UNIWERSYTET IM. ADAMA MICKIEWICZA W POZNANIU

# INTERDYSCYPLINARNE KONTEKSTY PEDAGOGIKI SPECJALNEJ

Redakcja naukowa
MAGDALENA OLEMPSKA-WYSOCKA

POZNAŃ 2020

INTERDISCIPLINARY CONTEXTS OF SPECIAL PEDAGOGY
The scientific journal of the Faculty of Educational Studies
Adam Mickiewicz University issued as a quarterly

EDTITORIAL BOARD
Chief Editor – Iwona Chrzanowska (Adam Mickiewicz University in Poznan)
Assistant Editor – Magdalena Olempska-Wysocka (Adam Mickiewicz University in Poznan)
Secretary – Aneta Wojciechowska (Adam Mickiewicz University in Poznan)

Andrzej Twardowski (Adam Mickiewicz University in Poznan), Agnieszka Słopień (Poznan University of Medical Sciences), Beata Jachimczak (Adam Mickiewicz University in Poznan), Katarzyna Pawelczak (Adam Mickiewicz University in Poznan), Miron Zelina (Univerzita Komenského v Bratislave), Jana Rapuš-Pavel (Univerza v Ljubljani), William Brenton (University of Maine Presque Isle), Jacek Pyżalski (Adam Mickiewicz University in Poznan), Amadeusz Krause (The University of Gdansk), Jarmila Novotná (MBA Dubrnický technologický inštitút v Dubnici and Váhom, Masarykova Univerzita v Brně), Magdalena Olempska-Wysocka (Adam Mickiewicz University in Poznan)

SUBJECT EDITORS
Iwona Chrzanowska (inclusive education, pedagogy of people with special educational needs)
Andrzej Twardowski (psychology of human development, early support of child development)
Agnieszka Słopień (psychiatry of children and adolescents)
Beata Jachimczak (inclusive education, pedagogy of people with special educational needs)
Katarzyna Pawelczak (psychology of people with disabilities)
Aneta Wojciechowska (special education, logopedics)
Miron Zelina (pedagogy, psychology)
Jana Rapuš-Pavel (social pedagogy)
William Brenton (special education)
Jacek Pyżalski (media pedagogy, resocialization)
Amadeusz Krause (special education)
Jarmila Novotná (pedagogy)
Magdalena Olempska-Wysocka (psychology, deaf education, logopedics)

LANGUAGE EDITORS
Karolina Kuryś (Polish)
Wendy Ross (English)
Nicol Ross (English)

STATISTICAL EDITOR Paweł Mleczko

© Uniwersytet im. Adama Mickiewicza w Poznaniu,
Wydawnictwo Naukowe UAM, Poznań 2020

Publication financed by the Faculty of Educational Studies
Adam Mickiewicz University in Poznań

Tłumaczenie zawartości 8 numerów czasopisma „Interdyscyplinarne Konteksty Pedagogiki Specjalnej" na język angielski i ich wydanie – zadanie finansowane w ramach umowy 608/P-DUN/2019. ze środków Ministra Nauki i Szkolnictwa Wyższego przeznaczonych na działalność upowszechniającą naukę

ISSN 2300-391X (wersja drukowana)
e-ISSN 2658-283X (wersja online)

# Contents


**ARTICLES**

BOGUSŁAW ŚLIWERSKI
Montessori Pedutology ... 7

DIKLA DIVON
Inclusive schools: Are teachers adequately prepared for inclusion? ... 33

EWA GAWLIK
Communication of adults with moderate intellectual disability in the process of autonomisation – preliminary considerations ... 53

AGNIESZKA HAMERLIŃSKA
Nicotinism and the knowledge of consequences of laryngectomy among university students ... 67

MONIKA KAŹMIERCZAK
What is communication? Investigations with kindergarten children ... 89

EWA GACKA
Secondary speech therapy prophylaxis aimed at children with low birth weight – a part of research ... 109

DOROTA PODGÓRSKA-JACHNIK
Selective mutism and shyness. Differential diagnosis and strategies supporting child development ... 125

JUSTYNA KOTOWICZ
Reading skills of D/deaf students – native signers ... 151

MARTA ZAWICHROWSKA
Development of language skills and conditions for psychosocial development of children and youth in multilingual families ... 169

AGATA TRĘBACZ
Articulation disorders of the sigmatism type and the level of self-esteem of students completing the stage of early school education. Own research conducted in the Greater Poland region .......................... 187

JUSTYNA WIŚNIEWSKA
Speech therapy students' attitudes to the use of ICTs in speech therapy practice ........................................................................... 223

DOMINIKA WIECHA, EWELINA ZAJĄC
Communicative competence of a child with cerebral palsy and mild intellectual disability ..................................................................... 243

RENATA GLIWA
Assessment of the language, communication and interaction competences and skills of a patient with aphasia following aneurysm clipping and diagnosed symptomatic epilepsy ...................................... 259

AGNIESZKA HAMERLIŃSKA, JULITA KIECZMER
The use of the mirror in speech therapy ................................................... 285

**REPORTS**

JOANNA BARTKOWIAK
*"Neurologopedics in theory and practice. Selected aspects of child's diagnostics and therapy"* Published by: Wydawnictwo Naukowe Akademii Techniczno-Humanistycznej, Bielsko-Biała 2012 Scientific edition by: Joanna Skibska, Dawid Larysz .............................................. 311

# ARTICLES

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

BOGUSŁAW ŚLIWERSKI
University of Łódź, Poland

# Montessori Pedutology

**ABSTRACT**: Bogusław Śliwerski, *Montessori Pedutology*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 7–31. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.01

The subject of the analysis is the reception of Montessori education in post-socialist Poland. The author focuses mainly on the models of pedeutological research to emphasise the important role played by the teacher as a professional, educator, but also a human being in this alternative upbringing and education. He recalls the most important results of research on the specificity of teaching work in Montessori institutions.

**KEY WORDS:** education, alternative education, teacher, Montessori pedagogy, teacher research models, pedeutology

## Introduction

Thirty years ago, a renaissance of Montessori education in pre-school education of post-socialist countries in the spirit of personalism and educational principles of didactic constructivism took place. Each of the waves of renewed interest in this education originated from the fact that it was excluded from Polish educational institutions during the period of two totalitarianisms – Nazi and Soviet ones, in 1939–1989. The concept of the child as an autonomous being in its development, who had to be helped in the art of discovering one's own freedom and using it responsibly, was unac-

ceptable to the authorities of the time. Only the transformation of the political system in 1989, and the consequent liquidation of political, and ideological censorship exercised by the Main Office for the Control of the Press, Publications, and Public Performances finally allowed for the translation into Polish or extraction from the archives of forbidden collections, scientific and methodological dissertations on the application of Maria Montessori education in Poland and all over the world.

## Łódź school for research on the reception and updating of Montessori education in theory and practice

The fascination with this kind of education and its application in teaching practice took place during the Second Polish Republic, when the first Montessori kindergartens were established in numerous places in Poland. Polish teachers, studying or staying abroad, participated in Montessori courses in Rome and London, and even co-created the first Montessori schools in Italy. Their knowledge and experience penetrated into the country thanks to numerous enthusiasts of this concept of education. Interestingly, this kind of education aroused great interest among the supporters of home education, who adapted it to their own needs and national spirit.

Ewa Łatacz from the University of Łódź wrote in her dissertation about the delight with pedagogy of New Education annoying traditionalists in the interwar period in Poland.[1] Numerous opponents of this pedagogy must have been surprised by the discovery of the Lódź historian of education of the delight, expressed among others by blessed Urszula Ledóchowska, but also the superiors of the Jesuit order in our country, with this concept, and even the establishment of nurseries or kindergartens for children, in which not

---

[1] E. Łatacz, *Recepcja teorii pedagogicznej Marii Montessori w Polsce do roku 1939*, Łódź 1996.

only the educational methods of Decroly or Froebel, but also of Montessori were used.

Thanks to the research results of Ewa Łatacz, at the beginning of the 1990s, the exceptional significance of the thoughts of the Italian doctor and the already functioning in the world experience of pre-school teachers and the producers of teaching aids, which are one of the key factors stimulating the independence of children in learning about the world, cooperating with them, was restored. With great self-denial and dedication, E. Łatacz obtained teaching aids, incredibly expensive, but beautifully manufactured in a Dutch factory, to educate candidates for the teaching profession and teachers already working in kindergartens, showing them materials of the highest aesthetic and methodological quality. At that time, she carried them in her backpack from classes at the university to teacher training institutions in the country, so that the participants of the first courses in the Third Polish Republic could practically learn, how to operate them and that they would inductively discover the fundamental rules of mathematics or their mother tongue like a child.

Soon, the first private Montessori kindergarten appeared in Lodz, and an assistant professor from the Department of Educational Theory at the University of Lodz, headed by the Author, – Małgorzata Miksza, contributed to the establishment of the first public kindergarten working in accordance with this pedagogy in that city. To this day, it hosts courses, trainings and workshops for those interested in alternative education, and the management has a serious problem with how to cope with the enormous pressure of hundreds of parents waiting for their child to be admitted to this facility each year. This is because there are too few such kindergartens in relation to the expectations and needs. However, the point is not that all kindergartens or even the majority of them should work on the basis of this model of education. The Montessori community in Łódź is the seat of the Polish Montessori Association.

Thanks to this, the educational value of this alternative was not diminished by conservative circles.[2] Montessori education is not an

---

[2] B. Śliwerski, *Pedagogika dziecka. Studium z pajdocentryzmu*, Gdańsk, GWP 2007.

antagonistic approach, competitively excluding other models of preschool education. It requires teachers to additionally complete specialised education, practice continuous self-improvement and self-education, and perform many times more individual work (often at home) before each day of classes. This is because it is necessary to prepare appropriate development-related materials and the environment every day so that each child could develop according to their own potential.

The nature of this pedagogy was aptly presented by Zbigniew Łubieński, an educator, in 1937: *Most modern educational methods make mistakes in two opposite directions: they either teach children many things without leaving enough room for their personal independence and initiative, or children are left with a great deal of freedom, without being provided with adequate (moral and technical) help, necessary to learn and the overall development. The Montessori method tries to find an indirect way, reconciling freedom with order, leaving far-reaching freedom of the creativity of the child, but at the same time establishing certain rules without which the teaching material would not be of proper use.*[3] We re-experience the art of discovering this pedagogy and developing it, updating it in new system conditions.

Polish teachers implement Montessori education into the native culture of preschool education, imbuing it with the latest psychological knowledge in the field of accelerating the development of children in the postmodern world and with the Polish cultural and spiritual tradition. The 21st century is important for the creative development of Montessori kindergartens and schools at every stage and level of education, so that the next, necessary transformation of education from traditional, static to dynamic, constructivist one, favouring the acquisition of lifelong learning skills, occurs. Polish masters of this pedagogy from various academic and educational centres in our country have created their own kindergartens, schools and special education institutions, which have become environments of fulfilled dreams of maximising own development potential

---

[3] After: E. Łatacz, op. cit., p. 150.

for children of various social classes. From the beginning of the 1990s, as part of the cyclically organised International Conferences "Alternative Education – Dilemmas of Theory and Practice", each of the subsequent editions was enriched with Montessori education, so their participants present the world of education and upbringing of children in accordance with an integral approach to this process.[4]

## Montessori education in the pedeutological systematics of ideas

Polish pedeutological thought is at the centre of the global debate on this subject, because Poland belongs to countries where the teaching profession is still perceived and treated as significant in the public space. As Henryka Kwiatkowska writes: *Pedeutology is knowledge about the teacher (Greek: paideutes – teacher, logos-word, science). It is an increasingly independent area of pedagogics, dealing with issues relating to teachers: their personality, selection for a profession, education, training and professional work.*[5] During the transformation

---

[4] See: *Edukacja alternatywna – dylematy teorii i praktyki*, ed. B. Śliwerski, Oficyna Wydawnicza IMPULS, Cracow 1992 (2nd ed. amended, Cracow 1993); *Pedagogika alternatywna – dylematy teorii, Wstęp*, ed. B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 1995 (2nd ed. Cracow 2000); *Pedagogika alternatywna – dylematy teorii i praktyki*, ed. B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 1998; *Edukacja alternatywna. Nowe teorie, modele badań i reformy*, ed. J. Piekarski, B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 2000; *Nowe konteksty (dla) edukacji alternatywnej XXI wieku*, ed. B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 2001; *Pedagogika alternatywna. Postulaty, projekty i kontynuacje*, volume I. *Teoretyczne konteksty alternatyw edukacyjnych i wychowawczych*, ed. B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 2007; *Pedagogika alternatywna. Postulaty, projekty i kontynuacje*. Volume II. *Innowacje edukacyjne i reformy pedagogiczne*, Oficyna Wydawnicza "Impuls", Cracow 2007; *Teoretyczne podstawy edukacji alternatywnej*, ed. B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 2009; *Edukacja alternatywna w XXI wieku*, ed. Z. Melosik, B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 2010; *Alternatywy w edukacji*, ed. B. Śliwerski, A. Rozmus, Cracow–Rzeszów, Oficyna Wydawnicza "Impuls", University of Information Technology and Management in Rzeszów 2018.

