. There are relatively few studies about school integration of these children.

The inclusion of a student with ASD in the education system without the necessary skills and without preparing teachers to meet the challenges that may arise will not be beneficial for the student with ASD and the teacher may be exhausted due to lack of resources.

More and more children diagnosed with ASD are integrated into mainstream education, representing one of the most challenging groups of students in terms of teaching process (White, Smith, Smith and Stodden, 2012; Love, 2016). To meet these challenges, teachers need to apply scientifically validated techniques specific to intervention for children with ASD or behavioural disorders. Specific Applied Behaviour Analysis (ABA) techniques have been identified as the most effective scientifically validated methods for students with ASD (Koegel, Koegel, Vernon, & Brookman-Fraze, 2010; National Research Council, 2001, Kamau, 2014).

Dysfunctions in social interactions, communication, imaginative ability, behaviour and sensory integration present in people with ASD also require individualized and personalized approaches. This paper addresses and analyzes the issue of Autism Spectrum Disorders, the inclusion of students with Autism Spectrum Disorders in mainstream schools, the development of adaptive behaviour, intervention techniques that facilitate learning and self-efficacy of teachers working in classrooms where students with Autism Spectrum Disorders are integrated.

Through the first two complex studies we wanted to analyze the factors associated with the development of adaptive behaviour and the effects of methods and techniques of teaching and assessment according to the principles of Applied Behaviour Analysis on the development of learning skills of children diagnosed with autism. And through the third study, this research makes an important contribution to the field of inclusive education

through the linguistic validation of the "Teachers' Self-Efficacy for Autism Spectrum Disorder Inclusion" Scale.

The research contains both an observational, descriptive part that provides information about the relationships between the variables studied, and an experimental part, which involves quantitative investigations.

PART I

CHAPTER I. Theoretical Foundations: The Autism Spectrum Disorder

In the first chapter, we presented Autism Spectrum Disorders (ASD): conceptual boundaries, characteristics of children diagnosed with ASD and challenges posed by the inclusion of students with ASD in mainstream schools.

The Autism Spectrum Disorder refers to “persistent impairment of mutual social communication and social interaction,” as well as “restrictive and repetitive patterns of behaviour, interests, or activities,” these symptoms being “present in early childhood and limit or affect every day functioning”. (American Psychiatric Association, 2013/2016, p. 53). According to the DSM-5 Diagnostic and Statistical Manual of Mental Disorders, the term spectrum is used due to the variation of the manifestations of the disorder depending on the severity of the condition, the level of development, the chronological age, the characteristics of the individual, his living environment and the model of intervention, compensation and current support from which the person with ASD benefits.

The National Institute for Health and Care Excellence NICE provides some standards that are key tools in addressing the Autism Spectrum Disorder. According to the institute, in people diagnosed with ASD we encounter disorders in terms of cognitive development, learning, language, medical, emotional and behavioural problems. These may include the need for routine and difficulty understanding other people's intentions, feelings, and perspectives (mind theory). The same institute provides the following statistics: approximately 50% of people diagnosed with ASD have an intellectual disability (IQ less than 70) and about 70% of people with ASD meet the diagnostic criteria for at least one other physical health problem, or mental health (often unrecognized), such as sleep problems, eating disorders, epilepsy, anxiety, depression, attention disorders, dyspraxia, motor coordination problems, sensory sensitivities, self-aggressive behaviour and other behavioural disorders (sometimes aggression towards others). These problems can significantly affect the quality of life of the diagnosed person and that of the family or relatives and can lead to social vulnerability (Sălăgean, 2020).

ASD is not a degenerative condition but there is a lifelong process of learning and compensation. Symptoms often have a maximum intensity in childhood, with evolutionary progress in subsequent years. But only a small proportion of people with ASD are self-employed in adulthood (they have a job, live alone). Those who succeed in doing so are generally those who have more developed intellectual and communication skills and have

found a job that suits their special interests and abilities. Education plays a key role in developing these special skills and those that help them function independently.

Children diagnosed with Autism Spectrum Disorders may have difficulty in understanding school curricula. These children may have difficulty in understanding the texts they read and abstract concepts, in developing handwriting, organizing time, they may have behavioural problems due to the difficulty of understanding social rules, low tolerance for frustration and resistance to change. They are easily distracted by issues that are insignificant to us or by personal interests, they have difficulty understanding the emotions and intentions of classmates and initiating and integrating into the play of their colleagues.

People with ASD may also experience a hypo- or hyper-reactivity to sensory stimuli that is manifested through exaggerated reactions to certain stimuli: auditory, visual, tactile, kinesthetic, gustatory, olfactory (eg certain sounds, textures), odors, fascination for lights or rotating objects, apparent indifference to pain, cold or heat).

Self-stimulation (eg, repetitive body or object movements) has always been a challenge for specialists working with students with ASD. According to the study done by Quill (2000, apud. Condrey, 2015), many children with ASD engage in self-stimulation behaviours to help them cope with the anxiety of environmental change and Temple Grandin (2011, Condrey, 2015) a famous author, inventor, reader and adult with ASD says that most children with ASD feel good when caught in these stereotypical behaviours.

These behaviours (eg, fluttering, shaking, singing, constantly repeating words or sounds, shouting, spinning objects or aligning them, etc.) occur in all environments, including the school environment, where they may hinder the interaction with the teacher, with other colleagues and the teaching-learning process itself. Because these stereotypical behaviours are atypical, even strange, teachers often hesitate to include children with ASD in their class. According to the literature, the level of comfort or discomfort that teachers feel about these behaviours is one of the most important factors in measuring self-efficacy. Teachers often believe that students with ASD will have a multitude of behaviours in the classroom, creating constraints and challenges that go beyond their ability to cope (Condrey, 2015).

Due to lack of training and knowledge, many teachers are not in favor of an inclusive educational model (Ross-Hill, 2009, according to McCullough, 2014). According to Ross-Hill (2009, apud. McCullough, 2014), lack of training and support can create tension and stress for teachers and students in inclusive environments; therefore, teachers need both training and support to successfully implement an inclusive educational program.

CHAPTER II. Adaptive behaviour

In the second chapter, definitions, functions and factors of adaptive behaviour, characteristics of the development of adaptive behaviour in people with ASD and studies on the assessment of adaptive behaviour in people with ASD are presented.

In 1959, Heber first introduced the concepts of social adaptation, learning, maturation into the diagnostic criteria for intellectual disability, which now define the term of adaptive behaviour.

The adaptive behaviour refers to the development and application of the skills needed to achieve personal independence and social skills. Adaptive behaviour is defined by the extent to which a person is able to manage real-life situations, including the functional use of communication, socialization, practical and motor skills (Sparrow et al., 1984, 2005).

Following the factorial analysis performed by Schalock (1999) and Thompson, McGrew and Bruininks (1999), 4 constant factors of adaptive behaviour were highlighted:

1. Physical or motor skills involving fine and gross motor skills and daily living skills such as feeding and toileting skills;
2. Conceptual skills, such as receptive and expressive language, writing, reading, calculating, using money etc.
3. Social skills, such as maintaining relationships, social interaction, social participation, understanding and reasoning;
4. Practical skills, such as housework: dressing, hygiene, cooking.

This structure has been introduced in the latest editions of the American Association on Intellectual and Developmental Disabilities (AAIDD), being operationalized as follows:

- conceptual skills: language, writing and reading, time notions and the concept of number;
- social skills: social responsibility, interpersonal skills, following rules, self-esteem, problem solving, credulity / naivety;
- practical skills: personal autonomy, occupational activities, use of money, health, safety, transport, daily routines (Roşan&Bălaş-Baconschi, 2015).

People with ASD have shown significant adjustment deficits. But studies that analyze adaptive behaviour in children with ASD and the factors that are associated with or influence its development come with different results.

For example, Perry et al. (2009) found that the severity of ASD symptoms is moderately to strongly negatively associated with adaptive behaviour. On the other hand,

Klin et al. (2007) and Kanne et al. (2011) found a weak relationship between autism symptoms and adaptive behaviour (using ADOS and Vineland, respectively).

