

## STATEMENT OF DISSERTATION THESIS

of Assoc. Prof. Elka Georgieva Goranova, PhD for awarding the PhD Degree in the scientific field of 7. "Health and sport", professional area of 7.4. "Public Health", PhD program on the topic: „**Indirect therapy interventions for children with autism spectrum disorders**" by **Tsveta Assenova Kamensky**

**Research supervisors:** Assoc. Prof. Margarita Stankova; Prof. Maria Grozeva, PhD, New Bulgarian University, Department of Health Care and Social Work

### **1. Significance of the research problem in scientific and applied terms.**

The research problem has significant scientific and applied value as it addresses current challenges related to the development and support of children with Autism Spectrum Disorders (ASD) and their families. Thus, the research presented contributes to the understanding of the role of parents as co-therapists and the effectiveness of interventions in which they are actively involved. The problem under study is of great importance since it affects not only the development of children with autism spectrum disorders (ASD) but also their social integration and the quality of life of their families. From a scientific and applied point of view, the development has practical value through the creation and research of the author's "Indirect Intervention Program for the Development of Language and Communication Skills." It examines the effect of parental involvement in the therapeutic process by adapting a tool for assessing children's communicative abilities. The study also contributes to adapting a communicative skills assessment tool. The importance of this work is underlined by the fact that it provides an overview of parent training programs in Bulgaria, which can serve as a basis for improving practices in working with children with autism. Scientifically, the work thoroughly analyzes the neurobiological, genetic, and cognitive aspects of ASD, as well as diagnostic and therapeutic approaches. Key intervention models, including highly structured training programs and targeted intervention practices, are discussed in detail, adding to scientific knowledge in the field.

### **2. Substantiation of the aims and objectives of the dissertation.**

The stated goal of the research is logically justified by the growing need for effective interventions for children with autism spectrum disorders (ASD) that involve active parental involvement. Existing research confirms that educational programs in the natural family environment can significantly improve children's communication skills, language development, and behavior. In this context, the study is not only theoretical but also of high practical value as it aims to develop and implement a specific intervention program tailored to the specificities of children with ASD. The set tasks are structured in detail and correspond to the main objective, providing the necessary steps to achieve it:

- Validation of a toolkit for measuring language-speech dynamics - provides scientific reliability and objectivity in tracking the effects of the intervention. This is key to demonstrating the effectiveness of the proposed program.

- Development of an indirect intervention program with parental involvement—this is a necessary condition for implementing modern therapeutic approaches that rely on intensive family involvement in the child's learning and development process.

- Identification of families willing to participate in the program - this aligns with the absolute need to select participants who are motivated and able to implement the proposed strategies at home.

The selection of diagnostic tools for communication and behavioral assessment of children is an important aspect of objectively monitoring program effects and accurately documenting individual progress.

- Design for tracking program implementation - ensures a systematic approach to program implementation and provides an opportunity to monitor parental involvement.

Collection and analysis of parental feedback allow for qualitative evaluation of the programme from the perspective of families, which is crucial for its refinement and adaptation to the specific needs of children with ASD.

- Mathematical-statistical analysis of the results - ensures objectivity and scientific evidential value of the conclusions drawn.

- Formulation of recommendations for theory and practice - a significant contribution to future research and developing new approaches to working with children with RAS and their families.

The aims and objectives of this dissertation are justified and adequately address the current needs in the field of interventions for children with RA. They not only respond to current research trends but also have the potential to lead to actionable findings that can support the development of effective treatment and support strategies for these children and their families.