[5] H. Kwiatkowska, *Pedeutologia*, Warsaw, WAiP 2008, p. 17.

period, after a half-century break (in 1939–1989), three trends of scientific research on the teacher, which contribute to the co-creation of pedeutology as a specific sub-discipline in pedagogical sciences, developed. The Author does not mention here the fourth, practical area of development of this pedagogy, the authors of which, mainly teachers-practitioners, focused their attention on the methodology of upbringing, educating and caring for children based on the method of M. Montessori.[6]

In this paper, the Author focuses only on scientific pedeutological studies and research. The Author does this not only in connection with the cognitive category of key importance for the scientific debate in Lódź, the more so because also in the German lexicon of "Montessori Education", entries concerning the teacher/educator were distinguished.[7] This proves the imperative of an integral approach to the anthropological, ethical, pedagogical and psychological assumptions of Maria Montessori education in affirmation or reception of her pedeutological views. Being an educator is a dynamic task of an adult as a guide for a child in the process of their upbringing. *Orientation towards young people as human beings under formation, and as active beings with a tendency to learn independently requires an educational attitude that offers them supportive help. Montessori defines this attitude as love towards another person.*[8] The basis of the psychospiritual relationship between the educator and the child is the service for people with the use of appropriate techniques, thanks to which it is possible to learn from the child to reach their

---

[6] See: H.K. Berg, *Maria Montessori – poszukiwanie życia razem z dziećmi. Odpowiedzi na aktualne pytania pedagogiczne*, Kielce, Wydawnictwo Jedność Herder 2007; *Erziehen mit Maria Montessori. Ein reformpädagogisches Konzept in der Praxis*, Hrsg. H. Ludwig, Freiburg, Verlag Herder 1997; S. Guz, *Edukacja w systemie Marii Montessori. Wybrane obszary kształcenia*, volume 2, Lublin, Wydawnictwo UMCS 2015; M. Miksza, *Zrozumieć Montessori*, Oficyna Wydawnicza "Impuls", Cracow 1998; B. Stein, *Teoria i praktyka pedagogiki Marii Montessori w szkole podstawowej*, Kielce, Jedność 2003.

[7] U. Steenberg, *Handlexikon zur Montessori-Pädagogik*, Ulm, Verlag Klemm & Oelschläger, 1997.

[8] Ibid., p. 48.

childhood, understand their nature, creativity and spirituality. It is necessary to be able to help the child act independently, become a moral being, which requires the teacher to constantly refrain from their own interference.

## Three trends in research

The first trend of research – is of a normative and model nature, and concerns the cultural and postulated status of a teacher, educator, primarily in their social and professional role, its importance in educating children and youth, but also self-education, self-development and self-improvement of teachers in connection with its performance in public and private education. These types of dissertations are of a postulative, idealising nature, largely referring to general and specific ethics, developmental psychology of the child, which are referred to in the dissertations of M. Montessori and their studies, as well as to the models of its fulfilment and alternative accomplishment implemented during the Second Polish Republic, thanks to numerous professionals.[9]

The second trend in empirical research concerns the psychosocial, political and economic conditions of the teacher's work, also in a comparative approach, referring to the results of international research in individual countries, as well as comparative studies. It is important because this first area of research is verified in terms of verifiability, reasonableness or possibility of implementation due to the independent variables.[10]

---

[9] Cf. N. Cicimirska, *Moja ochronka*, Lviv, Warsaw: Gubrynowicz i syn 1928; A. Gorycka-Wieleżyńska, *Szkoła pracy samorozwojowej. Część teoretyczna*, Warsaw, PSPS 1922; L. Jeleńska, *Przygotowanie do życia przez szkołę*, Poznań, Warsaw, Vilnius, Lublin, Księgarnia św. Wojciecha 1939; S. Marciszewska-Posadzowa, *Instrukcja la ochroniarek*, Poznań, Warszawa, Wilno, Lublin, Księgarnia św. Wojciecha b.r.w.; F. Pinesowa, *System wychowawczy dr M. Montessori*, Warsaw: DKP 1931; I.M. Schätzel, *Idea wychowania przedszkolnego "Casa dei Bambini" jako szkółka wszechstronnej pracy dziecka"*, Lviv, PTP 1919.

[10] M. Królica, *Znajomość wśród nauczycieli przedszkoli tez pedagogiki Marii Montessori i możliwości ich realizacji (unpublished text)*, [in:] *International Scientific Conference.*

The third area of pedeutological, research, a juridical one, results from analysing, commenting and postulating in the light of the law of duty, standards of teachers' work as a result of the jurisdiction in force in the country, as well as established and permanently changed directives of pedagogical supervision or teacher's professional pragmatics. This is because it turns out that they not only determine the performance of this professional role, but also prevent the implementation of innovations or facilitate the introduction of alternative curricular, organisational and/or methodological solutions to (pre)school education in work with children and youth.

While the first two areas of pedeutology dominate the scientific and research work of representatives or teams of academic circles, the latter has a statist nature related to the interference of state authorities in the selection of teaching staff for the profession, their education and training, as well as strengthening individual development and professional promotion. Because of the integration of scientific knowledge, there is no need for a separate distinction between psychological, sociological, legal and educational research in the above-mentioned areas, as the 20th century started, among others, "a discovery of a teacher" as a unique profession that requires exceeding the borders of the specialist knowledge and taking into account existential functions that will affect the creation of the meaning of own life as well as the one of students, pupils or dependences. Socio-cultural, political, economic and technological changes in the postmodern world, including the most developed countries, generate a new perspective on teaching functions, which H. Kwiatkowska describes in the dimension of a necessary transition:

1. From the transfer of knowledge to teaching cognitive and existential independence,
2. From control to inspiring development,
3. From a simple message to introducing the student to the world of knowledge,

---

*Pedagogika Montessori w Polsce i na świecie*, Cracow, 29–30 September 2008, Conference materials, Cracow 2008.

4. From the function of transferring knowledge to arranging information,
5. From the domination of intellect to the balance of the world of thoughts and feelings in school education and
6. From alternative to dialogue.[11]

When studying the works of Montessori, it is visible that there is no transition in the development of the identity of a teacher from a lower to a higher state. The educator is one who understands the limits of a child's learning and perceive themselves accordingly, as well as act accordingly as a facilitator of the sovereign development of a child, as one who humbly helps them to become HUMAN SELVES.

## A Montessori model of the teaching role

It should be clearly stated that in the case of teachers of Montessori kindergartens and schools or education and care institutions in the field of therapeutic and special education, it is necessary reverse the type of relationship the Author presented in the title of this paper. For Maria Montessori, a teacher is first a PERSON, on whose existential structure of the role of an educator, and finally of a teacher is overlapped. Therefore, the triad in Montessori pedeutology must have a different direction: PERSON-EDUCATOR-TEACHER, which can be shortened to P-E-T. The educator is a being open to children and for children, and not narcissistically or elitistically focused on themselves or on the standards of behaviour established by others. They cannot focus their professional activity primarily on the legal conditions of its performance, which does not mean that they should ignore them, neglect them or act against them. A Montessori teacher must not be submissive in their activity to the interests of trade unions, the ministry of education and its supervisory staff, as well as political parties or movements, both those in power and in

[11] Ibid., pp. 41–45.

opposition. Probably for this reason it is easier for them to fully perform the role of a guide of children in their self-development when they work in a private kindergarten or school.

In Maria Montessori education, a duality of dominants is present, in which two perspectives of their experience and practice interpenetrate. This is because on the one hand, the teacher is for children, but on the other – Montessori education is a professional commitment of teachers to reorient their attitudes towards developing competence to work with children. In German education, the term of Kindzentriertepädagogik or Kinderorientiertepädagogik is used. According to the principles of this education, the child is the focal point of the interest of the educators in its individual, social, moral, aesthetic, spiritual and physical development. In turn, the teacher must be able to self-develop themselves and establish contact with themselves in such a way that they can achieve the assumed didactic and educational goals in an indirect, non-directive way. In fact, the reciprocity of attitudes should also permeate the attitudes of children, who also play the role of teachers within this education, while teachers are observers of children's activities. As Paul Epstein writes: *The transformation of the school must occur simultaneously with the change of teacher preparation. This is because if a teacher is made an observer who is familiar with experimental methods, then they must be enabled to observe and experiment at school. And the basic principle of scientific education must be the freedom of the student.*[12]

The normative approach to Montessori teaching comes from both the reception of the study of the Italian woman by educators trained in Poland and abroad in modern times, and from the educational practice through which they verified and emphasised the topicality of her pedagogics. The above-mentioned American expert and academic lecturer of this kind of education developed his own model of a Montessori teacher, defining it for short C.O.R.E. (Connect-to establish contact; Obtain-to obtain information, gain

[12] P. Epstein, *Z notatek pedagoga Montessori. Poradnik*, translated by M. Madej, Oficyna Wydawnicza "Impuls", Cracow 2014, p. 43.

knowledge, Reflect – to reflect, to be reflective and Engage – to get involved), as crucial for the educational effectiveness of this education in school.[13] Swedish kindergarten teachers – Kristina Skjöld Wennnerström and Mari Bröderman Smeds emphasise in their approach to children such qualities and attitudes of a Montessori teacher as: faith and trust in the abilities of a child, in their inner strength and willingness to develop their own skills, conscious development of own authority and setting an example for children, constant self-development, the ability to observe, change in contact with children, a sense of internal satisfaction with working with children, the competence to properly prepare the environment and guarantee the sense of security to children, the ability to observe, show respect to a child, share time with children, firmness, accuracy, patience, but also the ability to refrain from assessing and interrupting the child's activity or interfering with it.[14]

Sabina Guz, who analysed the scientific literature in terms of the preparation of professional requirements necessary to work with children, came to a similar typology of the specific characteristics of a Montessori teacher:

> *In order to fulfil their role properly, they should have numerous specific characteristics:*
> - *to believe in the abilities of a child;*
> - *to perceive them as active and learning beings, independently creating their own personality, not passive and receptive;*
> - *to be convinced of the enormous importance of spontaneous activity for the development of a child;*
> - *to show respect and loving understanding for the manifestations of their self-expression;*
> - *to get rid of conceit, pride, haughtiness and prejudices against the child;*

---

[13] Ibid.

[14] K. Skjöld Wennnerström, M. Bröderman Smeds, *Pedagogika Montessori w przedszkolu i szkole*, translated by I. Łabędzka-Karlöf, Oficyna Wydawnicza "Impuls", Cracow 2007, pp. 83–84.

- *to do not show impatience and anger in situations when they make mistakes or do not comply with the applicable rules of social life;*
- *to be humble, patient, understanding, tactful and composed, but at the same time consistent and demanding;*
- *to be able to fade away into the background to give the child more space for free action and development;*
- *to have in-depth scientific knowledge about the child, their characteristics and laws of development, and constantly expand and update it;*
- *to be able to observe them with scientific accuracy and use the results of their observations in the upbringing process;*
- *to be a professional and personal authority for a child*.[15]

## Models of research on a Montessori teacher

The model of a Montessori teacher is very close to the Polish models of being a teacher, which were developed in the education of the period of the Second Polish Republic. For example, Ewa Łatacz showed similarity in the pedeutological views of Maria Grzegorzewska and Maria Montessori. They can be compared in order to perceive this in both normative approaches to being a teacher.[16]

In her historical and problem-focused monograph, the educator from Łódź made, among others, analysis of the pedeutological views of M. Montessori in terms of the perception of the teacher's image in Poland until 1939 and its presentation in the educational press published at that time. She drew attention not only to the reception of this kind of education from the time of its appearance in literature and the circulation of practical experience in the world in

[15] S. Guz, M*etoda Montessori w przedszkolu i szkole. Kształcenie i osiągnięcia dzieci*, Lublin, Wydawnictwo UMCS 2006, p. 69.