Farley and colleagues (2009) showed that coping skills are strongly associated with the success and independence of adults with ASD, regardless of IQ. Adults may have high IQ scores, but limited adaptive skills, and there are adults with low IQ scores who have a high level of independence. In another study, however, IQ is considered to be a strong predictor of adaptive behaviour, with the gap between IQ and adaptive impairments decreasing in people with lower functioning ASD, and older people have a greater gap between IQ and adaptive skills (Kanne et al., 2011).

While some have reported significant negative associations between age and adaptive behaviour and positive associations between cognitive ability and adaptive behaviours (Kanne et al. 2011; Klin et al. 2007; Liss et al. 2001; Perry et al. 2009; Saulnier et al. Klin, 2007), others failed to find these significant associations (e.g., Kenworthy et al. 2010).

Therefore, the following factors were identified as correlated (positive or negative) with the level of development of adaptive behaviour: age, severity of symptoms (especially in the fields of communication and social interaction) and IQ.

Assessing adaptive behaviour is an important and necessary part of the complex assessment of people with ASD, as it provides information about the extent to which autonomy and daily functioning are affected (Klin et al., 2005). The best known tools for measuring adaptive behaviour are: Adaptive Behaviour Checklist (Nihira et al., 1968), later known as the AAMD Scale for Adaptive Behaviour, Vineland Adaptive Behaviour Scales (VABS; Sparrow et al., 1984) and Adaptive Behaviour Assessment System-Second Edition (ABAS-II; Harrison and Oakland 2003).

CHAPTER III. Scientifically validated methods of intervention according to the principles of Applied Behaviour Analysis

In the third chapter we presented Applied Behaviour Analysis, as a science, some principles of learning and maintaining a certain behaviour and methods of behaviour management.

Applied Behaviour Analysis (ABA) is the science that deals with the study of human behaviour, the influence of the environment on behaviour and its change. It focuses on the objective definition of behaviours with social significance and the intervention is done in order to improve the studied behaviours, demonstrating the clear relationship between intervention and behavioural changes, using scientific research methods (objective description, quantification and controlled experiment).

Behaviour analysis is applied because of the commitment to contribute to the improvement of behaviours that develop and improve people's lives. Therefore, the behaviours chosen for improvement or modification are those that have social significance for the participants: social, linguistic, academic, daily, personal autonomy, vocational and / or recreational and relaxing behaviours, which enhance the participants' daily life experience and positively affect the people close to them. An effective application of behavioural techniques must improve the studied behaviour, at a practical level.

ABA is a science based on techniques derived from learning theories. Intervention programs are intensive and involve dividing each goal into small steps. Learning opportunities are carefully planned, offered and constantly reinforced by trained therapists. These programs have become popular due to the publication of studies (eg. Lovaas 1987) and biographical writings (eg. Maurice 1993) that have reported remarkable progress in children with Autism Spectrum Disorder by using these methods. ABA studies highlight three main factors: the use of positive reinforcement, the minimization of contingencies with punitive value, and specific objectives. The policy at the core of this approach is to emphasize positive aspects or strengthen desirable behaviours, rather than eliminating problematic behaviours (Sălăgean&Costea-Bărluțiu, 2019).

ABA principles are the basis for assessing / measuring behaviour, planning goals, teaching new behaviours or reducing the frequency, duration or intensity of undesirable behaviours, maintaining and generalizing learned behaviours, and promoting scientific research using controlled experiments.

This approach is one of the most well-known and studied forms of treatment in the world today, both as an intervention for people with disabilities and as a set of teaching methods in neuro-typical children's classes and education in general.

There are behavioural reinforcement methods that can be used individually, but there are also reinforcement programs that are used successfully for groups of people.

CHAPTER IV. Inclusive education

In the fourth chapter we presented national and international legislative and practical frameworks on inclusive education, challenges, risks and opportunities in terms of school segregation or inclusion, the role of the multidisciplinary team and the principles of curricular adaptation.

The most important events and documents that formed the basis of the principles of inclusive education are:

- The Individuals with Disabilities Education Act (IDEA) created in 1975 in the USA (Education for All Children with Disabilities);

- The 1990 World Declaration on Education for All (Jomtein, Thailand), a framework for action containing objectives and strategies to address the basic learning needs of all;

- The 1994 Salamanca Statement during the World Conference on the Education of Children with Special Needs. It promotes the Social Model of Inclusive Education;

- EASNIE (European Agency for Special Needs and Inclusive Education) launched in 1996 - a collaboration platform for Ministries of Education and stakeholders at national and European level;

- Inclusion - the fundamental philosophy of UNESCO programs and the guiding principle for the development of the EFA in 2000 (Dakar, Senegal)

- Inclusion Europe (European Union, the United States Convention) in 2010 which promotes the principle that inclusive education benefits all students, with or without disabilities.

There are 3 models and policies at European level on inclusive education:

1. Inclusion of all students in mainstream schools - a model found in Italy, Norway or Scotland, where over 90% of students with special educational needs (SEN) are integrated into mainstream education;

2. Separate education of most children with SEN in special schools - a model found in countries such as Belgium, Germany, the Netherlands, where recent reforms encourage inclusive education;

3. Hybrid approaches (special classes and part-time collaborative partnerships), such as ULIS integrated classes. The countries that have adopted this model are: France, the United Kingdom, Denmark and Finland.

The process of including children with special educational needs in mainstream education began in Romania in 2004 in response to European Union standards. According to

the Methodology regarding the organization of educational support services for children, pupils and young people with special educational needs, approved by Order no. 5574/2011 of the Minister of Education, Research, Youth and Sports, Art. 5, the school integration of persons with SEN is carried out in mass education units.

The principles underlying integrated education in mainstream schools are, according to several authors:

„ (1) All students have the right to participate in all activities included in the mainstream school curriculum; (2) During the school program, the teaching and specialized staff will be directly involved in supporting in all ways the maximum integration of students with special educational needs; (3) The school will have to meet, through a series of radical measures in the field of curriculum, all the educational requirements of the students, without harming their dignity and personality; (4) In the conditions of integrated education, the classes / groups of students will include children that are close in age and level of socio-cultural experience ” (pp. 308-309, Gherguț, 2007).

The child with ASD and his colleagues and the teacher will all benefit from the inclusion in mainstream school. When, on closer inspection, the benefits for each of the three parties involved outweigh the disadvantages or challenges that exist, integration is effective and can be successfully pursued.

Integration is complete only when the child with ASD truly assimilates knowledge with neuro-typical children and is included in all common activities in school or kindergarten, including play, and the child truly feels that he belongs to the community and has a role to play actively in the class or group (Bîrsanu, 2012).

A wide range of factors contribute to the successful integration of the child with ASD, including: teacher flexibility and openness to change and lifelong learning, adaptation and individualization of the curriculum taking into account the needs, skills and interests of the child, the existence of a multi / transdisciplinary team to plan, monitor and evaluate the inclusion process, close collaboration between team members and the child's parents, inclusion of the child in additional individualized therapeutic programs, conducted under the coordination of accredited specialists who monitor the child's progress, ensuring a climate of acceptance and friendship in the class or group of students.

A child diagnosed with ASD will need a team to facilitate, monitor, and evaluate the inclusion process. The team of specialists will include: the teacher, the learning support teacher, the school psychologist, the parents, the speech therapist (if needed), the school nurse, the therapist, the supervisor / coordinator if there is a shadow for the child.

When the transdisciplinary team can be formed, the results in terms of inclusive education programs, as well as the progress of the children will be seen, the family will be more involved and there will be a more collaborative professional climate (Carpenter, King-Sears & Keys, 1998).

Knowing the particularities of each student, with his/her qualities and disadvantages, adapting school requirements to the possibilities and pace of learning of the students for a longer or shorter period of time are ways in which they could be given the chance to succeed and feel the joy of being appreciated which can motivate and mobilize them to reach their maximum potential (Sălăgean, 2019).