### **3. Relevance between the chosen methodology and research approach and the stated aims and objectives of the dissertation.**

The chosen methodology and research approach are fully consistent with the primary goal of the dissertation - to investigate the impact of purposeful, structured, and active parental involvement on the language, speech, and communication development of children with autism spectrum disorders (ASD) and their behavior. The approach is research-informed, grounded in evidence-based models of therapeutic intervention, and includes quantitative and qualitative analysis methods. Preparatory activities, such as signing informed consent, providing information about intervention goals and methods, and pre-training parents, are consistent with ethics, informed consent, and methodological transparency. Including videos and paper-based didactic materials to assist parents ensures a standardized approach to program implementation. The fact that the NBU Departmental Council has approved the research methodology provides additional assurance of its scientific value, validity, and adherence to research standards. The intervention is based on Lev Vygotsky's Proximal Development Theory and Albert Bandura's Social Learning Theory, which are effective in language and cognitive development. The therapeutic model combines approaches from Applied Behavior Analysis (ABA) and classical speech-language pathology to provide a comprehensive and proven approach to promoting language development and communication in children with ASD. The program is delivered over a 12-week week, which the research literature suggests is the optimal period to achieve meaningful results. Its structured, modular organization ensures systematicity, accountability, and gradual progress in children's communication skills. In addition, the effectiveness of the intervention can be tracked:

- Diagnostic tools to assess language and communication development,
- Parental feedback,
- Mathematical-statistical analysis of the results.

The study's methodology and methods are closely aligned with the dissertation's goals and objectives. They ensure reliable measurement of intervention effectiveness, scientific validity, and practical applicability. The study achieves a high degree of congruence between theoretical conception and practical implementation through the systematically organized program, combined therapeutic approaches, and rigorous research design.

#### **4. Scientific and applied contributions of the thesis (description and evaluation), including the existence of original scientific contributions.**

This dissertation has significant scientific and applied contributions that contribute to both the expansion of theoretical knowledge in the field of Autism Spectrum Disorders (ASD) and the development of effective methods for therapeutic intervention. An important aspect of the research is the use of evidence-based approaches that confirm program effectiveness and provide practical guidance for professionals and parents. The combination of evidence-based therapeutic approaches with active parental involvement contributes to the enrichment of scientific knowledge and practical methods for working with children with ASD. The developed program can be used as a model for future interventions in Bulgaria.

##### **4.1. Scientific contributions**

Adaptation and validation of a tool for measuring the effect of therapy

- The study integrates and analyzes the applicability of the FOCUS (Focus on Outcomes of Communication Under Six) tool for assessing the dynamics of communication skills in children with RA in Bulgaria.

The methodology is based on the International Classification of Functioning, Disability, and Health—Child and Adolescent Version (ICFF/ICF-CY), an innovative approach in Bulgarian speech therapy practice.

- The use of this tool is an important contribution, as Bulgaria lacks standardized tools for measuring therapeutic progress in children with language and communication disorders.

Statistical evidence of intervention effectiveness

- The dissertation study used quantitative analysis to confirm the positive effect of the intervention on various aspects of communicative development.

- Statistically significant results ( $p < 0.001$ ) showed significant improvements in speech intelligibility, social play, coping strategies, and independence.

- These results extend existing scientific knowledge about the effectiveness of parent-based interventions for children with ASD.

Exploring individual dynamics in different groups of children

- The analysis distinguished three main groups according to the dynamics of their progress, providing a deeper insight into the factors influencing the effectiveness of the intervention.

- The data show that the program significantly impacts children with low baseline scores, while those with higher baseline scores make less progress.

- These findings may provide future guidance for the individualization of therapies.

#### Psychosocial aspects of the intervention

- The study found that the therapy had an impact not only on the children but also on their parents - improving their understanding of the specifics of ASD as well as their communication strategies with their child.

- This aspect is important for the current trends in therapy for children with RAS, where the emphasis is on working with the family as a key factor in development.

#### 4. 2. Scientific and Applied Contributions

##### Development and implementation of the author's program for indirect intervention

- The developed "Indirect Intervention Program for the Development of Language and Communication Skills in Children with RAS" offers a structured and applicable home therapy model.

The methodology trains parents in techniques for stimulating their child's language and social development through everyday activities and playful interactions.

- The program's flexible design allows it to be adapted to the individual needs of each family, making it applicable in various contexts.