[16] E. Łatacz, *Podobieństwo metod pedagogicznych Marii Montessori i Marii Grzegorzewskiej*, Acta Universitatis Lodziensis, Folia Paedagogica 2, 1999, pp. 15–19.

**Table 1.** A comparison of the characteristics of a teacher as perceived by Maria Grzegorzewska and Maria Montessori

| Comparative categories in the model of a teacher | Maria Grzegorzewska | Maria Montessori |
|---|---|---|
| Condition for working with children | Love for children | Love for children |
| Intrapersonal attitude | Self-education | Education of one's own |
| Interpersonal attitude | Responsibility | Responsibility |
| Social competence | Cooperation with parents | Cooperation with the family environment of a child, and even the social rehabilitation of parents |
| Moral level | High moral standards, humility | High moral standards, being a role model for a child |
| Intellectual level | Wisdom | mysticism and contemplation, reality research |

Source: own elaboration based on: E. Łatacz 1999.

the first decades of its application in kindergartens and schools of the Second Polish Republic, but also to the criticism of some of its principles and their impact on Polish pedeutology.[17]

An original approach to constructing the teaching role of a Montessori teacher was proposed by Beata Bednarczuk, who reached for psychological concepts of a human being as a self-educating subject, with an integrated and mentally balanced personality, with inner locus of control, which is transgressive and reflective. The author used not only the latest approaches to the teaching profession of Michael Uljens, Maria Czerepaniak-Walczak, Ned A. Flanders, Ewa Filipiak, Bogusław Śliwerski, Dorota Gołębniak, Kazimierz Obuchowski, Kazimierz Dąbrowski, Józef Kozielecki, Anna Brzezińska, Stefan Kunowski, but also placed their isomorphic attributes in the Polish concept of a teacher of a class, school or education with individual program.[18]

---

[17] E. Łatacz, *Recepcja teorii pedagogicznej Marii Montessori w Polsce do roku 1939*, Łódź, Wydawnictwo Uniwersytetu Łódzkiego 1996.

[18] Cf. B. Śliwerski, *Edukacja autorska*, Oficyna Wydawnicza "Impuls", Cracow 1996 (2nd ed. 2008); idem, *Problemy współczesnej edukacji*, Warsaw, WAiP 2009.

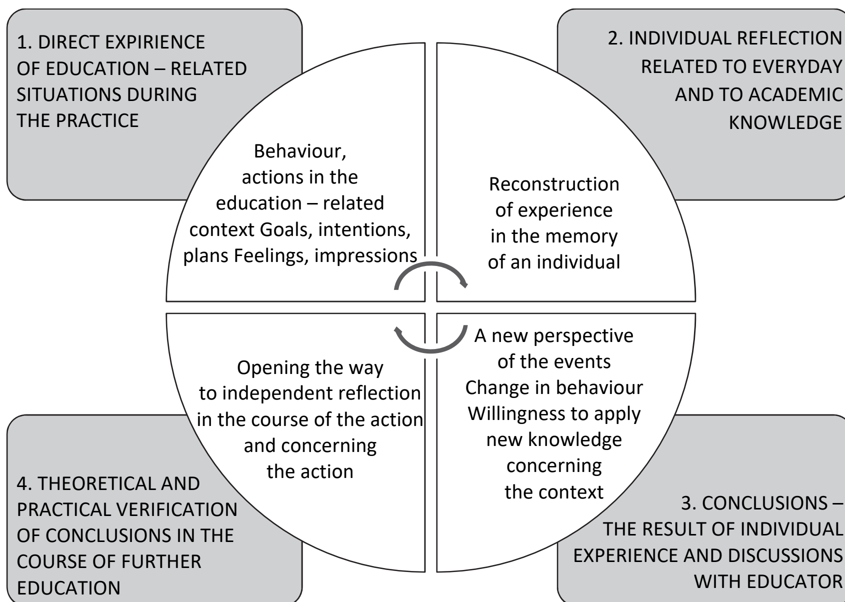



**Fig. 1.** Model of a reflective Montessori teacher (source: B. Bednarczuk, 2016, p. 112)

The second scope of research in the field of Montessori pedeutology has not developed in our country and is *in statu nascendi* probably because the movement of kindergartens and schools working in accordance with its principles is still at the stage of methodical preparation of teachers for work with children[19] and the construction of curricula, which would be in line with the ministerial core curriculum for preschool education by educators.[20] Perhaps it

---

[19] G. Badura-Strzelczyk, *Pomóż mi zrobić to samemu. Jak wykorzystać idee Marii Montessori we współczesności*, Oficyna Wydawnicza "Impuls", Cracow 1998; P. Epstein, *Z notatek pedagoga Montessori. Poradnik*, translated by Magdalena Madej, Oficyna Wydawnicza "Impuls", Cracow 2014; M. Miksza, *Zrozumieć Montessori*, Oficyna Wydawnicza "Impuls", Cracow 1998; B. Stein, *Teoria i praktyka pedagogiki Marii Montessori w szkole podstawowej*, Wydawnictwo Jedność, Kielce 2003.

[20] A. Albinowska, A. Gaj, B. Lauba, J. Matczak, J. Sosnowska, R. Czekalska, *Odkryjmy Montessori raz jeszcze… Program wychowania przedszkolnego opracowany na*

is related to the stereotype, popular in the interwar period, of thinking about Montessori education as only a certain method of education or an outdated concept, which has no place in the dynamically changing world of new technologies. Maria Królica performed a diagnosis of the level of knowledge of the principles of Montessori education among studying preschool teachers and their opinions on the possibility of practical use of this kind of education, and confirmed that they had elementary knowledge about the subject, but according to over 80% of the respondents there was no possibility to apply this kind of education in kindergartens due to the lack of appropriate teaching aids, architectural barriers and a large size of preschool groups.[21]

The third area of research concerns the empirical verification of the success and failures of Montessori education in Poland, but with a focus on children, their development and competence as a result of attending Montessori kindergartens or preschool departments.[22] Therefore, it does not have a pedeutological nature, because the researchers did not pay attention to a teacher as the subject and co-author of the changes taking place in children's development. Thus, in research projects, the discovery of a child is not accompanied by the discovery of a teacher, finding out what they are and whether their intrapersonal variables really constitute a significant contribution to the changes in the personality of children. In a way, it is assumed that if someone works in a Montessori kindergarten or school, they have internalised values and an adequate nature to prepare children for a widely understood environment, of which they are an active variable. Concentration on the infrastructural, material, technical and aesthetic preparation of the development

---

*podstawie założeń pedagogiki Marii Montessori w Przedszkolu Miejskim nr 106 w Łodzi*, Oficyna Wydawnicza "Impuls", Cracow 2013.

[21] M. Królica, *Znajomość wśród…*, op. cit., pp. 11–17.

[22] B. Bednarczuk, *Osobowość autorska absolwentów klas Montessori w perspektywie doświadczeń i celów życiowych*, Oficyna Wydawnicza "Impuls", Cracow 2016; S. Guz, *Metoda Montessori a zachowania społeczne dzieci*, Wychowanie w Przedszkolu 2002, no. 9, pp. 515–521.

environment for children is crucial for this kind of education, but incomplete if the teacher becomes only its didactically correct arranger.

## Who is a Montessori teacher?

In this kind of education, the independence of a child, their self-reliance and spiritual development as well as the ability to self-develop are closely related to the format of a teacher. The idealisation of their characteristics in the reception of the works of the Italian educator favours the neglect of the teacher in research on the quality of education. For example, Barbara Surma writes: *Therefore, the ideal educator in the eyes of M. Montessori would be a person who, in addition to scientific knowledge, has a number of character traits, such as patience, humility, inner self-control and the ability to observe, use all available research tools, and above all, they will be characterised by a "spirit", or a fascination with life that they help to develop. It is the passion with which a teacher accompanies a child, forgetting about themselves.*[23] Therefore, Montessori teachers are not studied in Poland, assuming that, since they obtained the education and certificates appropriate for work in this type of institutions, they are probably what the founders of this kind of education would like them to be. Surma adds – without reference to empirical data: *The problem is to form such an educator who would help in life. Thus, the education of a teacher should not be only intellectual education.*

*M. Montessori places much greater demands on teachers, she is concerned with character education, spiritual formation and self-study.*[24]

Therefore, we do not know who are, and what are Polish Montessori teachers. After all, is it not important whether they have knowledge about the genesis, creator and methodological solutions of this kind of education, but whether they are Montessori teachers

---

[23] B. Surma, *Pedagogika Montessori – podstawy teoretyczne i twórcze inspiracje w praktyce*, Łódź, Palatum 2008, pp. 65–66.

[24] Ibid., p. 66.

in its full sense and their own attitude? Are they different and in which way from other kindergarten or school teachers who do not follow the ideas of this education in their work? This is important because, as Montessori wrote in her book "The absorbent mind", the first step in preparing a Montessori teacher is to prepare oneself to create the environment for the development of a child. *Our education demands that the teacher, first of all, reflect on themselves and cleanse themselves of all the vices of tyranny. The complex of pride and anger, strengthened over the centuries, must be eradicated, the heart should be free from shackles. Above all, the teacher must learn to be modest in order to find love. Here is the attitude we must gain. This is the basis of internal balance without which there is no way to go any further. This is our inner preparation, our starting point and our goal.*[25]

It is not the best testimony about Polish and Italian teachers of Montessori kindergartens that out of 130 questionnaires sent in Poland by B. Surma – as part of her comparative research – only 67 were sent back, and out of 30 questionnaires distributed in Italy, it was only 16.[26] However, this type of research adds nothing to our knowledge of teachers, since they are asked for opinions without the possibility of verifying their credibility. Their concentration – both in Poland and Italy – on the method as a factor facilitating work with children confirms the instrumental approach to this kind of education. According to every fourth respondent a prepared teacher facilitates creative work, and it can be assumed that, after all, behind this preparation only the methodological sphere is hidden.

Although teaching is a profession, a social role, and thus also a set of universally applicable standards for performing certain activities, from a pedagogical point of view, if it is not a passion, then regardless of the educational concept it is based on, it leads to side

---

[25] M. Montessori, *Umysł dziecka. Umysł absorbujący, translated by Jacek Dąbrowski, Madras, 1949 [materials for internal use of the Polish Montessori Association]*, after: E. Sienkiewicz, *Osobowość i zadania nauczyciela montessoriańskiego*, www.edukacja.edux.pl/p-34834-osobowosc-i-zadania-nauczyciela-montessorianskiego.php access on 5.02.2018.

[26] B. Surma, *Pedagogika…*, op. cit., pp. 101–102.

effects that are harmful both to a teacher and their students. A teacher without passion is an executor of externally defined rules, a "worker" who produces an ordered product or service. Therefore, it is difficult for them to become a model, an idol, a significant person for their students, since they more often read bitterness, fatigue, discouragement, frustration, grief towards the whole world from their face, attitudes, or directly from the expressed statements, concerning the fact that they are or rather must be, a teacher. If someone in this role cares more about themselves and the opinion of their superiors than about those whom they should help in reading own talents, passions and possibilities for self-development, then they only maintain a negative image of their profession.

Teachers are not sovereigns of the implemented education, when they have to work under conditions established not by themselves, but by the educational supervision and the body running the institution. In the centralised system of public education, increasingly more often and more of them feel that they have to play unwanted roles in order to earn their living. Some people encounter in this profession the arrogance of pedagogical power, including the necessity to be submissive despite being aware of mistakes, nonsense or forced disguise. Such factors weaken the causative power of those teachers who – contrary to the existing solutions and limitations – find in the teaching profession their own energy to live and act for the benefit of others, and also for themselves.