An adapted curriculum is useful for teachers who carry out the integration activity in the classroom, for students with SEN who cannot meet the requirements of the compulsory school curricula, the teaching style does not suit them or they have certain special needs, for their parents who may become collaborators in training children and for their colleagues (Sălăgean, 2019).

CHAPTER V. Self-efficacy of teachers teaching in inclusive classrooms

In the last chapter of the theoretical part of the paper we presented conceptual delimitations of the term self-efficacy, the role of teachers' self-efficacy in the process of including children with Autism Spectrum Disorders in the education system and the best known tests for assessing self-efficacy.

The concept of self-efficacy was introduced by the Canadian psychologist Albert Bandura, defined as the belief in one's own abilities to organize and follow the course of actions necessary to achieve goals (Bandura, 1997, p. 3, according to Canabarro, Teixeira & Schmidt, 2018). The theory of self-efficacy is derived from the social-cognitive theory, which includes three areas: environment, cognition and behaviour (McCullough, 2014).

According to Bandura (1994, apud. Canabarro, Teixeira & Schmidt, 2018), there are four sources of influence for the development of self-efficacy: a) social persuasion, related to encouraging people, communicating them that they can do better, b) empirical experience, related to seeing someone perform a certain task, which could positively influence one's belief in their own ability, derived from observing the correctness and mistakes made by that person, c) direct learning experience, which involves the progressive improvement of certain learning skills during a task, d) the physical and emotional state resulting from one's own performance in executing some actions.

Self-efficacy influences the way people think, the choices they make, the goals they set for themselves, the effort they put into achieving them, the expectations they have and the level of resilience, quality of life, stress and depression they experience (Bandura, 2006, apud. Vasiliu, Pascal & Marinescu, 2015).

When we transpose the concept of self-efficacy into the educational context, it can refer to teachers' beliefs in their own ability to carry out pedagogical actions that lead to the expected results.

Numerous studies show that teachers with a high level of self-efficacy are more open to new ideas, show a greater desire to try new teaching methods, organize the class better and are more enthusiastic and satisfied with their own way of teaching (Guskey, 1998; Tschannen-Moran & Woolfolk Hoy, 2001, adj. Achurraa and Villardónb, 2013).

Teacher self-efficacy and training are substantial variables that affect teacher receptivity to inclusion (Soodak et al., 1998, apud. Shaukat, 2013).

Numerous tests have been developed to measure self-efficacy. Some of them measure the level of general self-efficacy, the level of self-efficacy of teachers, but there are also tools that measure the level of self-efficacy of teachers who teach in inclusive classes.

1. The general level of self-efficacy:

General self-efficacy scale (SES), Skills self-efficacy scale (SCI), Strong interest scale (SII)

2. The level of self-efficacy of teachers:

Teacher Efficacy Scale (TES, Gibson and Dembro, 1984), Teacher Interpersonal Self-Efficacy Scale (TISES, Brouwers and Tomic, 2001) and Teachers' Sense of Efficacy Scale (TSES, Tschannen-Moran & Woolfolk Hoy, 2001)

3. The level of self-efficacy of teachers who teach in inclusive classes:

The teacher efficacy for inclusive practices Scale (TEIP, Sharma, Loreman&Forlin, 2011), Autism Self-Efficacy Scale for Teachers (ASSET, Ruble, Toland, Birdwhistell, McGrew &Usher, 2013), The Teacher Self-Efficacy for Autism Scale (TSEAS, Love, 2016), Teachers' Self-Efficacy for Autism Spectrum Disorder Inclusion (TSE-ASDI, Corinne Gaffney Catalano, 2018)

But the most complex scale that measures the level of self-efficacy of teachers who teach in classes where students with ASD are included so far, we consider it to be the "Teachers' Self-Efficacy for Autism Spectrum Disorder Inclusion" Scale, designed by Corinne Gaffney Catalano in 2018. That is why we chose to perform the linguistic validation of this scale for the Romanian population.

PART II

CHAPTER VI. Correlational Study on the development of adaptive behaviour in students with ASD

The school orientation of a child diagnosed with ASD towards mainstream education, special education or homeschooling raises many controversies, questions and assumptions, and there are supporters for each type of form of schooling. Lately, due to the Covid-19 pandemic and the instability of the curriculum, many parents of children diagnosed with Autism Spectrum Disorders have chosen to continue only in the online education option and even to home school their children.

The question we want to find an answer to is: in what environment does a child with ASD develop better in Romania, and what are the factors that contribute to the development of adaptive behaviour? We believe that an answer to this question could be useful for specialists who design and implement psycho-socio-educational policies and for further research in this field.

The aim of this study is to analyze the relationship between different factors, internal or external, and the level of development of adaptive behaviour in children diagnosed with ASD.

We analyzed the relationship between adaptive behaviour and type of schooling, age, gender, IQ, socio-economic status, type of therapeutic services received by the student and the type of educational support (the presence of the shadow, curricular adaptation and the presence of the support teacher).

The total sample included 79 children with ASD aged 6 to 16 years (average age 9-10 years), enrolled in mainstream schools, special schools or homeschooled students. Age, diagnosis and associated disorders were considered for selection of participants. They were also interviewed about the type of education attended, the psycho-socio-educational interventions and the support services they benefit from, their IQ was also tested, but without excluding participants, depending on the latter criteria.

To measure IQ we used the CPM test - Raven Color Progressive Matrices (Raven, Raven & Court, 2005) and to measure adaptive behaviour we used ABAS II - Adaptive Behaviour Assessment System II (Harrison, Oackland, 2012).

To indicate the degree of association between variables, we statistically analyzed the data obtained using the SPSS program. We used the Pearson correlation coefficient to measure the statistical relationship and association between age, IQ and the level of

development of adaptive behaviour and the Eta coefficient for the independent categorical variables (form of schooling, psychotherapeutic services, educational support services, socio-economic situation of the family).

The results showed a significant positive correlation between IQ and the level of adaptive behaviour and weak associations between the other variables and adaptive behaviour.

The heterogeneous nature of the sample, the variability in age and level of intellectual development, and the fact that the number of students enrolled in mainstream schooling is much higher than that of those enrolled in special schools or studying at home, could partly explain the negligible associations between variables. In addition to these aspects, it is known that there is great variability in the characteristics of people with ASD.

**CHAPTER VII. The effect of using methods adapted from the principles
of Applied Behaviour Analysis for the development of language and learning skills
in children with Autism Spectrum Disorders - case studies**

Through this study we wanted to analyze the influence of using methods adapted from the principles of ABA for language development and learning skills in 5 school-age children with Autism Spectrum Disorders. For this we used the case study method. Data collection was performed over 2 years, the intervention period being different from case to case.

The participants included in the research are five children aged between 6 and 10, 4 boys and 1 girl, diagnosed with ASD. The selection was made according to the following criteria: age, diagnosis and availability to participate in the study.

For the assessment of language and learning skills we used the ABLLS-R test - Assessment of Basic Language and Learning Competences, developed by James W. Partington (Assessment of Basic Language and Learning Skills - Revised).

The intervention methods according to the principles of ABA were: NET - Natural Environment Teaching and Discrete trial teaching - DTT.

The aim of these case studies was to evaluate the effectiveness of individualised ABA intervention methods for participants in each of the studies, in order to develop language and learning skills.

The objectives of these studies were:

- To identify the level of language development and learning skills of children with Autism Spectrum Disorders in the sample studied, through specific tools;
- To develop personalized intervention programs;
- To apply methods adapted from the ABA principles included in the personalized intervention programs;
- To evaluate the efficiency of the methods, strategies and techniques used;
- To investigate the effects of applying ABA methods on language development and participants' learning skills.

VII.1. Case study 1

A., aged 7, lives with his mother, father and 3-year-old sister in urban area, in Alba County. The parents have higher education and the age of 41 and 44, respectively. He is integrated in a mainstream school, where he is accompanied by a shadow specialized in Applied Behaviour Analysis.

