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## THE APPLIED BEHAVIORAL ANALYSIS METHOD – A GOOD SUPPORTING PRACTICE FOR DEVELOPING SOCIALLY ACCEPTABLE BEHAVIOUR OF CHILDREN WITH AUTISM AND MENTAL DISABILITY

**B. Boneva\***

A student in the Faculty of Pedagogy, Trakia University, Stara Zagora, Bulgaria

### ABSTRACT

The report presents my student's attempt for research and description of a method that's been verified as a good practice of a social service. Its humane-personal orientation is backed with arguments. The accent is on one of the basic specifics of the "Applied Behavioral Analysis" method – the development of skills for self-help in children with autism and mental disability that lack these skills.

The main research goal is to describe the technology of applying the method via analysis of typical (profile) characteristics in the behavioral models of the specified group of children. In brief is shown the concept the method is based on: modification of the behavior not only in the affected areas but in the whole development of the children with autism and mental disabilities for overcoming their maladaptive behavior and social isolation. The analysis of the empirical results proves the applicability and the practical benefits of the concept that make the method a good practice with a strong multiplicative and sustainable effect.

The main research method is the reflexive analysis supplemented with the case study method. The cases used have been observed by me during my teacher observation in "Day Care Center for Children with Disabilities". A brief meaningful discussion of the results from the work with Applied Behavioral Analysis" method is made.

The conclusion describes the main research product: model of the technological procedures of the Applied Behavioral Analysis" method in a form suitable for application by interested experts.

**Key words:** behavioral analysis; mental disability; autism

### Choosing a Good Supporting Practice for Development of Socially Acceptable Behaviour of Children with Autism and Mental Disability

How do we choose a good supporting practice for persons with development deficiencies? Do they and their families have a choice? Does the society accept their difference or they are stigmatized for being different? Are we inclined to humanity that will give them conditions for making a choice? Not that long ago the choice for the disabled children and their families was the specialized facilities where they remained hidden but today the walls have been destroyed.

But the deinstitutionalization as an optimistic and humane perspective has put forward difficulties – are the parents, the teachers and the society ready to integrate the different, the persons with mental disabilities?

Lots of authors consider the mental disability as a consequence of diffuse organic damages on the brain cortex that result in permanent disturbances in the cognitive sphere and deficit in the intellectual and social behavior. It is also thought that autistic children are mentally disabled. According to other authors in some part of autistic children the intellect is preserved but there are some special features in its purpose.

In 1970-1980s, the autism is thought to be emotional and behavioral violation with specific manifestation that needed special

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\*Correspondence to: *Bilyana Boneva, 6100 Kazanlak, Bulgaria, 17 "Dr.Petar Beron" str. email : bilyana.i.boneva@gmail.com, +359 897 609730*

teaching practices and strategies for intervention. Today autism is defined as complex of deficits expressed in motor, psycho-physiological, emotionally-volitional, cognitive, communicational and speaking disturbances. It is accepted that the damaged personal integrity and identity of the autists functions in and between two points:

- frustration reaching to fears, hostility, aggression and self-aggression
- depression, lowered assertiveness that often forms suicidal dispositions

The consequences are expressed in complex disability – almost insurmountable barrier to the inmost right of existential inclusion in the meaning of the human life – to understand and to be understood.

Lots of studies and practical observations show that the neglected early support leads to durable even permanent behavioral disturbances and/or inadequate emotional, sensor and mental condition. That is why there is an urgent need for good practices to attack with complexity the basic spheres – attention, perceptive and expressive language, educational skills and self-help. Depending on the individual characteristics of the person with deficiencies a reduction of the maladaptive behavior and support for sustaining socially acceptable behavior could be achieved.

The type of need defines the type of support via taking in mind the individual complexes of disturbances and the stereotypes of behavioral characteristics that would allow choosing good methodology, strategy and programme for the described contingent.