While (…) *children form a subcultural whole as early as before they even begin their education at school and in this way seeds of collective opposition are sown*[27], teachers come to these institutions as individuals who, before they manage to transform into an understanding, solidary community, at the very beginning are subjected to disciplinary and normalising practices on the part of their superiors. Thus, as early as at the beginning of the teaching career, two socialisation worlds in authoritarian, hierarchical institutions are confronted not only by the very fact that the education process must take place

[27] S. Richer, *Socjologia i pedagogika*, Kwartalnik Pedagogicznyp 1987, no. 4, p. 52.

within specific legal, organisational and curricular frameworks, but also because *almost every activity of the student depends rather not from them, but from the teacher's initiative*[28], and almost every activity of the teacher is monitored and evaluated by educational supervision and the grassroots parental feedback, as well as the rare but possible evaluation on the part of the students. Schools *are highly bureaucratic organisations, largely governed by rules and official authority*[29], in which power is exercised in a legally sanctioned manner. No wonder that socialisation at school reflects different degrees and scopes of domination of some people over others, so that no one of the subjects of education could free themselves from the influence of the authorities.

*One of the professional groups particularly at risk of mobbing in the workplace are employees of the education sector. The characteristics of a teacher's work, the need to adapt to the applicable rules, and a high rate of unemployment in this profession are just some of the features that may contribute to the occurrence of unethical, hostile and even aggressive behaviour in the teachers' environment.*[30] The nature of any power, in virtually all systems – democratic and non-democratic ones, is the possibility of "killing" a person in accordance with the law, also in public and non-public, educational and non-educational institutions. Mobbing is a form of "killing" another person "in velvet gloves" in a way that is imperceptible to the environment, through the constant tormenting, harassing without the use of physical force.[31] As André Glucksmann writes: *Sometimes white-hot and brutal,*

---

[28] Ibid., p. 52.

[29] Ibid.

[30] A. Mościcka, M. Drabek, *Mobbing w środowisku pracy nauczyciela, in: Psychospołeczne warunki pracy polskich nauczycieli. Pomiędzy wypaleniem zawodowym a zaangażowaniem*, Oficyna Wydawnicza "Impuls", Cracow 2010, p. 79.

[31] See W. Reich, *Mordercy Chrystusa*, translated by Henryk Smagacz, Warsawp Jacek Santorski & CO Agencja Wydawnicza 1995; J. Carter, Wredni ludzie, translated by Justyna Kotlicka, Warsaw, Jacek Santorski &CO Agencja Wydawnicza. Wydawnictwo System 1993; E. Fromm, *Wojna w człowieku. Psychologiczne studium istoty destrukcyjności*, Warsawp Jacek Santorski &CO Agencja Wydawnicza 1994; P. Zim-

*other times cold and insidious, tireless hatred circulates around the world. Its fierce and stubborn spectre destroys private relations and public affairs. Every time it appears, we open our eyes wide in amazement.*[32]

So what for will serve the substantive, didactic, planning, diagnostic, media-related, technical, educational, and even creative competence to a Montessori teacher[33], if in relationships with students, their parents or educational supervision a barrier appears that invalidates or significantly weakens the meaning and value of their actions? *The bureaucratization of educational system in the form of institutionalised rationality, requirements, uniformity of conduct and hierarchically divided power, resulting from the massification of education, flourished in our century and not always has supported the achievement of the well-being of the students. In addition, the "rights of institutions" were not always consistent with natural law. Therefore, the teacher takes full responsibility for recognising the law that separates human beings from the good of the person and is biased. The teacher must decide when statutory law does not apply, when it becomes evil or a recommendation to do evil (such situations are possible when the statutory law is assigned an absolute position).*[34]

Scientific research of employees of various sectors and professional groups on the experience of mobbing by their superiors and colleagues places teachers in the highest place in terms of the intensity of this phenomenon.[35] Teachers in a postmodern society need critical competence that allows them to understand themselves, to

---

bardo, *Efekt Lucyfera. Dlaczego dobrzy ludzie czynią zło?* Translated by Anna Cybulko, Joanna Kowalczewska, Józef Radzicki, Marcin Zieliński, Warsaw, WN PWN 2008.

[32] A. Glucksmann, *Rozprawa o nienawiści*, translated by Wojciech Prażuk, Warsaw, Czytelnik 2008, p. 7.

[33] M. Kocór, *Samoocena kompetencji zawodowych nauczycieli*, [in:] *O kompetencjach współczesnych wychowawców. Perspektywa praktyki edukacyjnej*, Bydgoszcz, Wydawnictwo UKW w Bydgoszczy 2010.

[34] W. Wołoszyn-Spirka, *Kompetencje nauczyciela – wychowawcy w świetle filozofii realistycznej*, [in:] *O kompetencjach współczesnych wychowawców. Perspektywa praktyki edukacyjnej*, Bydgoszcz, Wydawnictwo UKW w Bydgoszczy 2010, p. 40.

[35] A. Mościcka, M. Drabek, *Mobbing w środowisku pracy nauczyciela…*, p. 81.

determine their professional role and the possibility of finding optimal solutions to difficult situations. The declarative privilege of free choice of means and methods of education is not enough for them, since the centralised authorities of each political option in charge of the education system impose economic and social restrictions on teachers (e.g. too low wages, lack of funds for the purchase of teaching aids, increase in the size of student teams, etc.) or old patterns of didactic teaching models that contradict the sense and possibilities of real application of modern educational solutions.

Therefore, it is worth investigating who is a teacher in Montessori institutions? Are they different in which way from other preschool education teachers? Is Zygmunt Bauman right in saying that in the postmodern world they are only doorkeepers, and not idealists, missionaries, innovators or enthusiasts, that our teachers in a centralised school system are closer to being officials of public education, partial professionals, but not HUMAN SELVES? *They used to have the luxury of being the sole doorkeepers of the edifice of knowledge – there was no other way. Nowadays they are only such informal doorkeepers, without a special uniform, without stripes – for there are many other ways to access knowledge.*[36] Therefore, we do not know what the personal identity of Montessori teachers is, which is, after all, a secondary identity, to some extent added on the primary identity of the person who starts the profession. Nobody is born with this education. There is also no possibility of academical "cloning" of Maria Montessori in the process of educating candidates for teachers of these institutions. The personal identity of every human being (including the one being a teacher) is their understanding of their own existence, their life in response to the question of who they are. It is also related to such dimensions of human existence as authenticity, integrity, meaning, autonomy, self-respect, freedom, choice, responsibility and obligation.

---

[36] *Koniec geografii, Z profesorem Zygmuntem Baumanem rozmawiają Michał Paweł Markowski i Jacek Ziemek*, Przekrój 2001, no. 4, p. 19.

Identity understood in this way is also a social identity that structures the life of a human being in their relationship with other people. *Social identity is our understanding of who we are and who other people are, and inversely – understanding of other people of who they are and who others, including ourselves, are.*[37] Therefore, what is the point of generating the concept of professional identity in this situation? Do we not create in this way a showy category? Since the identity of a human being *is formed from the moment of their birth, from the moment when the child first obtains physical autonomy in the act of separation from the mother's body, and then, in the course of gaining experience and knowledge about themselves, when they shape the concept of "I" as someone with relatively constant characteristics making them different from others*[38], does not "the introduction" of professional standards into an individual and creation of the desired teacher model lead to the formation of a professional identity as a showy identity, an identity assigned but excluding or conflicting with the personal perspective of human development?

The inner freedom of teachers is given to them along with their nature as part of their being, but in the order of perfection, that is, the degree of participation in freedom, it is proposed to them. Therefore, teachers should constantly free themselves, gain and consolidate their inner freedom, that is, freedom in choosing and achieving the intended goals, which as such will be the ability to resist external pressure. No one from the outside will provide them with freedom so necessary for their creative work, unless they themselves make an effort in this direction. However, in order to free oneself from the bondage of seduction, one must critically ap-

---

[37] J.A. Bjųrkųe, *Pomoc do samopomocy.* Kofoeds School in Copenhagen. Institute for Social Work, translated by Beata Jagielska and Jan Kaczorowski, Kofoeds Skoleks Forlag, Kųbenhavn, Wydawnictwo "Żak" Warszawa 1997, p. 17.

[38] J. Miluska, *Iluzoryczna obecność tożsamości społecznej w edukacji politycznej w społeczeństwie obywatelskim*, [in:] *Przemiany społeczno- cywilizacyjne i edukacja szkolna – problemy rozwoju indywidualnego i kształtowania się tożsamości*, ed. T. Lewowicki, A. Szczurek-Boruta, B. Grabowska, Oficyna Wydawnicza "Impuls", Cracow 2005, p. 86.

proach the necessity of the existence of power in the achievement of the common good or happiness which is the education of children and youth. It is time to break with the identity of the professional role "assigned" by the authorities in favour of a "proposed" identity, which encourages creative exploration, self-determination and self-rule.

## References

Albinowska A., Gaj A., Lauba B., Matczak J., Sosnowska J., Czekalska R., *Odkryjmy Montessori raz jeszcze… Program wychowania przedszkolnego opracowany na podstawie założeń pedagogiki Marii Montessori w Przedszkolu Miejskim nr 106 w Łodzi*, Oficyna Wydawnicza "Impuls", Cracow 2013.

*Alternatywy w edukacji*, ed. B. Śliwerski, A. Rozmus, Cracow–Rzeszów, Oficyna Wydawnicza "Impuls", University of Information Technology and Management in Rzeszów 2018.

Badura-Strzelczyk G., *Pomóż mi zrobić to samemu. Jak wykorzystać idee Marii Montessori we współczesności*, Oficyna Wydawnicza "Impuls", Cracow 1998.

Bednarczuk B., *Osobowość autorska absolwentów klas Montessori w perspektywie doświadczeń i celów życiowych*, Oficyna Wydawnicza "Impuls", Cracow 2016.

Berg H.K., *Maria Montessori – poszukiwanie życia razem z dziećmi. Odpowiedzi na aktualne pytania pedagogiczne*, Kielce, Wydawnictwo Jedność Herder 2007.

Bjųrkųe J.A., *Pomoc do samopomocy. Kofoeds School in Copenhagen. Institute for Social Work*, translated by Beata Jagielska and Jan Kaczorowski, Kofoeds Skoleks Forlag, Kųbenhavn, Wydawnictwo "Żak" Warszawa 1997.

Carter J., *Wredni ludzie*, translated by Justyna Kotlicka, Warsaw, Jacek Santorski &CO Agencja Wydawnicza. Wydawnictwo System 1993.

Cicimirska N., *Moja ochronka*, Lviv, Warsaw, Gubrynowicz i syn 1928.

*Edukacja alternatywna – dylematy teorii i praktyki*, ed. B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 1992 (2nd ed. amended, Cracow 1993).

*Edukacja alternatywna w XXI wieku*, ed. Z. Melosik, B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 2010.

*Edukacja alternatywna. Nowe teorie, modele badań i reformy*, ed. J. Piekarski, B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 2000.

Epstein P., *Z notatek pedagoga Montessori. Poradnik*, translated by M. Madej, Oficyna Wydawnicza "Impuls", Cracow 2014.

*Erziehen mit Maria Montessori. Ein reformpädagogisches Konzept in der Praxis*, Hrsg. H. Ludwig, Freiburg, Verlag Herder 1997.