There were no problems in the peri and postnatal period, and the first signs were a delay in language and motor development and stereotypical movements (at the age of 1 year). The boy first received ABA therapy in 2016 in Canada, continuing from 2019 in Romania.

The initial evaluation of the study took place between 28.10.2019-19.11.2019, when A. was 6 years and one month old. This was done through direct observation, interaction with the child and an interview with the parent, in a psychology office to determine the current level of acquisitions. The ABLLS-R test was used for evaluation. The purpose of the evaluation was to design a personalized intervention plan, based on which to continue the intervention based on the principles of Applied Behavioural Analysis.

On 11/24/2019, the personalized intervention plan was created with the help of the multi disciplinary team: coordinator, behavioural therapists / instructors, the shadow, his teacher and parents.

The purpose of this plan was to form and develop independent conduct for social integration.

General objectives:

- O1: Development of communication and social skills;
- O2: Cognitive development;
- O3: Development of behavioural control;
- O4: Development of self-service skills.

And the specific objectives were the following:

Behaviour

- Frequency reduction of the self-stimulation behaviour – putting hands in mouth
- Development of waiting skills in natural situations
- Frequency reduction of slapping behaviours
- Approaches the adult, sits at the table and meets the requirements
- Looks at the work materials

- Makes eye contact before the request and after the answer, to receive feedback

Communication

- Makes eye contact when he asks what he wants
- Requests what he wants using sentences
- Asks for attention.
- Asks for an activity to be removed
- Asks for information using the questions “What?” / “Where?” / “Who?” / “Whose?” / “Which?” / “How?”
- Names items fluently
- Uses sentences when describing, naming items or answering questions
- Uses verbs in the present and past tense
- Uses the personal pronoun correctly in expression
- Uses prepositions correctly in expression
- Answers the questions What? ”, “ Which? ”, “ Where? ”, “ How? ”, “ Why? ”

Game and social interaction

- To play functionally in independent and group play
- To look at the other children during the game
- To imitate children in the game
- To participate in socio-dramatic games

Personal autonomy

- Dress / undress
- To take his pants off
- To take on / off his blouse
- Self-service
- To use the spoon and fork independently

The parents periodically participated in therapy to see how the therapists work and followed the same methods at home. Data were taken for each objective. Although progress was slower, the trend was negative for problematic behaviours and positive for goals aimed at increasing the frequency of behaviours.

The final evaluation was carried out on 13.12.2020. A. made progress in language and learning skills. Problematic behaviours were reduced, so A. was prepared to attend mainstream school with a specialized shadow.

The principles of intervention in the Applied Behaviour Analysis and the methods used influenced the progress made by A. in each area of development.

Next, a new intervention plan will be drawn up in which both therapy and school goals will be set. The multidisciplinary team will be reorganized, together with the shadow who accompanies A. to school, the teacher and the support teacher, each objective will be divided into small steps and the methods of teaching, evaluation, the type of help that A will benefit from will be established and also the reward system to increase his motivation to learn.

VII.2. Case study 2

T, 6 years old, comes from a family with 2 children. He lives with his mother, father and older sister in the countryside. He is integrated in a mainstream school, being enrolled in school in grade 0. His mother is 36 years old, has a postgraduate degree and works in banking and his father is 40 years old, post-secondary education and works in the police. T. has a diagnosis of ASD, impaired activity and attention and expressive language disorder.

From the perspective of T.'s mother, his evolution is obvious, especially regarding social interaction. T is aware of the presence of parents, constantly looking for their company. However, he is having difficulty in generalizing. He still fails to be in all environments as he is at home or in therapy: to be involved, to communicate and to take the initiative.

The first assessment was made when T. was 4 years and 8 months old. The evaluation period was 19.08.2019-17.11.2019. The personalized intervention plan was made on 01.12.2019.

The specific objectives were:

Behaviour

- Reducing the frequency, intensity and duration of shouting, hitting and crying behaviours
- Reducing the behaviour of destroying objects
- Reducing self-stimulation behaviours - repetition of texts, advertisements, nonsense

Reducing behavioural problems was highly prioritized in this plan. Both frequency and descriptive context data (ABC sheets) were taken to see exactly what the function of these behaviours was. Once the main function was established, the procedure that was used in all environments (home, therapy, school) was established.

- To respond verbally when he is called by name and to make eye contact
- To wait without touching the materials
- To wait for a delayed reward
- To look at the materials on the table and make eye contact before the request and after the answer to get feedback

Visual attention

- To solve a puzzle of at least 5 pieces, offered in groups
- To sort non-identical items

Imitation

- To imitate actions with objects
- To imitate fine motor movements
- To imitate gross motor movements
- To imitate sentences / phrases

Language development

- To ask for objects needed for an activity
- To ask for attention
- To ask for something using sentences
- To ask for help
- To use the personal pronoun correctly in speech
- To name acquaintances
- To name items fluently

Independent play and parallel play

- To play functionally with at least 3 toys
- To make various comments during the game
- To look at the other children during the game
- To imitate children in the game

Academic skills

- To color in outline
- To draw lines and geometric shapes

Personal autonomy

- To follow all the steps, independently, at the toilet

During the intervention, each step explained in this plan was followed and data were taken for each objective. Parents attended therapy sessions, learned how to use the techniques used by therapists, asked questions, and continued the same intervention at home. Without parental involvement and continued intervention at home and in other settings, progress would have been very small.

The final evaluation was carried out on 15.09.2020. T. made visible progress in all areas of skill assessed. His language became much more functional, his behavioural problems diminished and his pace of learning increased.

VII.3. Case study 3

M., aged 7, lives with her parents in the urban area, in Cluj County. She is integrated in a mainstream school, being enrolled in the first grade. She goes to school accompanied by one of her parents. She is diagnosed with ASD and ADHD (Attention Deficit Hyperactivity Disorder).

So far the parents are very proud of M. She has made a lot of progress from their point of view, from a child who at the age of 4 did not say "mom", now she is at school and has average school results. Her mother is the happiest because M. is starting to make friends.

The initial assessment was performed between 13.08.2019-23.09.2019, when M. was 6 years and 11 months old, in order to develop a personalized intervention plan, based on which to continue the intervention based on the principles of Applied Behaviour Analysis. For this, the ABLLS-R test - Assessment of basic language and learning skills was used.

The personalized intervention plan was made on 27.10.2019 and the objectives that were pursued were the following:

Behaviour

- Reducing behaviours that have the function of avoiding unpleasant activities (writing) at school
- Increasing the level of attention (eye contact and understanding) at school
- Increasing fluency in routine activities - at home

Cooperation, attention and fluency

- To seek adult approval after completing a task
- To identify an object by looking at an adult
- To respond to gestures
- To continue / extend a pattern
- To solve puzzles with irregular pieces
- To sort images by criteria (length, size, intensity, etc.)
- To arrange images chronologically (sequential)
- To solve mazes
- To locate objects in complex images

Language development

- To name items using sentences (eg "I see a...", "There are some...", "Here is a...");
- To provide answers that complete a logical association ("The bee goes to ... the hive ..." / "The cow gives us ... milk ...")
- To use sentences with the verb-noun or noun-adjective structure (eg "It's an old car")
- To complete different sentences during daily activities
- To complete different songs and fun expressions
- To use the definite and indefinite article
- To use the plural of nouns correctly
- To use verbs correctly in the past tense
- To select and say "same / different"
- To use adjectives correctly in speech
- To identify and name an object when told a characteristic of it ("What is red?", "Which is big?", "Who is tall?", Etc.), in an exposure of 3 objects
- To select non-examples ("What's not red?", "Not big", etc.)
- To describe an item using the noun-adjective structure ("The car is red")
- To use the personal pronoun correctly in speech