##### Development of multimedia and didactic materials for parent education

- The program includes videos and paper-based materials that provide detailed instructions for completing therapeutic tasks.

- This is key to the effectiveness of parent engagement and increases the accessibility of the intervention.

##### Exploring the role of parent involvement in the therapeutic process

- Evidence suggests that intervention success is significantly related to parental motivation and involvement.

- Parents who actively participated and implemented recommendations observed more significant progress in their children's communication skills.

- This highlights the need for specific training programs for parents as part of the therapeutic process.

##### Assessment of intervention implementation difficulties and recommendations for improvement

- Potential challenges were identified, such as a lack of confidence in some parents and difficulties implementing therapeutic recommendations.

#### 4. 3. Original contribution to science

First study in Bulgaria on the effect of parent-based therapy on communication in children with RAS

- This dissertation is the first Bulgarian study to apply and analyze the effectiveness of a parent-based intervention using scientifically validated instruments.

Its data can be used as a basis for developing national programs to support parents of children with RAS.

#### Implementation of FOCUS in the Bulgarian context

The use of the FOCUS tool and its adaptation to the Bulgarian context is an innovative approach that speech and language therapists can use to assess progress in children with language disorders.

First empirical evidence of the effectiveness of this type of intervention in Bulgaria

- Analysis of the results provides evidence-based evidence of the effectiveness of the intervention.

- This can guide future research and policy in the area of therapy for children with ASD.

Development of a model for the analysis of individual dynamics in the development of children with RAS

- Distinction of three main groups according to their progress could be the basis for future personalized therapeutic strategies.

### **5. Evaluation of publications related to the thesis: number and type of publications in which they have been published.**

The PhD student has contributed to four (4) publications related to the thesis topic in English, three of them co-authored and one self-published. The titles, contents, and presented methodologies of the publications show very good skills in presenting scientific theses and active participation in scientific forums related to the researched topics. The dissertation publications meet the requirements of the Regulation on the Development of the Scientific Staff of the NBU.

### **6. Opinions, recommendations, and comments.**

In Bulgaria, several other screening tests for autism are used for different age groups: the Modified Checklist for Autism in Young Children (M-CHAT-R/F), the ATEC (Autism Treatment Evaluation Checklist), and the Screening Questionnaire for Autism Symptoms in Adults.

- Results of forward and backward translation - The adaptation of the FOCUS questionnaire to the Bulgarian environment was conducted per internationally established standards for

translation and validation of test instruments. Qualified specialists achieved a high degree of equivalence between the original and the Bulgarian version of the questionnaire through forward and backward translation. The corrections suggested by the authors of FOCUS have been successfully implemented, with special attention paid to terminology related to language, speech, and communication. The distinction between verbal and non-verbal communication skills has been refined, as has the wording of the response scales to ensure their clarity and accuracy.

- There is a lack of more detailed information on the contingent regarding whether therapy was provided before they participated in the study. This would have shed light on some of the "unexpected" results.

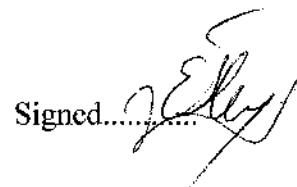
**7. Conclusion with a formulated positive or negative evaluation of the dissertation.**

This dissertation makes a significant scientific and practical contribution to therapy for children with autism spectrum disorders. Its innovative methodology, validated assessment tools, and author-developed curriculum contribute to both the advancement of scientific knowledge and the practical application of effective intervention methods. The results of the analysis can be helpful for professionals working in child development, education, and therapy, as well as for creating more accessible and effective services for children with autism in Bulgaria and other countries in the region. The study has the potential to influence future speech therapy and therapy practice in Bulgaria positively.

Based on my overall positive assessment, I recommend to the esteemed Scientific Committee that Tsveta Assenova Kamensky be awarded the degree of Doctor of Education and Science in the field of 7.4. Public Health.

Date: 03.03.2025

Signed.....

A handwritten signature in black ink, appearing to be 'T. Assenova', written over the 'Signed.....' text.