Fromm E., *Wojna w człowieku. Psychologiczne studium istoty destrukcyjności*, Warsaw, Jacek Santorski &CO Agencja Wydawnicza 1994.
Glucksmann A., *Rozprawa o nienawiści*, translated by Wojciech Prażuk, Warsaw: Czytelnik 2008.
Gorycka-Wieleżyńska A., *Szkoła pracy samorozwojowej. Część teoretyczna*, Warsaw, PSPS 1922.
Guz S., *Edukacja w systemie Marii Montessori. Wybrane obszary kształcenia*, volume 2, Lublin, Wydawnictwo UMCS 2015.
Guz S., *Metoda Montessori a zachowania społeczne dzieci*, Wychowanie w Przedszkolu 2002 no. 9, pp. 515–521.
Guz S., *Metoda Montessori w przedszkolu i szkole. Kształcenie i osiągnięcia dzieci*, Lublin, Wydawnictwo UMCS 2006.
Jeleńska L., *Przygotowanie do życia przez szkołę*, Poznań, Warsaw, Vilnius, Lublin, Księgarnia św. Wojciecha 1939.
Kocór M., *Samoocena kompetencji zawodowych nauczycieli*, [in:] *O kompetencjach współczesnych wychowawców. Perspektywa praktyki edukacyjnej*, Bydgoszcz, Wydawnictwo UKW w Bydgoszczy 2010.
*Koniec geografii, Z profesorem Zygmuntem Baumanem rozmawiają Michał Paweł Markowski i Jacek Ziemek*, Przekrój 2001, no. 4.
Królica M., *Znajomość wśród nauczycieli przedszkoli tez pedagogiki Marii Montessori i możliwości ich realizacji (unpublished text)*, [in:] *International Scientific Conference. Pedagogika Montessori w Polsce i na świecie*, Cracow, 29–30 September 2008, Conference materials, Cracow 2008.
Kwiatkowska H., *Pedeutologia*, Warsaw, WAiP 2008.
Łatacz E., *Podobieństwo metod pedagogicznych Marii Montessori i Marii Grzegorzewskiej*, Acta Universitatis Lodziensis, Folia Paedagogica 2, 1999, pp. 15–19.
Łatacz E., *Recepcja teorii pedagogicznej Marii Montessori w Polsce do roku 1939*, Łódź, Wydawnictwo Uniwersytetu Łódzkiego 1996.
Marciszewska-Posadzowa S., *Instrukcja la ochroniarek*, Poznań, Warszawa, Wilno, Lublin, Księgarnia św. Wojciecha b.r.w.; F. Pinesowa, System wychowawczy dr M. Montessori, Warsaw, DKP 1931.
Miksza M., *Zrozumieć Montessori*, Oficyna Wydawnicza "Impuls", Cracow 1998.
Miluska J., *Iluzoryczna obecność tożsamości społecznej w edukacji politycznej w społeczeństwie obywatelskim*, [in:] *Przemiany społeczno-cywilizacyjne i edukacja szkolna – problemy rozwoju indywidualnego i kształtowania się tożsamości*, ed. T. Lewowicki, A. Szczurek-Boruta, B. Grabowska, Oficyna Wydawnicza "Impuls", Cracow 2005.
Montessori M., *Umysł dziecka. Umysł absorbujący*, translated by Jacek Dąbrowski, Madras, 1949 [materials for internal use of the Polish Montessori Association].
Mościcka A., Drabek M., *Mobbing w środowisku pracy nauczyciela*, [in:] *Psychospołeczne warunki pracy polskich nauczycieli. Pomiędzy wypaleniem zawodowym a zaangażowaniem*, Oficyna Wydawnicza "Impuls", Cracow 2010.

*Nowe konteksty (dla) edukacji alternatywnej XXI wieku*, ed. B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 2001.

*Pedagogika alternatywna – dylematy teorii i praktyki*, ed. B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 1998.

*Pedagogika alternatywna – dylematy teorii, Wstęp*, ed. B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 1995 (2nd ed. Cracow 2000).

*Pedagogika alternatywna. Postulaty, projekty i kontynuacje*, volume I. *Teoretyczne konteksty alternatyw edukacyjnych i wychowawczych*, ed. B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 2007.

*Pedagogika alternatywna. Postulaty, projekty i kontynuacje*. Volume II. *Innowacje edukacyjne i reformy pedagogiczne*, Oficyna Wydawnicza "Impuls", Cracow 2007.

Reich W., *Mordercy Chrystusa*, translated by Henryk Smagacz, Warsaw, Jacek Santorski & CO Agencja Wydawnicza 1995.

Richer S., *Socjologia i pedagogika*, Kwartalnik Pedagogiczny 1987, no. 4, p. 52.

Schätzel I.M., *Idea wychowania przedszkolnego "Casa dei Bambini" jako szkółka wszechstronnej pracy dziecka"*, Lviv, PTP 1919.

Sienkiewicz E., *Osobowość i zadania nauczyciela montessoriańskiego*, www.edukacja.edux.pl/p-34834-osobowosc-i-zadania-nauczyciela-montessorianskiego.php access on 5.02.2018.

Skjöld Wennnerström K., Bröderman Smeds M., *Pedagogika Montessori w przedszkolu i szkole*, translated by I. Łabędzka-Karlöf, Oficyna Wydawnicza "Impuls", Cracow 2007.

Steenberg U., *Handlexikon zur Montessori-Pädagogik*, Ulm, Verlag Klemm & Oelschläger 1997.

Stein B., *Teoria i praktyka pedagogiki Marii Montessori w szkole podstawowej*, Wydawnictwo Jedność, Kielce 2003.

Surma B., *Pedagogika Montessori – podstawy teoretyczne i twórcze inspiracje w praktyce*, Łódź, Palatum 2008.

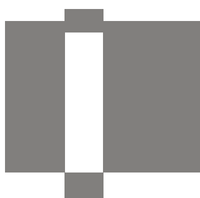
Śliwerski B., *Edukacja autorska*, Oficyna Wydawnicza "Impuls", Cracow 1996 (2nd ed. 2008); idem, Problemy współczesnej edukacji, Warsaw, WAiP 2009.

Śliwerski B., *Pedagogika dziecka. Studium z pajdocentryzmu*, GWP, Gdańsk 2007.

*Teoretyczne podstawy edukacji alternatywnej*, ed. B. Śliwerski, Oficyna Wydawnicza "Impuls", Cracow 2009.

Wołoszyn-Spirka W., *Kompetencje nauczyciela – wychowawcy w świetle filozofii realistycznej*, [in:] *O kompetencjach współczesnych wychowawców. Perspektywa praktyki edukacyjnej*, Bydgoszcz, Wydawnictwo UKW w Bydgoszczy 2010.

Zimbardo P., *Efekt Lucyfera. Dlaczego dobrzy ludzie czynią zło?* Translated by Anna Cybulko, Joanna Kowalczewska, Józef Radzicki, Marcin Zieliński, Warsaw, WN PWN 2008.



Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

DIKLA DIVON
Adam Mickiewicz University, Poland

# Inclusive schools: Are teachers adequately prepared for inclusion?

**ABSTRACT**: Dikla Divon, *Inclusive schools: Are teachers adequately prepared for inclusion?* Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 33–51. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.02

This article will discuss one of the main topics on the educational and social agendas in Israel. Integrating children and adults with special needs into schools and the community is a worldwide issue. Many researchers have tried to find and evaluate the most effective integration methods, to assist people with special needs and enable them high quality of life and equality. In this article, we will look at the process of integrating students with special needs and the transition that took place during the last few decades regarding the idea of "inclusion", which is now a top priority for the Ministry of Education's directors. Based on recent studies, we will examine whether school teaching staff and student teachers are ready to implement inclusive programs in schools as required. We will then propose ways to optimize the training of the educational staff, towards the implementation of the inclusive programs.

**KEY WORDS:** Education, Special Education, Integration, Inclusion, Inclusive Schools

## Introduction

Integration and inclusion of children and adults with special needs in schools and the community are two issues on the educational and social agenda of many countries, including Israel. Many

researchers are examining different ways of integration, to find the most effective way of integration for people with special needs both in facilitating the integration process and in the success of the integration, manifested in improving the quality of life and equality for those integrated. In this article, we will examine the process of integrating students with disabilities in Israel since the enactment of the "Special Education Act" in 1988 and up to the formulation of the "inclusion" concept, which is favored by the Ministry of Education and is still being implemented.

In this paper, we will review the following issues:

- When did the discourse on "inclusion" come to the forefront of educational priorities? Equally important, what was the founding event that initiated it?
- What is the added value of inclusion over integration?
- We will discuss the ability of teachers and student teachers to implement the school inclusion programs, according to the 11th amendment of the Special Education Act.
- Based on a literature review, we will present a model for preparing student teachers to teach according to the 11th amendment of the aforementioned law.

## Integration in Israel – historical review

The philosophical concept underlying the idea of integration is that a child with special needs has the same rights as a child without such needs; therefore, he has the basic right to study together with his peers within the same educational system.

Studies suggest that separating a child with special needs from his peers will inevitably result in future difficulties. Separating a child or an adult with special needs from the rest of society is a discriminatory action, designated to make the lives of "ordinary" people easier.[1] Excluding the "weak" people, allegedly to protect them, indicates discrimination and not consideration.

---

[1] רונן ח. 1997. ״הכללתם של ילדים חריגים בחינוך הרגיל. סוגיות בחינוך מיוחד ובשיקום"..

Referral ofhildren with special needs to special education shifts the responsibility of care from the regular school, to the disabled individual and to the therapeutic staff. In doing so, it dismissed the regular educational system from responsibility and from the need to address the problems of children with special needs. Indeed, there are special children who need more teaching time and more time for learning; but in principle, disabled children do not need instruction that is fundamentally different from the instruction provided to their normally developing peers. According to this approach, special education teachers are educators with special skills and not educators of special children.[2]

The philosophical concept that considers the disabled individual as an integral part of society, led to two complementing models that aim to achieve de facto integration of the special individual in society: **the behavioral model**, which advocates the principle of normalization, and the **humanistic-educational model**.

## The behavioral model – the principle of normalization

One of the social changes that derived from the struggles of human rights movements, is the integration model – based on the concept of normalization. This concept developed in the United States and has manifested itself in two areas: 1) **Legislation** aimed at equal rights, equal opportunities, and affirmative action that would enable "normal life" in the community. 2) **Integration** of students with special needs into the public education system, in order to prepare them for a normal life.[3]

---

.29-21:(2)12

[2] רונן ח. 1997״ .הכללתם של ילדים חריגים בחינוך הרגיל. סוגיות בחינוך מיוחד ובשיקום״..
.29-21:(2)12

[3] רייטר, ש. 1999״ .איכות חייו של הילד בעל הצרכים המיוחדים לאור הרחבת עקרון הנורמליזציה״. סוגיות בחינוך המיוחד ובשיקום 14( 2:)61–69

The behavioral concept has received much criticism for adhering to the medical model, according to which the abnormality must be "cured" and made „normal". The behavioral model dictated systematic ways of working and clear stages of diagnosis, defining the "disease", implementing an intervention program that determines the environmental conditions and subsequent treatment, and examining the results in light of the criterion of health or normality versus illness or abnormality. Although the behavioral method was found to be effective and was widely used in educational and rehabilitation institutions, it entailed omitting the uniqueness of the individual. The goal of normalization was achieved, perhaps, but the price was the disabled people's isolation and alienation, despite living within the community. No wonder adults with disabilities began to make claims and requests to live meaningful, interesting, and independent lives and to be able to make their own decisions.[4]

## The humanistic-educational model

The humanistic-educational model, focusing on the disabled individual and his rights, was developed as an alternative to the behavioral model. This model maintains a holistic approach towards the individual and the social, therapeutic, educational, and rehabilitation services provided to him. According to this model, true integration is a two-way activity of the individual and society, rather than a one-way activity of preparing the disabled person to be like everyone else. True integration means cultivating the ability of the disabled person to live a meaningful life of dignity with the inclusion of the disability, and at the same time preparing society to accept people with disabilities and handicaps as ordinary people and adapt the services it provides to their needs. The keyword in this model is **respect for the individual**.

---

[4] רייטר, ש. 1999 "איכות חייו של הילד בעל הצרכים המיוחדים לאור הרחבת עקרון הנורמליזציה". סוגיות בחינוך המיוחד ובשיקום 14( 2:)61–69

## From normalization to inclusion and integration

According to the integration model, which is based on the behavioral model and the humanistic-educational model, people with disabilities should live in conditions as similar as possible to those of ordinary people in all areas of life: residence, work, study, leisure, etc. To this end, they should be granted the same civil rights given to other citizens. At the same time, in a gradual process, the understanding began to take root that the integration model was not sufficient and thus the idea of inclusion began to form. The idea of inclusion is a perceptual change in the concept of "normalization" underlying the integration model. The change is manifested in the transition from an attempt to "change" a person with special needs and "normalize" him, to a desire to "include" them as they are and adapt society to them. The inclusion model shifted its weight to the humanistic model with an increasing demand that society should adapt itself and accommodate those with special needs. The concept of inclusion stemmed from scholars from Scandinavia and the US, who believed that for de-facto equality, it is not enough to adapt people with special needs to society, but also vice versa.[5] For that to happen, the public should be educated to accommodate people with special needs and should acknowledge that they are able to live in good conditions, no less than those of an average citizen. Without a profound social change of consciousness, all people with special needs will still be considered „different", will not receive basic human respect and dignity. Not because they are incapable, but because they do not meet the criteria set by the mainstream. The rights of people with disabilities should be enshrined in law, which will guarantee them equal rights.