- To use prepositions correctly in speech (under, under, in, next to, in front of, behind, away, close, etc.)
- To identify and name certain locations in pictures and reality
- To name the category when presented with a set of items
- To complete a sentence with the category when the object is stated ("The lion is a...".)
- To identify the object when the category is stated ("What is an animal?" - in a multi-item exposure, or "Tell me an animal" – without visual support)
- To identify and name the object when told the function (with visual support, exposure of 3)
- To name the function of an object ("What do you do with ...")
- To complete a sentence with the name of the object when the function is stated or with the function when the object is stated (without visual support)
- To answer the questions "What? Where? Whose? Who?"
- To ask using eye contact
- To request information using the question "What? / Where? / Whose? / Who? "

Game and social interaction

- To do independent activities outdoors or indoors (Instruction: "Play alone")
- To play with the appropriate toys
- To make comments while playing
- To do different actions with the objects from thematic games
- To participate in board games
- To participate in socio-dramatic games

Objectives for the group

- To play interactively with other children, to participate in games coordinated by other children
- To offer and share items with others
- To look for the missing person
- To actively seek the attention of others, to maintain the attention of others
- To watch the children in the group
- To respond to instructions according to a criterion (eg "Who has a red T-shirt get up!")
- To raise her hand and answer a question
- To learn new skills in the group

- To complete a form and bring it to the adult
- To stand properly during the transition from one activity to another

Academic skills

- To identify and name the letters
- To match the word to the picture
- To match word for word
- To count to a given number
- To count randomly placed objects
- To name the numbers in order (0-10)
- To match number to quantity
- To color in outline
- To draw lines and geometric shapes
- To copy the numbers according to the pattern
- To copy curved lines
- To copy letters according to the pattern
- To write letters and numbers after dictation

Data were taken in each therapy session, on daily monitoring sheets. Each time, if M. needed a prompt to answer, the therapist came back to the instruction / question / requirement, so that M. could provide an independent answer. The token system was used, both in therapy and at school. Periodically, one of the therapists went to school with her parents.

The final evaluation was made on 05.10.2020. M. has made visible progress in all areas of expertise assessed. Next, a new intervention plan will be drawn up in which both therapy and school goals will be set.

VII.4. Case study 4

D., 7 years old, lives with his mother, father and younger sister. He is integrated into special education, in grade 0 and is described by his parents as "a happy, kind and very energetic child". D. has Spina bifida occulta, a condition of the spine and from a neurological point of view there is a major risk of epilepsy. D.'s journey was very satisfying during the 5 years of therapy, given that he did not speak at all when he started therapy, and now he has

become a cheerful boy who reads and is quite independent in his activities of personal autonomy.

The initial evaluation was carried out between 15.08.2019-23.09.2019, in order to design a personalized intervention plan, based on which to continue the intervention based on the principles of Applied Behaviour Analysis.

The intervention plan was made on 28.03.2021 and the objectives were the following:

Behaviour

- Frequency reduction of verbal self-stimulation - repetition of words and phrases

Development of visual attention

- To sort a set of images by criteria
- To arrange a set of images chronologically (sequential)

Development of auditory attention and receptive language

- To select an item based on 1 or 2 features

Development of expressive language

- To ask using prepositions
- To ask using personal pronouns
- To ask for information using the questions: Which one? What the? Where? How? Who? Whose?
- To ask for permission
- To name items and describe situations using sentences
- To use prepositions correctly in the sentence
- To use pronouns in expression
- To answer the questions "Where?", "What?", "Who?", "Whose?", "How?"
- To identify the category when he is given two or more items
- To identify the object when he is told the category, function or characteristic of the object

Game and social interaction

- To play with different objects and talk while playing with the other children
- To participate in games coordinated by other children
- To participate in interactive motor games
- To look at others during social interaction

- To show interest in the behaviour of others
- To demonstrate joint attention

Academic skills

- To color in outline
- To draw lines and geometric shapes
- To write letters and numbers
- To copy letters according to the pattern
- To copy numbers by model
- To write letters after dictation
- To cut using scissors
- To paste images into appropriate positions

Development of gross and fine motor skills

- To run properly
- To ride a tricycle
- To throw a ball in the air and catch it with your hands
- To jump forward
- To kick the ball towards the football gate or towards another child
- To put hooks on the rope
- To put the lid on the jar

Development of personal autonomy

- To close and open buttons
- To brush his teeth

The personalized intervention plan was made for about a year, so I prioritized certain goals and then moved on to the next ones. I collaborated with parents and teachers. I filled out daily sheets, taking data on each objective. Once an objective was reached, I periodically returned to it (for maintenance) and tested that objective in different new environments, with new people (for generalization).

The final evaluation was carried out on 20.02.2021. D. has made visible progress in all areas of expertise assessed. His language became much more functional, self-stimulation decreased and the pace of learning increased.

VII.5. Case study 5

R., 10 years old, lives with his mother, father and younger sister. He is integrated in mainstream school, being enrolled in the third grade. He goes to school with a specialized shadow. R. has a diagnosis of Autism Spectrum Disorder. The parents' expectations regarding the intervention are: the development of independence, verbal and emotional communication. R. has had a good evolution but we still need to intervene on the development of communication skills, behaviour in society and control of emotions.

The initial evaluation was carried out between 20.08.2019 and 30.09.2019. The evaluation was made in order to develop a personalized intervention plan, based on which to continue the intervention based on the principles of Applied Behaviour Analysis. The ABLLS-R test was used for evaluation.

The personalized intervention plan was made on 29.10.2019 and the objectives were the following:

Social interaction and behavioural control

- Reducing of aggressive behaviours
- Managing emotions
- Developing relationship skills with other children
- To get the children's attention
- To initiate a game
- To get into a progressing children's game
- To take no for an answer
- To understand another person's perspective

Functional language development

- To ask using eye contact
- To ask using sentences
- To ask for attention
- To ask using prepositions
- To ask about future events
- To ask for information
- To name items fluently
- To use sentences when describing, naming items or answering questions

- To use the definite and indefinite article
- To use the plural of nouns correctly
- To use verbs in the present tense (1st, 2nd, 3rd person, singular and plural), past and

future

- To describe complex images
- To describe problematic situations
- To recognize and name personal emotions and moods
- To describe experiences
- To name the emotional states associated with a vocal response (eg, "I'm sorry", "I'm sorry you're sick", "I'm glad you came")
- To name behaviours encountered in social interaction ("is ashamed", "is busy")
- To provide multiple community-related answers (eg, "What can you do in the park / school / home / cinema?" - Provide at least 3 different answers)
- To answer the question "How?"
- To answer the question "Why?"
- To describe the stages of an activity, what happened before and after
- To have a conversation with a child (Make at least 5 conversational exchanges on 10 different topics. Also pay attention if he makes a new comment or asks a new question)
- To tell stories

Objectives for group therapy

- To offer and share items or food with others
- To look for the missing person
- To look at others during social interaction
- To initiate greeting
- To change his behaviour according to the actions of the partner
- To help others in an activity
- To know the preferences of others and to draw their attention to the objects of interest
- To watch the reactions of others during a conversation
- To generalize the skills learned, in groups

Personal autonomy

- To close / open the buttons on his clothes

- To arrange his clothes
- To tie his shoe laces
- To eat a variety of foods
- To eat by himself, without a tablet

During the intervention, data were taken on daily monitoring sheets. Priority objectives were chosen and once they were achieved, other objectives were chosen. The parents periodically participated in therapy to see how the therapists work and used the same methods at home.

The final evaluation was carried out on 06.04.2021. The principles of intervention in the Applied Behaviour Analysis and the methods used influenced the progress made by R. in each area of development.

Next, a new intervention plan will be drawn up in which both therapy and school goals will be set. Each objective will be divided into small steps and the teaching and assessment methods, the type of help that R. needs and the reward system for increasing the motivation to learn will be established.

VII.6. Conclusions

All 5 participants made progress following the intervention based on the principles of Applied Behaviour Analysis, in terms of language development and learning skills. The most visible progress was made in the areas of visual attention, requests, verbal response, syntax and grammar, writing skills and social interaction. Following an intensive program of personalized intervention, with specialists who are trained in Applied Behaviour Analysis, students will be better prepared to integrate into the education system.