### **Some of the most often applied interventions for supporting children with autism and mental disabilities**

There are different models that support the forming of knowledge and skills with practical importance but the problem is that they work only in some of the areas affected by the disturbances. Some of the most widely used models are TEACCH (1) therapy, P.E.C.S. (2), sensor intervention (3), Brain Gym (4), work therapy, art therapy, hypotherapy, sand therapy (5), biofeedback (6) and others.

Dr. Lovaas offers a programme for applied behavioral analysis (Applied Behavior Analysis – ABA), based on the idea that every behavior is learned on the basis of its consequences.

“People with deficits in the development need help to achieve new behavior but help is also needed for giving up the old one – sudden outbursts of anger and exasperation during frustration as well as secluding oneself for hours in obviously senseless ritual games“

Dr. O.I.Lovaas

**Subject** of the text is the efficiency of the “Applied Behavioral Analysis” method as a good supporting practice for building socially important behavior and self help in mentally disabled and autistic children.

**Below** follows a brief and informative presentation of the concept and the technology for the method application – via analysis of typical characteristics in the behavioral models in the specified group of children.

### **THESAURUS**

- **Applied behavioral analysis**

The “Applied Behavioral Analysis” method is developed by O. Ivar Lovaas and his associates in the USA (7).

The ABA method is based on more than 50 years of scientific researches on persons suffering from deceases in the wide spectrum of behavioral disturbances and development disturbances. When applied the ABA is effective because it works on the base of task that stimulate the individual to react.

The aim of the method is to support the person with deficits in forming a socially important behavior and self help. ABA works for improving the cognitive, volitional and the emotional processes and thus it forms socially important purposeful behavior and self help. The method directly influences the basic spheres – attention, imitation, perceptive language, expressive language, educational skills and skills for self help.

The method corrects the maladaptive and destructive behavior as well.

Applying ABA is a good supporting practice via which the children work not only on one and the same task with only one tutor but with all on the tasks set. In this way the children with deficits are easily adaptive, more communicative and thus is also avoided preferences and affiliation to a certain teacher. This gives chance for fast results and an easy socialization.

- **Special educational environment**

The philosophy of the method focuses mainly on the importance of the education in sustained special environment that is not isolated but

close to the natural. It reveals the child as a subject to its acts in the borders of its reactive potential. The individual support is achieved via cooperation, subject to subject communication and interaction with each child for building and sustaining a socially acceptable behavior. The accent is put on three points:

- A sequence of steps adding one fragment after another (task-stimulus and child's reactions) as an integral coherence. This helps achieving a methodical entirety: help in forming the behavior at first in smaller steps that on a later stage unite as a whole – the so called complex task.
- A reward follows each reaction. The emphasis is on those fragments of the behavior that will be achieved successfully by the child and he or she will be given an award. The tasks set could not be dealt with without encouragement and the corresponding awards.
- The parents co-operate actively in the parallel support at home, outside the supporting environment.

The most important condition for achieving results is the systematic and consistent work on one and the same individual programme for reasserting one and the same specific action but with different tutor-specialist. The aim is to achieve easy communication and as a final result to reach the possible to a certain degree adaptation and existential inclusion of the child.

### **Technology for ABA Application**

#### ➤ Observation

The observation determines the stereotypical behavior, the ability to switch between tasks, the fatigue, the results from the tasks and how active the child is. The basic behavioral characteristics for knowing the individual mechanism of the children are also determined.

#### ➤ Instruction

The instruction determines the comprehension of the child. It is exact and brief, e.g.: "Look at me".

After the instruction the child is given a short time from 3 to 5 seconds and is shown a significant stimulus while saying the word, for example "Jigsaw" or "Candy". This helps the child to concentrate on the instructions. After another short time of 2-3 seconds between the instruction and showing of the stimulus the

child should react. If the child completes the task he or she should be given an award.