The weak point of the principle of normalization lies in the interpretation of the term "normal". There was a general misconception that normal means good and disabled means not-good. This

---

[5] רייטר, ש' לייזר, י' ואבישר, ג' (עורכים). (2007). שילובים: לומדים עם מוגבלויות במערכות חינוך, חיפה: אחווה.

perception defined how to address people with special needs; in educational settings, the staff believed that people with special needs should be "normalized" as much as possible. People with special needs would like to be accepted as they are.[6]

In recent years, the principle of normalization has been redefined. This new definition corresponds to the ethos of a heterogeneous and democratic society, and it focuses on society's readiness to integrate all individuals. In order to accommodate people with disabilities, a two-level, comprehensive accessibility is needed: (a) **the physical level**: the public space must be adapted and made accessible to the physical limitations of people with special needs; (b) **the perceptual level**: there is a need to change basic attitudes towards people with special needs, consider them as human beings and accept them as they are and not as disabled people who should be corrected. Following the critique on the concept of normalization among the professional community, there was a tendency to replace the term 'normalization'/'integration' with the terms 'inclusion' and 'participation'. The term 'inclusion' expresses the basic legal right of equality. The two main laws in Israel that address integration are the Special Education Law and the Equal Rights for Persons with Disabilities Law.[7,8]

The purpose of these laws was determined in the body of the law as follows:

Section 2 of the Special Education Law provides as follows:

2. The goals of special education services are –
   (1) To promote and develop learning, competencies, and abilities of students with special needs and their physical, mental, emotional, social and behavioral functioning as well as to provide them with knowledge, life skills, and social skills;

---

[6] רייטר, ש' לייזר, י' ואבישר, ג' (עורכים). (2007). שילובים: לומדים עם מוגבלויות במערכות חינוך, חיפה: אחווה.

[7] Special Education Law, 1988.

[8] Special Education Law, 1988.

(2) To ensure the right of students with special needs for equal and active participation in society, in all areas of life, and to provide an appropriate response to their special needs in a way that will enable them to live in maximal independence, privacy, and dignity, while realizing their abilities;

(3) To promote the integration of students with special needs in regular educational institutions.[9]

The Equal Rights for Persons with Disabilities Law:

(2) To protect the dignity of people with special needs and ensure their right for equal and active participation in society, in all areas of life, and to provide an appropriate response to their special needs in a way that will enable them to live in maximal independence, privacy, and dignity, while fully realizing their abilities.[10]

## Integration in Israel – historical review

In 2002, the Israeli Special Education Law was extended and is now referred to as the Integration Law, which addresses the integration of children with special needs in regular education. Article 20B of the proposal states:

**"An integrated student is entitled, as part of his studies at a regular educational institution, to supplemented teaching and learning as well as to special services..." (section 20b).**

The amendment specifies the composition of the Integration Committee, whose role is to determine the eligibility of a student with special needs in a regular school and the need to tailor an educational program for each integrated student. The amendment clear-

---

[9] Special Education Law, 1988.

[10] Equal Rights for Persons with Disabilities Law, 1998.

ly states, for the first time, the necessity to integrate children with special needs into the regular education system, with the addition of special instruction and special services. In addition, the decision on eligibility for each child will be made at the school level according to the recommendation of the integration committee, in **cooperation with the parents.** That is, parental involvement and partnership are now enshrined in legislation and parents can appeal to the committee. The Special Education Law and its expansion in 2002 has a new chapter that defines educational integration as the desired outcome – giving preference to the regular educational system over special education; providing special education services and regular care within the regular framework; and extending parental participation in making decisions concerning their children, their participation in placement committees and disclosure of documents to the parents. The Ministry of Education has established three different frameworks for the integration of special education students: a special education school, a special education class in a regular school (an advancing class), and individual integration in a regular class and a regular school.

In recent years, there has been growing public interest in integrating children with disabilities into the regular education system. This interest is reflected in the increasing involvement of organizations and associations, in discussions in the Knesset (Israeli parliament) committees, in the legal-legislative field, in petitions submitted to the courts, and in the establishment of a public committee (chaired by former judge Dalia Dorner) to examine the policy regarding of students with special needs. This committee examined the implementation of the integration section of the law and recommended various improvements: parental involvement and letting them choose the suitable framework for their child; preferring a flexible budgeting method – "the budget follows the child"; individual decision on the child's placement, according to his level of functioning; training and professional development for the teacher-assistants; training teachers from the regular education track; proper

equipment of special education settings and locating them near regular schools.

A Brookdale Institute (2010) report revealed that graduates of the system who have been integrated into regular education, report a lack of social connections after school hours. The report indicated that the educational integration at schools does not enhance the social lives of students with special needs in the after-school hours, that is, integrated students have few after-school social experiences. Another finding was that all students in schools where children with disabilities were integrated did not receive adequate preparation. It was also found that the integrated students do not receive a life preparation program and do not have the skills needed to integrate into society.[11]

These findings indicate that "it takes two to tango". That is, the inclusion target (Objective 12) of the Ministry of Education, which has been implemented since 2012, requires that the regular schools should be adept at accommodating students with special needs. This step is critical, as are the integration and life-skills programs for students with special needs. Consequently, those students do not enjoy an optimal social life and do not take an active part in the community.

## Integration and quality of life

The concept quality of life represents an ideology and a socio-political strategy that has been more prevalent in the last two decades. This means that it is not enough to strive for the integration of the individual in a more normative framework, but that he or she must be guaranteed quality of life.[12] The term 'quality of life' pre-

---

מעקב :יסודיים ספר-בבתי מיוחדים צרכים עם ילדים שילוב. 2011 .מ ,מרום ;.א ,מילשטיין ;.ד ,נאון [11]
ירושלים, ברוקדייל מכון-וינט'ג-מאיירס, 11-586-דמ. מיוחד חינוך בחוק "השילוב פרק" יישום אחר

[12] Schalock R.L. (2000), Three Decades of Quality of life. In Wehmeyer M., Patton J. (Edt), Mental Retardation in the 21st Century. pp. 335–356. PRO-ED, Inc.

רייטר, ש. 1999 ".איכות חייו של הילד בעל הצרכים המיוחדים לאור הרחבת עקרון הנורמליזציה".
סוגיות בחינוך המיוחד ובשיקום 14( 2 :) 61–69

sents an alternative paradigm to the medical paradigm on which the special education system was based. The integration movement, which created an education reform, expanded the meaning of the term 'quality of life' and applied it to every student that is different from the norm in his surroundings, in terms of origin, socio-economic status, etc. According to this paradigm, the educational framework should tailor an individual program for each child and adolescent with disabilities, after finding out about the student's needs, preferences, and abilities. It will take into consideration his opinion and allow him to make choices and decisions. The program is supposed to take into account various aspects – social ones, independence, physical comfort, personal development, and psychological well-being. Contrary to the integration movement, which was based on the medical model, the inclusion movement, which is based on the social model, contends that disability is not a feature of the individual but a state of interaction between the individual and his environment and the assistance provided to him. That is, the manifestation of disability is a product of social definition because society decides how to evaluate people with disabilities and judge them. Supporters of the movement argue that children with disabilities should not be adapted to the framework, as implied by the integration model, but on the contrary – that the framework should be adapted to the children. For example, instead of providing the student with a sequence of special education framework, as suggested by the integration model, he should be given a series of services within a regular class. The services will be ranked according to the scope of the class and according to the degree of intensity of the adjustments required.[13] This view stems from the movement's fierce belief that equality is a moral value that should be protected unconditionally.[14]

---

[13] רייטר, ש' (1990). דרכי עבודה בחינוך מיוחד. סוגיות בחינוך מיוחד, יחידה מס' 11, תל אביב: האוניברסיטה הפתוחה.

[14] רונן, ח' (2007). שילוב – סוגיות ומחלוקות ש' רייטר י' לייזר וג' אבישר (עורכים), שילובים: לומדים עם מוגבלויות במערכת החינוך , עמ' 55–27. חיפה: אחווה.

## Inclusion

Inclusion is a concept from the field of psychology that describes the ability to accept feelings and difficulties of another person as they are, without rejecting or denying them, or transferring them to others in an unadapted manner. Inclusion is associated with the ability to observe difficult emotions and situations or interpret them in a way that will enable accepting and assimilating them.

Inclusive schools were first established in Israel in 2017. Those first four schools host students with special needs and "regular" students. Dozens of additional inclusive schools are about to open in 2021. This reflects the desire of the educational system in Israel to prioritize the inclusion program over the integrative program.

## Inclusive schools in Israel

**An inclusive school** is a school built entirely around the inclusion of children with special needs alongside "ordinary" children. Adi Altschuler, a social entrepreneur and the founder of Wings of Krembo – a youth movement for children with and without special needs, initiated the establishment of inclusive schools so that the inclusion and participation revolution will take place in formal education as well.

In inclusive schools, every third student has special needs. The school is physically and pedagogically adapted for this purpose. The curriculum provides educational quality on the one hand, and inclusive and integrative thinking on the other. Teachers are substantially supported by special education teachers and integration assistants. All staff members are trained according to the inclusion model.

## Educational inclusion

Educational inclusion is based upon several social and educational approaches. Education is part of society and therefore must apply social norms and advocate moral values. Educational inclu-

sion stresses the acceptance of the individual, regardless of who he or she is, by providing the setting and opportunity to express their needs and receive the optimal conditions to realize their abilities, even if they are different from those of their peers.

The principle underlying the inclusion policy is the aspiration of the education system to create meaningful learning that has involvement, belonging, interest, enthusiasm, emotional and mental connection, and constant growth for all participants. Israel is a multicultural and diverse society. Therefore, there is a need to apply concepts of inclusion and diversity in various services and settings. The Israeli educational system consists of students with different characteristics and diverse needs. Each student has strengths, as well as skills and competencies that require support and enhancement. The different educational frameworks aim to accommodate each student's needs, as part of the institution's raison d'être.[15]

The Ministry of Education has set inclusion as a pivotal goal in its working plans since 2012, recognizing that openness to learning about and getting acquainted with "others", will advance us to be the type of society we aspire to. An inclusive school provides its students with the optimal conditions for their development, advancement, and mental well-being. It is a place that recognizes diversity, flexibility, and creative thinking. It works to create a sense of belonging, protection, and meaning, and maintains a meaningful dialogue with all its members – students, teachers and other staff members, parents, and the surrounding community.

In recent years, **school inclusion** has become a priority in the national agenda. Many teachers from regular education receive special education training, and regular schools are transforming into inclusive schools. An inclusive school enables children with mild, moderate, and severe disabilities to integrate into regular settings near their homes and acquire the same education as their peers, only adapted to their individual needs. The school inclusion pro-

---

[15] R. Slee (2011). *The irregular school: Exclusion, schooling and inclusive education*. Oxon: Routledge.

gram has a vital role in educating future generations to be tolerant and accepting of all others.

In the educational system in Israel, as in other countries, there are students with diverse abilities and different needs. The inclusion and participation of all students is a top priority. An inclusive society recognizes the added value of diversity and its advantages. People are different from one another – each has abilities, needs, wishes, and desires, and all individuals can contribute to shaping our society.

The commitment to the inclusion and integration of students is an important challenge for the teaching staff. This commitment means that the staff members maintain the perception that every student is entitled to study within his immediate community and to experience shared living throughout the day, in educational institutions, in after-school activities, and in extra-educational frameworks. Moreover, it should be acknowledged that different responses to different students benefit the entire class and promote it as a whole.

Inclusion in educational settings relates to four central "action areas": pedagogical inclusion, emotional-social inclusion, organizational inclusion, and environmental inclusion. This division into four areas is not dichotomous, but it allows for an in-depth, holistic observation of the educational institution as one organism with a variety of study trends, treatment options and tailored teaching.

Inclusion and participation at schools are reflected in the provision of multiple responses to a variety of needs, in those four "action areas". This series of responses allows each student to progress and realize his potential, find interest in things, expand his social skills, and enrich his emotional world.

The ability of the teaching staff to address the important moral and professional challenges they face is a key goal for the educational system. The inclusion and participation of students with special needs strengthen the ability of the teaching staff to address those important moral and professional challenges. These challenges provide an opportunity for enriching professional and emotional experiences.

