

## **THESIS STATEMENT**

from Assoc. prof. Dr. Elena Kirilova Boyadzhieva-Deleva

for dissertation on topic

### **„THE INFLUENCE OF PHONOLOGICAL PROCESSING ON ORAL AND WRITTEN LANGUAGE IN APHASIA“**

**for the acquisition of the educational and scientific degree "Philosophy Doctor" (PhD) in professional field 1.2. Pedagogy, Speech and Language Therapy**

**by Emanuela Hrabar Shtika**

Supervisor: Assoc. prof. Dr. Katerina Atanasova Shtereva

#### ***1. Compliance of the procedure with the current regulations***

The statement was prepared according to the Order ПД-38-56/29.01.2024 г. by the Rector of Sofia University. The dissertation, the abstract and the accompanying documentation fully meet the requirements of the Law on the development of the academic staff in Republic of Bulgaria and the Regulations for its implementation, as well as the Regulations for the terms and conditions for acquiring scientific degrees and holding academic positions in Sofia University "St. Kliment Ohridski".

#### ***2. General biographical presentation of the candidate***

Emanuela Hrabar Shtika graduated with honors from the bachelor's and master's degrees in the specialty "Speech and Language Therapy" at Sofia University "St. Kliment Ohridski". During her studies, she volunteered as a collaborator in working with children with communication disorders and SEN in various organizations. Since 2019, she has been working as a speech therapist at Logopedic Centre "Talk to Me", Sofia. She participated in more than 10 scientific and practical seminars and trainings to improve her qualifications. She participated in 4 projects (2 of which are international) on topics from the field of speech and language therapy, child development and practical training of students. She presented papers at 9 conferences, 6 of which were international.

#### ***3. Actuality of the issues of the dissertation work***

The developed topic is extremely relevant given the increasing frequency of strokes among younger people and the enormous social significance of their consequences. In addition to the increasing public interest in aphasia as a result of vascular or other brain disorders, the need to conduct research in the field is also compounded by the fact that Bulgarian speech therapy owes a kind of debt to patients with aphasia and their families due to insufficient scientific and practical developments in our country in the last 30 years. A particularly unexplored area is that of phonological processing in acquired language disorders, usually reserved as a focus of research in

childhood pathology. Within the framework of the dissertation research, it is demonstrated that phonological processing is severely affected in aphasia and its qualitative changes and their severity can be considered a key predictor of the development of the patient's oral and written language status over time, being treated in turn and as a starting point for structuring the therapeutic strategy.

#### ***4. Structure and content of the dissertation***

The dissertation is placed on 227 standard printed pages, of which 171 are main text (12 pages of References and 44 pages of Appendices). It is structured with an introduction, three chapters, summary and conclusions, recommendations, limitations, conclusion, contributions, references and appendices.

With the introduction to the problem, the doctoral candidate demonstrates her personal motivation and emotional attitude to the researched area, based on current statistical data on the prevalence of aphasia and the social significance of its effects. The aim, subject and object of the study are concisely stated, some of the more significant results are mentioned and the main contributions of the work are highlighted.

The first chapter presents a thorough theoretical overview of aphasia through an analysis of definitions, etiology and classifications in historical and contemporary aspects, a description of the forms of aphasia and their symptoms, as well as a parallel with acquired disorders of reading and writing. Within 2 of 3 separate sections, the connections of phonological processing and aphasia are examined, which is directly related to the topic of the dissertation. Phonological deficits in both production and perception in aphasia are described in detail, providing current data from Bulgarian studies, highlighted in a separate point in the second section. The relationship of phonological processing with impairments of spoken and written language in aphasia is analyzed in depth on the basis of theoretical models. Also, in a separate section, the diagnosis of aphasia is examined in detail both through the prism of the general and classic approaches to the disorder, as well as in relation to the specific methods for assessing phonology in aphasia. The theoretical overview ends with the formulation of conclusions, through which the conduct of the dissertation research is justified and motivated.

The second chapter presents the research methodology. The goal is formulated clearly and concretely, the tasks operationalize it precisely and in detail and are consistently structured in view of the stages in the realization of the research plan. A very good impression is made by the planning of a task to obtain permission to conduct the research from the Ethics Commission of the SU "St. Kliment Ohridski". The research questions are broadly formulated and summarized in two main and several additional hypotheses. Object and subject of research are differentiated. The description of the sample of 60 examined persons, divided into 2 groups, also indicates the criteria for selection and group affiliation. The sample is presented in detail, and along with demographic data (gender, age, place of residence, level of education, profession), data on the form of aphasia, the duration of the disorder, etiology, handedness and accompanying disorders are provided. The procedure for applying the study is described in detail, as well as the content of the two main diagnostic tools (Boston Diagnostic Aphasia Examination, BDAE, and the Standardized Assessment of Phonology in Aphasia, SAPA). In connection with the set goal of the dissertation,

detailed information is provided on the procedure for translation and adaptation of the phonology assessment tool, including the help of expert assessment by a psycholinguistic specialist at the stages of selection and construction of the stimulus language material. The procedure of translation, adaptation and approval of SAPA is preceded by obtaining formal consent from the author of the original test and involves repeating the standardized test conditions. The statistical methods applied to analyze the results are listed in the next section.