#### ➤ Awards

The awards used are inner or outer:

- Tactile - hugs, caress, pats
- Verbal approvals – "good"; "great"; "wonderful"
- Acts - hopping, running, stretching, rolling over, laughing, etc..

A good motivating award is avoiding the negatives.

#### ➤ Punishment

In the ABA method the punishment used is the "Time Out". It reduces the signs of maladaptive behavior. It is very important to have a contrast between positives-negatives, a contrast between "yes" and "no".

The child could be time-outed for 3 or 5 minutes but he or she should be calm in the last 30 seconds. The refusal to acknowledge the unacceptable behavior could also serve as punishment if it is sensitively accepted by the child.

### **Register of behavior**

The register of behavior is a system of notes on the behavior that serve to monitor whether ABA is effective or not in order to make corrections in the individual programme for achieving the goals. In ABA the register is kept in a "work box" (8) that contains an archive with the child's epicrisis as well as all the data for the set individual tasks and the regular reports for the results.

### **Some Empirically Established Facts**

As a student in my practice at "Day Care Center for Children with Disabilities" in the town of Kazanlak to follow how does the ABA works I used not only observation but also reflective analysis and case study. A valuable empirical material has been gathered via these two methods and part of it will be shown below. This is evidence for the effect of ABA as a good supporting practice – how the children that were till recently hidden from the decent society "other children" really develop enough skills for existential inclusion.

The research uses data from children aged from 7 to 18 years:

J.G., a boy, 7 years 6 months old, diagnosis generalized development disorder, child's autism;

St.T., a girl, 7 years old, diagnosis atypical autism, moderate to heavy mental disability;

Al.B., a boy, 9 years old, diagnosis expressive speech disorder, combined disorder of behavior and emotions;

Hr.D., a girl, 18 years old, diagnosis heavy mental disability.

#### ABA method instrumentarium:

A diary for reflecting the results of the observation.

Test – for initial assessment – IA (9), subsequent assessment – SA (10), as well as final assessment of the achievements on the basis of five more SA.

Psychological tests and games for reflecting the results in the basic spheres (11) in order to identify the achieved results.

#### Empirical data from the research

J.G. – ABA is implemented when the child is four and a half years old. The result shows that the child needs support in forming socially acceptable behavior in all of the six spheres.

After 18 months of support three times a week J.G. shows improvement even in the initial assessment.

St.T. – ABA is implemented when the child is four years old. Due to the specifics of the autism the child suffers from restraints and significant retardation in all spheres. The subsequent assessment 2,3,4 shows improvement and support for forming socially acceptable behavior is possible.

A.B. – ABA is implemented when the child is six years old. During the support for forming socially acceptable behavior via ABA the analysis shows that the rates of improvement are good and even.

Hr.D., ABA is implemented when the child is 15 years old – The ability for socially important behavior and self help are heavily reduced. The subsequent assessment shows improvement but also a drop in some of the results although insignificant.