## Views of student teachers and teachers toward inclusion of students with special needs

One of the factors influencing teachers' attitudes is knowledge about children with special needs and their integration in regular classes. This knowledge is acquired during both teaching training and in service. Studies confirm the assumption that training in special education, during those two professional periods, is necessary in order to reduce objections to integration. Enriching teachers' knowledge about integration and ways to meet the needs of integrated students may reduce negative attitudes toward integration.[16] Teachers who reported a high level of special education training, or experience in teaching students with special needs, held more positive views toward integration.[17]

Rothenberg and Reiter (2002) conducted in a study in which 92 Israeli education students from non special-education study programs participated.[18] The study group included 59 students who took an introductory course in special education; the control group included 33 students who did not take that course. The study addressed the question of whether there is a connection between taking introductory courses in special education and more positive attitudes towards children with special needs and their integration in regular classes. The syllabi in those courses were based on pedagogical and didactic principles, mainly education to equality, justice, and fairness towards all groups and to all individuals. The study showed that students from the study group changed their attitudes towards children with special needs and their integration in the regular educational system. The change was apparent in all components of one's views: emotional, behavioral, and cognitive.

---

[17] K. Parasuram (2006). *Variables affecting teachers' attitudes towards disability and inclusive education in Mumbai*, India. Disability and Society, 21 (3), pp. 231–242.

[17] D. Supriyanto (2019). *Teachers' attitudes towards inclusive education: a literature review*. IJDS: Indian Journal of Disability Research, 6 (1), pp. 29–37.

[18] רוטנברג, י' ורייטר, ש'. (2002). שינוי עמדותיהם של סטודנטים במכללה להכשרת מורים לגבי ילדים בעלי צרכים מיוחדים ושילובם בכיתות הרגילות. מעוף ומעשה, 23–27

These studies indicate a positive relationship between learning about disabilities and preparing to work with disabled students, and positive attitudes of teachers towards inclusion. Studies also indicate that positive attitudes towards inclusion lead to optimal integration.[19] Therefore, in view of the 11th amendment to the Special Education Law (1988), which advocates inclusion and participation of every student with special needs in Israel, we are committed to preparing the educational staff early on in their academic training, in order to include and integrate all special education students within regular education settings.

## Recommendations and a training model

Studies indicate that the status of special education teachers, subject teachers, and educators has been undergoing change, in the trend toward inclusive educational system. Teachers do not always know what their status is, and the school organizational structure has changed. Teachers are required to work collaboratively and synthesize the information collected about each student into personalized programs aimed at advancing students with special needs. As a pedagogical instructor and a college lecturer, I meet student teachers with special education background as well as subject student teachers; I also meet teachers in whose classes there are students with special needs. From conversations I've had with them and the results of the studies detailed above, I see the need to prepare those future teachers already in their academic training, familiarizing the student teachers with the type of tasks they'll need to perform in inclusive schools. Following the inclusion goals set by the Ministry of Education and the planned follow-up goals in the State of Israel, I recommend that inclusion programs be part of the academic studies and prepare student teachers for educational inclusion and inclusive teamwork.

---

[19] D. Supriyanto (2019). *Teachers' attitudes towards inclusive education: a literature review*. IJDS: Indian Journal of Disability Research, 6(1), pp. 29–37.

Since student teachers who do not specialize in special education will be required, according to the school inclusion program, to take part in inclusion programs of students with special needs, I propose that in the first academic year all student teachers in Israel should be introduced to inclusive education, to facilitate their active participation in the schools' inclusion programs. Teaching curricula should include courses on social inclusion. Graduates of such courses will acquire tools to instill in students the values of social and emotional inclusion of students with special needs. The model is based on the fact that the field of inclusion is an integral part of the degree in education. Inclusion-related courses will encompass four semester courses in each academic year and on the fourth (practical training) year, student teachers will be required to gain practical experience in an inclusive class or school. The training model for the three academic years contains courses and workshops in the following topics:

1. Inclusive pedagogy and optimal differential learning.
2. Inclusive values and social and emotional integration.
3. Exposure to the various disabilities and their characterization.
4. Teamwork and collaboration.
5. Principles of inclusive schools and their inter-organizational working processes.

Practical experience must include differential learning and coping with social and emotional differences.

The principle of inclusion must be an integral part of the curricula at teachers' colleges and universities if we want all schools to be inclusive. It should be woven – both theoretically and practically – into the academic studies, to prevent a situation whereby a teacher encounters the concept of inclusion and is trained for it only after receiving certification.

I sincerely hope that the inclusion model that is gaining momentum throughout the world and in Israel will be a part of our outlook and that the inclusion of students with special needs at an early age will contribute to community building and create an inclusive generation of people who consider everyone equal – a society with tolerance to diversity and accepting of others completely.

# References

רונן ח. 1997" הכללתם של ילדים חריגים בחינוך הרגיל. סוגיות בחינוך מיוחד ובשיקום". 12(2):21–29.

רונן, ח' (2007). שילוב – סוגיות ומחלוקות ש' רייטרי' לייזר וג' אבישר (עורכים), שילובים: לומדים עם מוגבלויות במערכת החינוך , עמ' 27–55. חיפה: אחווה

רייטר, ש' (1990). דרכי עבודה בחינוך מיוחד. סוגיות בחינוך מיוחד, יחידה מס' 11, תל אביב: האוניברסיטה הפתוחה.

רייטר, ש. 1999" איכות חייו של הילד בעל הצרכים המיוחדים לאור הרחבת עקרון הנורמליזציה". סוגיות בחינוך המיוחד ובשיקום 14(2 :) 61–69.

נאון, ד.; מילשטיין, א.; מרום, מ. 2011. שילוב ילדים עם צרכים מיוחדים בבתי-ספר יסודיים: מעקב אחר יישום „פרק השילוב" בחוק חינוך מיוחד. דמ-586-11, מאיירס-ג'וינט-מכון ברוקדייל, ירושלים.

Ainscow M., Booth T. & Dyson A. (2006). *Improving schools, developing inclusion*. New York, NY: Routledge.

Ainscow M., Sandill A. (2010). Developing inclusive education systems: the role of organizational cultures and leaders. *International Journal of Inclusive Education*, 14(14), pp. 104–111.

Aloni N. (2008). *Empowering dialogues in humanistic education*. Bnei Brak: Hakibbutz Hameuhad.

Anderson J., Boyle C. & Deppeler (2014). The ecology of inclusive education, [in:] Z. Zhang, P.W.K. Chan & Boyle C. (Eds.), *Equality in Education: Fairness and Inclusion*, Rotterdam, Sense, pp. 23–34.

Artiles, A.J., & Kozleski E.B. (2007). *Beyond convictions: Exploring culture, history, and power in inclusive education*.

Bender W.N., Vail C.O. & Scott K. (1995). Teachers' Attitudes toward Increased Mainstreaming: Implementing Effective Teaching for Students with Learning Disabilities. *Journal of Learning Disabilities*, 28(2), pp. 87–94.

Blecker N. & Boakes N. (2010). Creating a learning environment for all children: Are teachers able and willing, *International Journal of Inclusive Education*, 14, pp. 435–447.

Booth T. Ainsco T. (2002). *Index for Inclusion: Promoting the Learning and Integration of All Students in the School.* (Translation: Anat Seidman). Center for the Study of Container Education, Mishal Publishing.

Boyle C., Topping K. & Jindal-Snape D. (2013). Teachers' attitudes towards inclusion in high schools, *Teachers and Teaching*, 19, pp. 527–542.

Change F., Early D. & Winton P., et al. (2005). Early childhood teacher preparation in special education at 2-and 4-year institutions of higher education, *Journal of Early Interventions*, 27, pp. 110–123.

De Boer A., Pijl S. & Minnaert A. (2010). Regular primary teachers' attitudes towards inclusive education: A review of the literature, *International Journal of Inclusive Education*, 15, pp. 331–353.

Dori J. (2013). Education heterogeneity: optimal educational models for systemic or local coping. In Naomi Mendel Levy (Ed.), *Dealing with differences between students in the Israeli education system* (pp. 17–16). Lecture summary at the Israeli National Academy of Sciences.

Fakih M. (2019). Teachers' Attitudes Towards Inclusion of Learners with Disabilities at American Private Early Childhood Education in Dubai: An Investigative Study (Doctoral dissertation, The British University in Dubai (BUiD)).

Florian L. & Rouse M. (2009). The inclusive practice project in Scotland: Teacher education for inclusive education, *Teaching and Teacher Education*, 25(4), pp. 594–601.

Forlin C. & Chambers D. (2011). Teacher preparation for inclusive education, *Asia-Pacific Journal of Teacher Education*, 39, pp. 17–32.

Harkabi A., Mendel-Levy N. (eds.). *Education for All – and Everyone in the Education System in Israel*. Jerusalem: Israeli National Academy of Sciences.

Joint-Ashalim (not yet published). *Typology of the systemic conduct of the school for individual education.*

Kim J. (2010). Influence of teacher preparation programmes on preservice teachers' attitudes towards inclusion, *International Journal of Inclusive Education*, 15, pp. 355–377.

Lancaster J. & Bain A. (2010). The design of pre-service inclusive education courses and their effects on self-efficacy: A comparative study, *Asia-Pacific Journal of Teacher Education*, 38, pp. 117–128.

Moore P. (2012). The "containment" policy: a systemic approach aimed at fulfilling the students as individuals (presentation). *A learning day about the bride in theory, research, and practice.*

Parasuram, K. (2006). Variables affecting teachers' attitudes towards disability and inclusive education in Mumbai, India. *Disability and Society*, 21 (3), pp. 231–242.

Pugach M.C., & Blanton L.P. (2012). Enacting diversity in dual certification programs, *Journal of Teacher Education*, 63(4), pp. 254–267

Pugach M.C., et al. (2011). A historical perspective on the role of collaboration in teacher education reform: Making good on the promise of teaching all students, *Teacher Education and Special Education*, 34(3), pp. 183–200.

Schalock R.L. (2000), Three Decades of Quality of life. In Wehmeyer M., Patton J. (Edt), Mental Retardation in the 21st Century, pp. 335–356. PRO-ED, Inc.

Schalock R.L. (2004). The concept of quality of life: what we know and do not know. Journal of Intellectual Disability Research, Vol. 48(3) pp. 203–216

Sharma U., Forlin C. & Loreman T. (2008). Impact of training on pre-service teachers' attitudes and concerns about inclusive education and sentiments about persons with disabilities, Disability & Society, 23, pp. 773–785.

Slee R. (2011). *The irregular school: Exclusion, schooling and inclusive education*, Oxon: Routledge.

Supriyanto D. (2019). Teachers' attitudes towards inclusive education: a literature review. *IJDS: Indian Journal of Disability Resea rch*, 6(1), pp. 29–37.

UNESCO (2005). Guidelines for inclusion: Ensuring access education for all. France: UNICEF. http://unesdoc.unesco.org/images/0014/001402/140224e.pdf.

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

Ewa Gawlik

University of Łódź, Poland

# Communication of adults with moderate intellectual disability in the process of autonomisation – preliminary considerations

**Abstract**: Ewa Gawlik, *Communication of adults with moderate in-tellectual disability in the process of auton-omisation – preliminary considerations*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 53–65. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.03

The aim of this paper is to look into communication in adults with moderate intellectual disability in the process of their autonomisation. This matter has been investigated to shed some light on how people with intellectual disabilities communicate in their social realities in the context of their autonomy and independence. The paper presents a preliminary research using the interpretative paradigm. To deliver the intended goal, the author has used the problem-centered interview.

**Key words:** communication, intellectual disability, autonomy, independence, adulthood

## Introduction

In this article, I will seek to analyze communication in adults with intellectual disabilities with respect to their self-reliance and independence in their daily lives. I will use the term 'autonomy'

primarily from the perspective of one's autonomy being recognized and becoming self-reliant. Autonomy consists in the rights of those with moderate intellectual disability to make independent decisions about their external and internal affairs, that is to be self-reliant and independent in making decisions about themselves. In my view, the above are underpinned by socialisation processes, making essential contribution to social realities of those with moderate intellectual disabilities. In this light, it seems essential to look into the communication of individuals with intellectual disabilities, because it is words and the way they are understood and interpreted that create the reality.