We consider it important to use complex, curriculum-based assessment tests that assess all areas of development, so that the intervention is as complex as possible and the objectives are clear and specific. Dividing the objectives into learning stages was also very beneficial for the children. They went through each stage one by one and thus learning was faster and the monitoring was facilitated.

The intervention was performed both individually and in groups. For social interaction skills and group rules, it is very important that these children interact with other children their age, and that the environment in which the intervention takes place is as similar as possible to the school environment.

The limitations of the research are primarily those due to the type of research - the case study. This is qualitative research, and the results cannot be generalized. But this type of research can help us to understand and analyze in depth different variables and their influence on each case. The fact that the period of observation, intervention and data collection was of about 2 years, helped us to better see the evolution of each child.

Another limitation could be the fact that the 5 children were very different. The variability in the characteristics of the Autism Spectrum Disorder for each individual is a known fact. For this reason, it is important for the intervention to be individualized.

Next, we can study how well these children managed to integrate into the education system. What are the methods that can be adapted and applied to the classroom by the teacher and what is the effect of their application on the quality of integration, on the interaction between students, between the student with ASD and the teacher, on class management and student performance.

CHAPTER VIII. Linguistic adaptation and validation of the 'Teachers' Self-Efficacy for Autism Spectrum Disorder Inclusion" Scale (TSE-ASDI)

The Teachers' Self-Efficacy for Autism Spectrum Disorder Inclusion Scale (TSE-ASDI) is the first scale to measure the self-efficacy of teachers who work with children diagnosed with ASD in inclusive settings, a reliable instrument that can be used by trainers and researchers for students, beginner teachers and also experienced teachers (Catalano, 2018).

This study was intended to make a linguistic adaptation and validation of the TSE-ASDI scale in Romanian. We also aimed to analyze teachers' self-efficacy by performing correlational analysis to test the relationships between teachers' self-efficacy and other variables such as: age, level of education, participation in training courses and experience with individuals with ASD.

This tool was developed based on five factors that teachers and students considered essential for teaching ASD students: a) developing and understanding students' needs through formal and informal assessments; b) supporting social communication; c) managing inappropriate behaviours; d) curricular and instructional adaptation and e) communication and collaboration with interdisciplinary team members and parents (Catalano, 2018).

Our initial sample consisted of 202 participants. Participants (N = 202) completed a questionnaire about demographic characteristics and data about their experience in interacting with students with ASD and teaching experience and the TSE-ASDI scale (Catalano, 2018), translated and adapted into Romanian. Two weeks after the first data collection, participants were invited to complete the scale again. 60% of participants (N = 122) completed the scale for the second time and their answers were statistically analyzed.

The total sample size is representative for the studied population, being calculated for an effect size $|\rho| = 0.3$ and α err prob. = 0.05.

Linguistic translation and validation took place in stages, following the recommendations of the literature (Brislin, 1976):

- Obtaining permission to use the scale in the study
- Translation of the scale into Romanian, by two authorized Romanian translators
- Revision and adaptation of the translated version by a group of experts in the field of psychology, specializing in the field of Autism Spectrum Disorders
- Retrospective stage - translation of the scale into English by a licensed certified translator, without disclosing the purpose of the study

- Comparing the original version of the scale with the version obtained in the retroversion phase, by a group of experts in the field of Education and Autism Spectrum Disorders and improving translation

- Completion of the scale by the participants

- Testing psychometric properties

The fidelity of the Romanian version of the TSE-ASDI scale was tested using the internal consistency coefficient. To analyze the internal fidelity of the translated version of TSE-ASDI, we calculated Alpha Cronbach for the full sample and sub-samples of students and teachers who teach in kindergarten and primary school.

Then, the equivalence between the two tests was tested. The Wilcoxon test of classified signs was used to verify that the medians of the two versions, both original and translated, differed significantly (Wilcoxon, 1945). The rank correlation coefficients (Spearman, 1904) were calculated for the scores of both tests. The IBM SPSS Statistics 20 (2011) package was used for statistical data processing.

We also examined the correlations between respondents' self-efficacy and age, level of education, experience interacting with ASD students, ASD training and teaching experience.

The results of the language validation process indicate that this scale is a valid tool for measuring teachers' self-efficacy in relation to the inclusion of students with ASD in education. Internal consistency values indicated high scale validity. The result obtained in this study is congruent with that reported by G. Catalano (2018).

The results also showed the equivalence between the first and second testing, which indicates a strong fidelity of the scale. However, the correlations between respondents' self-efficacy and age, level of education, experience of interacting with ASD students, ASD training and teaching experience are weak or negligible.

Among the limitations of this study we mention the sample size (N = 122 participants), the small percentage of participants who completed the scale for the second time (60%) and the heterogeneous nature of the sample. Measuring the psychometric properties of the scale on a larger sample would be necessary for the use of the scale for the Romanian population.

The results of this study could support the extension of research, in the sense of using the translated version of TSE-ASDI (Catalano, 2018) for students and teachers in kindergarten and primary school. However, caution is advised in the use of the scale for the

Romanian population and further research is needed on larger and more homogeneous samples in order to have a cultural validation of the scale for the Romanian population.

CHAPTER IX. Final conclusions

This paper contains both theoretical-fundamental and practical-applied research. It addresses and analyzes the issue of Autism Spectrum Disorders, the inclusion of students with Autism Spectrum Disorders in mainstream schools, the development of adaptive behaviour, intervention techniques that facilitate learning and self-efficacy of teachers working in classrooms where students with Autism Spectrum Disorders are integrated. There is a close interpenetration and interdependence between the theoretical-fundamental and the practical-applied part, but the research topics are mainly correlated with the practice of education.

The research contains both an observational part, with a descriptive character that gives us information about the relationships between the studied variables, and an experimental part, which involves quantitative investigations.

Through this complex research we wanted to analyze the factors associated with the development of adaptive behaviour and learning skills of children diagnosed with Autism Spectrum Disorders, as well as factors associated with the level of self-efficacy of teachers who teach classes where these children are included. We believe that understanding these factors is important for facilitating the teaching-learning process and for integrating these special students into mainstream school.

Adaptive behaviour is a term that refers to the age-appropriate behaviours that a person must perform independently in order to function well in daily life and integrate into society. Models of adaptive behaviour include communication skills, personal autonomy, avoiding danger, observance of school rules, social skills, leisure skills, but also the ability to work, to take personal responsibility.

In the first study, we analyzed the relationship between several factors, internal or external, and the level of development of adaptive behaviour in children diagnosed with ASD. The analyzed factors were: the type of schooling, age, IQ, socio-economic status of the family, the type of therapeutic services that the student benefits from and the type of educational support (the presence of the shadow, curricular adaptation and the presence of the support teacher). The results showed a significant positive correlation between IQ and the

level of adaptive behaviour and weak associations between the other variables and adaptive behaviour.

Adaptive behaviour and learning skills are essential for the integration of the child with Autism Spectrum Disorder into mainstream education. Children diagnosed with ASD may experience a number of difficulties in learning adaptive skills.

In the second study, we analyzed the influence of using methods adapted to the principles of behaviour analysis applied to language development and learning skills in 5 school-age children with Autism Spectrum Disorders. For this we used the case study method. Data collection was performed over approximately 2 years, the intervention period being different from case to case. Each case has made progress in the development of language and learning skills, with the aim of shaping independent behaviour for the social integration of these children, in particular their integration into the school system.

But in addition to preparing children for integration, it is necessary to train teachers to meet the challenges that arise from the integration of these special children in the classroom. Preparing teachers for inclusion should focus on improving their self-efficacy (Forlin, 2010; Shaukat, 2013). Therefore, a final objective of this paper was to provide trainers with a scale that measures the level of self-efficacy of teachers who teach in classes that include students with Autism Spectrum Disorders.