The third chapter offers an impressive array of results obtained through the various statistical procedures of regression, correlation, variance, and factor analysis, supported by robust descriptive statistics. The results are illustrated with 6 tables and 28 graphs and are subjected to a detailed discussion in parallel with their presentation, which, in the presence of so many data and the search for multidirectional correlations, is a definite advantage in structuring the work. The connections between phonological processing and the understanding of speech, production, reading, writing are derived and analyzed. The derivation of dependencies between the specified components and the demographic factors gender, age, education, residence and place of birth is a contribution of the analysis. Of immediate practical importance is the identification of relationships between the age of aphasia, its severity, and phonological processing, which can be defined as a prognostic factor for recovery and progress in therapy. It is impressive not only the number of statistical methods used by the PhD student, but also her ability to interpret the obtained numerical values qualitatively in the form of results. The summary of the research consists of seven conclusions, presented explanatory and with a view to the practical benefits of the obtained results.

An excellent impression is made by the separation of the "Recommendations" section, outlining 6 areas with specific guidelines for diagnostic and therapeutic practice with aphasias, and the "Limitations" section, which objectively indicates the reduced possibility of generalization of the conclusions due to the lack of representativeness of the sample, the limited use of diagnostic tools without derived normative values and the limitations in the possibility of controlling external factors during the research procedure.

The conclusion in a concise form affirms the successful proof of the research hypotheses.

The referenced literature consists of 116 sources, designed according to the APA standard, of which 26 are in Bulgarian and 90 in English.

The appendices are 78 and include a solid array of exported data from the statistical processing and results of multifactorial and linear regression, factorial and variance analysis on all subtests of the methodology (72 tables in total), as well as additional descriptive statistics for the sample. The presentation of data in appendices does not reduce the quality of the analysis in the main text and does not deprive the evidentiary part of clarity. Also included in the appendices are the operational documents for conducting the study: a letter with a declaration of informed consent and the full version of the SAPA application form.

### ***5. Scientific theoretical and practical contributions***

The formulation of 6 groups of contributions of different nature (theoretical, methodological, empirical, practical-applied, methodical and social) actually corresponds to what was achieved within the framework of the dissertation research. The theoretical overview and related publications update the knowledge of aphasias and contribute to a better understanding of

them by expanding the context for considering the issue in light of the relations with the quality of phonological processing. As a result of the dissertation work, the Bulgarian speech and language therapy community acquired a reliable diagnostic tool for the assessment of phonology in aphasia. The obtained empirical data can be used for future scientific research and contribute to the preparation of effective therapeutic programs. Last but not least in importance is the social contribution of the dissertation work, which is associated with increasing public awareness of the risks associated with stroke and aphasia, as well as awareness of the importance of timely speech and language diagnostics and therapy. The obtained results and the conclusions drawn based on them are the starting point from which the doctoral student is able to formulate eight guidelines for future scientific research in the field. The translation, adaptation and testing of the original tool SAPA with the consent of its author is a contribution both to the dissertation work and to the speech and language therapy practice with patients with aphasia in our country.

#### ***6. Abstract***

The presented abstract correctly reflects the main aspects of the research and the contributions of dissertation.

#### ***7. Publications on the topic of the dissertation***

The publication activity of the doctoral student can be defined as an independent scientific and theoretical contribution. A total of 11 publications are presented, of which 4 articles in journals (3 referenced in Web of Science, 1 international journal in English referenced in EBSCO) and 7 reports from scientific conferences (6 international) published in collections referenced in NACID. Of the publications, 6 are independent and 5 are co-authored with the scientific supervisor. The topic of all publications is related to the topic of the dissertation work. The doctoral student completely covers and even exceeds the scientometric indicators according to the minimum national requirements for the awarding of the educational and scientific degree "doctor" in scientific field 1.2. Pedagogy.

#### ***8. Personal impressions***

My personal impressions of Emanuela Shtika have been excellent since the time of her studies in the bachelor's and master's degree in speech and language therapy. She has always demonstrated high motivation to participate in the learning process, diligence and striving for high achievements, combined with systematic self-training. Even as a student, Emanuela showed a desire to be involved in scientific life by participating in two student scientific forums with publications. My impressions of her as a practicing speech and language therapist are also excellent, acquired personally during her internship at LC ELBO and her participation as a member of a project financed under the National Research Institute of Sofia University.

#### ***9. Notes, recommendations and questions***

None.

### ***10. Conclusion***

The dissertation is distinguished by a number of merits in theoretical and experimental-applied terms, shows a marked author's attitude and high professional competence. Based on this, I confidently propose to the honorable scientific jury to award the educational and scientific degree "Doctor" to Emanuela Hrabar Shtika in Professional field 1.2. Pedagogy, Speech and Language therapy.

member of the scientific jury:

/Assoc. prof. Dr. Elena Boyadzhieva-Deleva/

10/05/2024