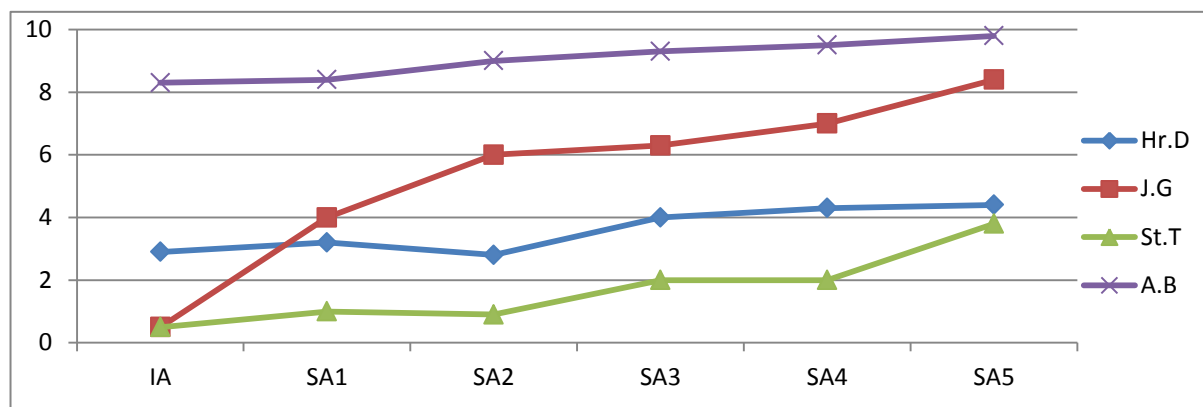


Chart 1 – Empirical data (12)

Note: The maximum score of 176 points in the diagram is equaled to 0  
The minimum score of 0 points is equaled to 10

The results reflected in the diagram show that ABA is a method that leads to significant results in the six spheres of forming socially acceptable behavior and self help.

#### IN CONCLUSION

The applied behavioral analysis is based on the values and the mechanisms of the behaviorism but modified via introducing the subject-subject interaction.

The support by the means of awards is characteristic, including sanctions with features of encouragement.

Applying the “Applied behavioral analysis” builds team interaction between different tutors

– specialists in specific spheres, and the families. This makes it a facilitating method.

#### USED LITERATURE

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2. Kostadinova, K, „Child’s autism – nature, manifestations, problems and solutions „<http://goo.gl/wbjQaR>
3. Levterova – Gadjalova D., (2002) “Actual Problems of the Special Education”. Plovdiv. UP „Paisiy Hilendarski”

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1. Treatment and Education of Autistic and Related Communication Handicapped Children“ – method for correction of communicative disturbances. The method

- improves the quality of the attention of the children and the comprehension, reduces the outbursts of aggression, and improves the rate of successful dealing with the set tasks.
2. Picture Exchange Communication System -A system for communications via exchange of pictures. The therapy is developed by the clinical psychologist Andy Bondy and the speech therapist Lorry Frost. The aim of the method is to teach the children with problems in the development to initiate communication spontaneously and to interact with another person.
  3. Pressing and Brushing – Integration of the senses for teaching the autistic child to function and to overcome the sensor-integrative dysfunction.
  4. Brain Gym - Series of specialized movements that effectively integrate the left and the right brain hemispheres and make learning easy. The specific body movements stimulate separate aspects of brain function.
  5. Dora Calf – analytic approach based mainly on working with the symbolic content of the non-conscious as a source for inner growth and development.
  6. Neurotraining – a method developed by NASA.
  7. That convincingly demonstrates the significant improvement in the functioning of autistic children when applying intensive early integration. They demonstrate they possess procedures for modifying the behavior in all spheres of development. The critics of the behavioral intervention often point out the argument that the method is an experimental procedure with insufficient empirical proves for its effectiveness
  8. Chart for calculating the overall results from the studied six spheres – attention, imitation, perceptive and expressive speech, pre-school skills, skills for self-help.  
Work programmes for targeted training for a certain skill in the specified sphere  
A form for monthly distribution of the work programmes  
A data list for daily reflection of the results  
A list for gathering the initial information – tests
  9. Initial assessment
  10. Subsequent assessment
  11. Spheres of basic levels of skills according to the Applied Behavioral Analysis:  
Sphere 1 Attention – measured from 0-12 in downward order  
Sphere 2 Imitation - measured from 0-12 in downward order  
Sphere 3 Perceptive language - measured from 0-36 in downward order  
Sphere 4 Expressive language - measured from 0-42 in downward order  
Sphere 5 Pre-school educational skills - measured from 0-48 in downward order  
Sphere 6 Self help - measured from 0-24 in downward order
  12. Starting point of the coordinate system – age of the child when introducing the ABA method; vertical axis of the coordinate system – result of the sum of all the six spheres; Horizontal axis of the coordinate system – the six separate spheres are presented as single lines and each shows the spheres of assessment.