Therefore, we made a language adaptation of the “Teachers’ Self-Efficacy for Autism Spectrum Disorder Inclusion” Scale (TSE-ASDI). Then we also studied the self-efficacy of teachers by performing correlational analysis to test the relationships between teacher self-efficacy and other variables such as: age, level of education, participation in training courses and experience with individuals with ASD.

The results of the language validation process indicate that this scale is a valid tool for measuring teachers' self-efficacy in relation to the inclusion of students with ASD in education. Internal consistency values indicated high scale validity. The result obtained in this study is congruent with that reported by its author, G. Catalano (2018).

The results also showed the equivalence between the first and second testing, which indicates a strong fidelity of the scale. However, the correlations between respondents' self-efficacy and age, level of education, experience of interacting with ASD students, ASD training, and teaching experience are weak or negligible.

The integration of a child with ASD into mainstream school must be seen both in terms of his or her level of development and in terms of the teachers' level of preparation and

self-efficacy in relation to the integration process. All these factors studied can facilitate the integration process.

IX.1. The value of research and personal contributions

This research makes an important contribution to the field of inclusive education through the development of instruments ("Teachers' Self-Efficacy Scale for Autism Spectrum Disorder Inclusion" Scale - TSE-ASDI) and the presentation of intervention methods and techniques according to ABA principles.

At a practical level, based on this paper, a guide has been developed for teachers and other specialists, which aims to provide resources to facilitate the learning and school integration of the child with ASD. The book is entitled "Teach Me to Learn - Scientifically Validated Interventions in the Context of Inclusion and Recovery of the Child with Autism Spectrum Disorder."

This book contains information about the characteristics of students with Autism Spectrum Disorders, principles and practical examples in the field of inclusion of these students in mainstream schools and curricular adaptation, real testimonies of teachers and shadows who actively participated in the inclusion process, principles from Applied Behaviour Analysis and practical methods that can facilitate interaction, communication and teaching in classrooms where students with SEN are included, but also in typical classes. Last but not least, the readers can find many resources that will be useful to any specialist working with students with SEN: questionnaires, screenings, interviews, models of intervention plans, data collection forms, daily files, adapted lesson plan.

In terms of relevance to the scientific community, the results of studies will be useful for understanding the development of adaptive behaviour and learning skills of children with ASD and for further research in this area.

In addition, the linguistic validation of the "Teachers' Self-Efficacy for Autism Spectrum Disorder Inclusion" Scale, it is important to have an assessment tool in our country that can be used in research on the issue of inclusion of students with ASD in mainstream schools. Knowing the skills, the difficulties perceived by teachers in teaching classes where students with ASD are included, and the extent to which they feel prepared to cope, could provide a direction for designing effective training programs for universities and other institutions and organizations involved in training teachers.

Bibliography

Achurraa, C., & Villardónb, L. (2013). Teacher self-efficacy and student learning. *The European Journal of Social and Behavioural Science*, 1(1), 366-383. Retrieved from [http://dx.doi.org/10.15405/FutureAcademy/ejsbs\(2301-2218\).2012.2.17](http://dx.doi.org/10.15405/FutureAcademy/ejsbs(2301-2218).2012.2.17)

APA American Psychiatric Association (2016). *DSM – 5 Manual de diagnostic și clasificare statistică a tulburărilor mintale*. Ediția a 5-a. APA Publishing

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review*, 84(2), 191-215. doi: 10.1037/0033-295X.84.2.191

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behaviour* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998).

Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 287-305). Greenwich, CT: Information Age.

Bîrsanu, T. (2012). *Dezontogeneza în etapele de dezvoltare umană*. Editura „Magic Print”.

Canabarro, R. C. C., Teixeira, M. C. T. V., & Schmidt, C. (2018). Translation and Transcultural Adaptation of the Autism Self-Efficacy Scale for Teachers of Students with Autism: Autism Self-Efficacy Scale for Teachers (Asset). *Brazilian Journal of Special Education*, 24 (2), 229-246. <https://dx.doi.org/10.1590/s1413-65382418000200006>

Carpenter, M., Nagell, K. & Tomasello, M. (1998). Social cognition, joint attention, and communicative competence from 9 to 15 months of age. *Monogr Soc Res Child Dev*; 63:iv, 1-143.

Catalano, C. G. (2018). *Developing and Validating the Teacher Self-Efficacy for Teaching Students with Autism Spectrum Disorder in Inclusive Classrooms (TSE-ASDI) Scale*. Theses, Dissertations and Culminating Projects. 200. <https://digitalcommons.montclair.edu/etd/200>.

Condrey, J. H. (2015). *General Education Teacher Perceptions of Self-Efficacy Regarding Teaching Students with Autism in Inclusion Settings*. Gardner-Webb University School of Education. ProQuest 10022238

EASNIE. 2018. *European Agency Statistics on Inclusive Education: 2016 Dataset Cross-Country Report*. (J. Ramberg, A. Lénárt and A. Watkins, eds.). Odense, Denmark; p. 52.

Farley, M. A., McMahon, W. M., Fombonne, E., Jenson, W. R., Miller, J., Gardner, M., et al. (2009). Twenty-year outcome for individuals with autism and average or near-average cognitive abilities. *Autism Research*, 2(2), 109–118.

Forlin, C. (2010). Teacher education reform for enhancing teachers' preparedness for inclusion. *International Journal of Inclusive Education*, 14 (7), 649-653.

Gherguț, A. (2007). Sinteze de psihopedagogie specială. Ghid pentru concursuri și examene de obținere a gradelor didactice. Ediția II-a. Editura Polirom

Guskey, T. R., (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education*, 4(1), 63-69. doi: 10.1016/0742-051X(88)90025-X

Harrison and Oakland, 2003 P. Harrison, T. Oakland; Adaptive Behaviour Assessment System (ABAS-II), the Psychological Corporation, San Antonio, TX (2003)

Heber, R. (1959). A manual on terminology and classification in mental retardation. *American Journal of Mental Deficiency*, 64, *Mogr. Suppl.* 2., ix, 111.

Kamau, L. Z. (2014). Applied behaviour analysis based interventions in public schools: Understanding factors that hinder adoption, implementation and maintainance (Order No. 3665227). Available from ProQuest Central. (1637646597). Retrieved from <https://search-proquest-com.am.e-nformation.ro/docview/1637646597?accountid=136549>

Kanne, S. M., Gerber, A. J., Quirnbach, L. M., Sparrow, S. S., Cicchetti, D. V., & Saulnier, C. A. (2011). The role of adaptive behaviour in autism spectrum disorders: Implications for functional outcome. *Journal of Autism and Developmental Disorders*, 41(8), 1007–1018. doi:10.1007/s10803-010-1126-4.

Kenworthy, L., Case, L., Harms, M. B., Martin, A., & Wallace, G. L. (2010). Adaptive behaviour ratings correlate with symptomatology and IQ among individuals with high-functioning autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 40, 416–423.

Klin, A., McPartland, J., & Volkmar, F. R. (2005). Asperger syndrome. In F. R. Volkmar, R. Paul, A. Klin, & D. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders: Vol 1. Diagnosis, development, neurobiology, and behaviour* (3rd ed., pp. 88–125). Hoboken, NJ: John Wiley & Sons.

Klin, A., Saulnier, C. A., Sparrow, S. S., Cicchetti, D. V., Volkmar, F. R., & Lord, C. (2007). Social and communication abilities and disabilities in higher functioning individuals with autism spectrum disorders: The Vineland and the ADOS. *Journal of Autism and Developmental Disorders*, 37(4), 748–759.

Koegel, R. L., Koegel, L. K., Vernon, T. W., & Brookman-Frazee, L. I. (2010). Empirically supported pivotal response treatment for children with autism 119 spectrum disorders. In J. Weisz & A. Kazdin (Eds.), *Evidence-based psychotherapies for children and adolescents*. New York: Guilford Press

Liss, M., Harel, B., Fein, D., Allen, D., Dunn, M., Feinstein, C., et al. (2001). Predictors and correlates of adaptive functioning in children with developmental disorders. *Journal of Autism and Developmental Disorders*, 31(2), 219–230.

Lovaas, O. I. (1987). Behavioural treatment and normal educational and intellectual functioning in young autistic children. *Journal of Consulting and Clinical Psychology*, 55, 3–9.

Love, Abigail M. A. (2016) "Development of a Self-Efficacy Scale for Teachers Who Teach Kids With Autism Spectrum Disorder". Theses and Dissertations--Educational, School, and Counseling Psychology. 45. https://uknowledge.uky.edu/edp_etds/45

Maenner M. J. , Shaw K. A. , Baio J., et al. (2020). Prevalence of Autism Spectrum Disorder Among Children Aged 8 Years — Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2016. *MMWR Surveill Summ* 2020;69(No. SS-4):1–12. DOI: <http://dx.doi.org/10.15585/mmwr.ss6904a1>.

McCullough, M. I. (2014). *Teacher Self-Efficacy in Working With Children With Autism in General Education*, Walden University, College of Social and Behavioural Sciences.

National Research Council. (2001). *Educating children with autism*. In C. Lord & J. P. McGee (Eds.), *Committee on education interventions for children with autism*. Division of Behavioural and Social Sciences and Education. Washington, DC: National Academy Press.

NICE National Institute for Health and Care Excellence. <https://www.nice.org.uk/guidance/qs51>

Nihira, K., Foster, R., & Spencer, L. (1968). Measurement of adaptive behaviour: A descriptive system for mental retardates. *American Journal of Orthopsychiatry*, 38(4), 622–634. <https://doi.org/10.1111/j.1939-0025.1968.tb02430.x>

Quill, K. A. (2000). *Do-watch-listen-say: Social and communication intervention for children with autism* (pp. 19-20). Baltimore, MD: Paul H. Brookes Pub.

Partington, J. W. (2006). *The Assessment of Basic Language and Learning Skills - Revised (The ABLLS-R Guide): Scoring Instructions and IEP Development Guide*. (Version 3.0 ed.). Pleasant Hill, CA: Behaviour Analysts Inc.

Perry, A., Flanagan, H. E., Geier, J. D., & Freeman, N. L. (2009). Brief report: The Vineland Adaptive Behaviour Scales in young children with autism spectrum disorders at different cognitive levels. *Journal of Autism and Developmental Disorders*, 39(7), 1066–1078.

Raven, J., Raven, J. C. & Court, J. H. (2005). *Matrici progressive color*. Ediția în limba română. Romanian Psychological Testing Services.

Ross-Hill, R. (2009). Teacher attitude towards inclusion practices and special needs students, *Journal of Research in Special Educational Needs*, 9: 188-198, doi:10.1111/j.1471-3802.2009.01135.x

Roșan, A. & Bălan-Baconschi, C (2015) Dizabilitatea intelectuală in Roșan, A. (Ed.). (2015). *Psihopedagogie specială. Modele de evaluare și intervenție*. Iași: Polirom, pg. 99 -123

Ruble, L. A., Toland, M. D., Birdwhistell, J. L., McGrew, J. H., Usher, E. L. (2013). Preliminary Study of the Autism Self-Efficacy Scale for Teachers (ASSET). *Research in Autism Spectrum Disorders*, 7(9), 1151-1159. <https://doi.org/10.1016/j.rasd.2013.06.006>

Saulnier, C. A., & Klin, A. (2007). Brief report: Social and communication abilities and disabilities in higher functioning individuals with autism and Asperger syndrome. *Journal of Autism and Developmental Disorders*, 37(4), 788–793.

Sălăgean, S. C. (2019). *Evaluarea, eficientizarea și monitorizarea programelor de educație incluzivă. Ensuring Equal Opportunities Through Educational Management and Psychopedagogical Assistance in European Context*, Coordonator științific: Prof. univ. dr. Ramona LILE, Editura Pro Universitaria, ISBN 978-606-26-1063-0.

Sălăgean, C. S., & Costea-Bărluțiu, (2019). An Integrative Analysis Of Stereotypic Behaviours In Autism Spectrum Disorders. A Case Presentation. *Studia Universitatis Babeș-Bolyai, Psychologia-Paedagogia*, 64(1).

Sălăgean, S. C. & Stan, N. C. (2020). Reducing vocal self-stimulation in children with autism spectrum disorders. 2019. The European Proceedings of Social & Behavioural Sciences EpSBS e-ISSN: 2357-1330. Conference: ERD 2019 - Education, Reflection, Development, Seventh Edition. doi:10.15405/epsbs.2020.06.3

Sălăgean, C. S. (2020). *Învățăm să învăț - Intervenții validate științific în contextual incluziunii și al recuperării copilului cu tulburare de spectru autist*. Editura Adventus. Cernica.

Schalock, R. L. (1999). The merging of adaptive behaviour and intelligence: Implications for the field of mental retardation. En R. L. Schalock (Ed.), *Adaptive behaviour:*

Conceptual basis, measurement and use. Washington, DC: American Association on Mental Retardation.

Sharma, Umesh & Loreman, Tim & Forlin, Chris. (2011). Measuring teacher efficacy to implement inclusive practices. *Journal of Research in Special Educational Needs*. 12. 12 - 21. 10.1111/j.1471-3802.2011.01200.x.

Shaukat, S. (2013). Impact of Demographic Variables in the Development of Prospective Teachers' Efficacy Beliefs towards Inclusive Practices in the Context of Pakistan. *The European Journal of Social & Behavioural Sciences* (eISSN: 2301-2218), 484-508. [http://dx.doi.org/10.15405/FutureAcademy/ejsbs\(2301-2218\).2012.3.9](http://dx.doi.org/10.15405/FutureAcademy/ejsbs(2301-2218).2012.3.9)

Soodak, L., Podell, D. M., & Lehman, L. R. (1998). Teacher, student, and school attributes as predictors of teachers' responses to inclusion. *The Journal of Special Education*, 31(4), 480-497. doi: 10.1177/002246699803100405

Sparrow, S., Balla, D. A., & Cicchetti, D. (1984). *Vineland Adaptive Behaviour Scales (expanded form)*. Circle Pine, MN: American Guidance Service.

Sparrow, S. S., Cicchetti, D., & Balla, D. A. (2005). *Vineland Adaptive Behaviour Scales—2nd edition manual*. Minneapolis, MN: NCS Pearson, Inc.

Thompson, J. R., McGrew, K. S., & Bruininks, R. H. (1999). Adaptive behaviour and maladaptive behaviour: Functional and structural characteristics. In R. L. Schalock (Ed.), *Adaptive behaviour and its measurement: Implications for the field of mental retardation* (pp. 15–42). Washington, DC: American Association on Mental Retardation.

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783-805. doi:10.1016/S0742-051X(01)00036-1

U.S. Department of Education, Office of Special Education Programs, Individuals with Disabilities Education Act (IDEA) database, retrieved February 20, 2020, from https://nces.ed.gov/programs/coe/indicator_cgg.asp

Vasiliu, D., Pascal, D. A. și Marinescu, G. (2015). Evaluarea autoeficacității. Proprietăți psihometrice pentru Self-Efficacy Scales: SES. *Revista de studii psihologice*, nr.2, Universitatea Hyperion, București, pp.210-222

White, M. L., Smith, J. D., Smith, T. E. C., & Stodden, R. (2012). Autism spectrum disorders. In D. Zager, M. L. Wehmeyer, & R. L. Simpson (Eds.), *Educating students with autism spectrum disorders* (pp. 3-12). New York, NY: Routledge

***UNESCO-IBE, International Bureau of Education, <http://www.ibe.unesco.org/en/document/governance-2009>

***World Declaration on Education for All and Framework for Action to Meet Basic Learning Needs, Adopted by the World Conference on Education for All Meeting Basic Learning Needs Jomtien, Thailand, Published by UNESCO, <https://unesdoc.unesco.org/ark:/48223/pf0000127583>, 1990