The goal behind educating people with intellectual disabilities is to provide them with communication skills so they can express their needs and interests to the best of their ability. It is the learning and teaching processes that should support personal growth in this regard. Not only is the transmission and reception of messages an important element in the process of communication, but also the expression of thoughts, desires and needs to be able to fully participate in society. It is communication that gives some direction to our actions, gives us a sense of being understood, it is "an element that contributes to establishing, sustaining and shaping the entire cognitive system, as well as acquiring social skills (competence)".[1] In preparing those with moderate intellectual disabilities for adulthood, the process of acquiring communication skills should be oriented towards "one's building their own identity, developing autonomy and a sense of dignity, beginning to function socially, understanding and complying with social norms, in particular equipping oneself with skills and knowledge they need to enjoy freedoms and human rights, and to perceive themselves as an independent person, to the best of their ability".[2]

---

[1] J.J. Błeszyński, *Komunikacja osób ze spektrum autyzmu – w poszukiwaniu najlepszych rozwiązań*, [in:] *Autyzm i AAC. Alternatywne i wspomagające sposoby porozumiewania się w edukacji osób z autyzmem*, Ed. B.B. Kaczmarek, A. Wojciechowska, Kraków 2015, p. 34.

[2] A general education curriculum for pupils with moderate or severe intellectual disabilities in primary schools.

Undoubtedly, to deliver this educational goal, the process of (self-) communication shall be an integral part of the functioning of people with intellectual disabilities. One's becoming aware and expressing their needs, desires, expectations and hopes is a natural part of life for both non-disabled and disabled people.

## Words create reality…

While observing daily lives of adults with moderate intellectual disabilities, I have always asked myself the question: how can we better learn, show and represent the social realities of those with moderate intellectual disabilities with respect to their communication with themselves and others. Their sense of independence, autonomy and being able to express their own needs is conditioned by their ability to communicate with themselves, but also, or even above all, with others. Everyone, disabled and non-disabled alike, needs to communicate with the world. There are no differences in this realm. The differences regard the forms of communication only. It is interesting how the calls for normalization, independence and social participation of people with moderate disabilities open up the space for full and valuable communication in those with some disability. This means a kind of communication that allows a person with intellectual deficiency to express themselves fully. One of interesting facts are the statements of disabled adults about themselves. These are statements about their independence, social roles, about their viewing themselves as mothers, fathers, wives, husbands and parents. The following question arises: Do these statements stem from their lived experiences, and provide their realities with some meaning and sense? Or are their declarations merely a copy of the words, beliefs of, for example, people significant to them? If the latter is the case, the words used are meaningless and pointless. Of course, this can be the result of people with intellectual disabilities' internalizing certain scripts and processing them

thoughtlessly as if they are their own. Therefore, in this article, I will highlight the ways in which adults with moderate intellectual disabilities communicate.

## Independent life

The concept of living an independent life refers to the functioning of people with disabilities in local communities. This concept has been developed in the Scandinavian countries in the 1960s and in the 1970s in the United States. It is "the ability to engage in self-care activities and to participate in the process of self-determination in the least restrictive community".[3] The respect for and recognition of the rights of people with intellectual disabilities is the basis of the concept of independent life. Communicating, expressing oneself, creating oneself, executing one's plans for life, but also giving oneself the right to study, work, enjoy leisure time, housing and pursue relationships. All this rests on one's ability to communicate with themselves and with the world. It is the ability to communicate and receive messages that is the foundation of an independent life. The way people with moderate intellectual disabilities communicate with themselves and with others determines their independent lives. By learning to communicate, people with disabilities can "become more independent of others [...]".[4] This is why it is so important to equip disabled adults as well as children and young people with communication skills and let them feel they belong in their communities. This is the responsibility of both schools and local communities.

Independence and self-reliance in adults with intellectual disabilities rests on the support for their communication within their communities. Communication facilitates individual agency and affiliation with a group and gives them an independent status. For

---

[3] B. Borowska-Beszta, *Niepełnosprawność w kontekstach kulturowych i teoretycznych*. Kraków 2012, p. 171.

[4] R. Kijak, *Dorośli z głębszą niepełnosprawnością intelektualną jako partnerzy, małżonkowie i rodzice*. Kraków 2017, p. 7.

people with intellectual disabilities, correct communication is a factor that contributes to their revalidation and rehabilitation. As Amadeus Krause argues: "the goals behind modern revalidation are much broader and apply to all types and degrees of disability. These goals are to:

- Neutralize developmental dysfunctions;
- Help to compensate for other dysfunctions;
- Improve the functioning of the whole organism;
- Prepare those with disabilities to pursue the processes of learning and upbringing;
- Preparation of the individuals to fulfill social roles and function in society;
- Take up employment"[5] (Krause et al., 2010, p. 47).

How people with moderate intellectual disabilities will communicate, whether they will use facilitated communication or alternative communication, is subject to their fulfilling life or career goals. These are the manners, actions, meant to support their social functioning. After all, the essential objective is to use "all means available to enable people with complex communication needs to transmit and receive messages"[6] and "all actions aimed at helping those who cannot speak or have limited use of speech and allow them to communicate'.[7]

## Adulthood

Everyone becomes an adult, regardless of their condition – whether we are disabled or non-disabled. In the case of people with

---

[5] A. Krause, A. Żyta, S. Nosarzewska, *Normalizacja środowiska społecznego osób z niepełnosprawnością intelektualną*. Toruń 2010, p. 47.

[6] M. Grycman, *Czym są wspomagające sposoby porozumiewania się*, "Biuletyn Stowarzyszenia Mówić bez Słów" 2003, No. 1, p. 3.

[7] Tetzchner S. von, Martinsen H., *Wprowadzenie do wspomagających i alternatywnych sposobów porozumiewania się. Nauka znaków oraz używania pomocy komunikacyjnych przez dzieci, młodzież i dorosłych z zaburzeniami rozwojowymi*, Trans. A. Loebl-Wysocka, J. Gałka-Jadziewicz, Warsaw 2002, p. 7.

disabilities, the issue is obvious – adulthood means, among other things, living an independent life, finding a job and developing relationships. For those affected with moderate intellectual disabilities, this realm is more complex. The fact that a person with intellectual disability becomes an adult is obvious, as evidenced at least by their age. What is essential here is the 'consent' in those with moderate intellectual disabilities to their adulthood. Of course, in our reflection upon the support for people with moderate intellectual disabilities, "one should not become extremely optimistic and promote the view that every person with intellectual disabilities can play the role of a partner or parent if provided with adequate support"[8], as pointed out by Remigiusz Kijak. This is to say: not all of them can communicate clearly. Thus: "adulthood in the social sense means the way an individual behaves that is characterized by a serious attitude to tasks, responsibility for oneself and others, care for one's health and property, ability to earn a living and to support oneself".[9] However, all this must be supported by clear and factual communication with the community. Among those with moderate disabilities (moderate intellectual disabilities), many do have communication skills, and, consequently, the ability to live an independent life.

As mentioned before, the socially acceptable functioning of adults with disabilities is determined by their fulfilment of tasks due to the adult stage of life, such as: building relationships, living an independent life and seeking for and keeping a job. The same factors apply to people with moderate intellectual disabilities. These are normalising aspects, showing that people with intellectual disabilities have the same right to work, live independently and establish relationships.

---

[8] R. Kijak, *Dorośli z głębszą niepełnosprawnością intelektualną jako partnerzy, małżonkowie i rodzice*. Oficyna Wydawnicza "Impuls", Kraków 2017, p. 23.

[9] M. Kościelska, *Przeżywanie własnej i cudzej dorosłości przez osoby z niepełnosprawnością*, [in:] R.J. Kijak Ed., *Niepełnosprawność – w zwierciadle dorosłości*. Kraków, 2012, p. 16.

One's being prepared to play social roles, function in a society and take up gainful employment demonstrates the features of adulthood, and allows them to fully function in a community as an independent person, fulfilling the tasks due to their role and functioning properly as a member of society. It should be stressed that people with moderate intellectual disabilities need to have their adulthood recognized by the society to be able to fully and autonomously participate in their communities. Adulthood in people with disabilities varies as much as intellectual disability itself. This state is characterized by different levels of functioning, so it should be reflected upon in individual rather than global terms. As Małgorzata Kościelska argues, "adulthood is a multidimensional process, involving different mental functions and different life roles. The process can also take place harmoniously and at a pace similar to that of the whole social group, or can be more individual, inhibited, uneven, for example accelerated or partially slowed down".[10]

## Methodological framework

In connection with my interest in the issue of communication among adults with intellectual disabilities, I have chosen a method of problem-focused interview and participatory observation. As the data was collected primarily to learn about "the context of the phenomena described by a given individual"[11], the statements made by adults with disabilities were concentrated on the importance of communicating from the perspective of living an independent life, self-reliance and autonomy. It was important to "obtain contextualized data that shows a bigger picture (...)"[12], in this case, the context of communication.

---

[10] M. Kościelska, *Przeżywanie własnej i cudzej dorosłości przez osoby z niepełnosprawnością*, [in:] R.J. Kijak Ed., *Niepełnosprawność – w zwierciadle dorosłości*. Kraków 2012, p. 18.

[11] K. Rubacha, *Metodologia badan nad edukacją*. Warsaw 2008, p. 140.

[12] Ibid., p. 140.

My aim was to focus on the issue of communication rather than respondents' experiences, and so the problem-focused interview was adopted instead of a narrative interview; as a result, respondents' statements help us focus on the problem. The choice of a method was also dictated by the fact that I knew what information I wanted to obtain from the very beginning of my research project, while at the same time bearing in mind that 'it is the respondent that makes up the dominant features of one's theoretical concept.[13] It is obvious that relevant literature (Konarzewski, 2000; Rubacha, 2008; Kruger, 2007; Juszczyk, 2013; Silverman, 2009) clearly points out that the problem-focused interview stems from the typology of semi-guided interviews. They are "receptive to the context and respondent's free narrative, and allow specific questions to be asked in the course of the interview. Such interviews are always focused on something. Interviews can be focused on:

– A problem;
– Material;
– Subjective theories;
– information (ethnographic interview)".[14]

A problem-focused interview and participatory observation have been adopted in this article. Participatory observation consists in the researcher, the observer, 'entering' the environment of the observed persons. The researcher gains greater insight into the culture of the community under observation and is closer to the events within the group. This method is often used with "closed communities" of individuals subject to research projects. Thanks to participatory observation, the researcher can participate in the life of a given social environment to conduct scientific research. They are focused on gathering empirical material to be used in analyses later on. The researcher must be aware that they play the role of a scientist, although "they can never stand completely outside of the social reality

---

[13] S. Juszczyk, *Badania jakościowe w naukach społecznych. Szkice metodologiczne*, Katowice 2013, p. 154.

[14] K. Rubacha, *Metodologia badan nad edukacją*. Warsaw 2008, p. 140.

and the situation under inquiry".[15] When starting their observation, the researcher shall find out about the area under investigation as much as possible. It is therefore important, in the initial research phase, to "take into account the nine dimensions of each social situation that come into contact with each other in a complex manner:

1. Space – Physical place or places.
2. Actors – People involved in a situation.
3. Action – A set of activities done by people.
4. The object – Physical things present in a given situation.
5. Activity – Single human activities.
6. Event – A set of interrelated activities.
7. Time – Temporal sequencing, the pace of events.
8. Objectives – What people are trying to achieve.
9. Emotions – Feeling and expressing".[16]

The observation took place in an integrated flat. It has furnished data that was then subjected to empirical analysis, and the observed reality was interpreted from the perspective of previously adopted assumptions.

Adults with moderate intellectual disabilities were invited to take part in the study. They live in integrated flats. These people have occupied their flats for 3 years. They are learning to live independent and self-reliant lives. This comes handy in investigating their communication methods within the realm of gaining independence and self-reliance.

## I'm independent and self-reliant – words create reality

The examined individuals declare their own independence. This can be thought of as a dream, a desire they are striving for. They communicate their independence in a directive way, as if someone

---

[15] K. Konecki, *Studia z metodologii badań jakościowych. Teoria ugruntowana*, Warsaw 2000, p. 144.

[16] M. Ciesielska, K. Wolanik-Boström, M. Öhlander, *Obserwacja*, [in:] *Badania jakościowe. Metody i narzędzia*. Vol. 2, Ed. D. Jemielniak, Wydawnictwo PWN, Warsaw 2012, p. 44.

could take it away from them or put it in question. Their attitude to reality is manifested in the interviews.

> W:1 *"I can take care of myself. Upon graduation, I will find a job. I will earn money and move out of the flat. [author's note: the integrated flat)"* [K. L: 19]

It is a declaration on how he/she wants to achieve his/her goals:

> W:2 "My aunt Monika will help me, she will come with me and help me with important matters" [K. L: 19)

When asked about difficulties in expressing their expectations

> W:3 *"because they don't understand us, they know better than we do" [P., l: 30], "and I know everything, I can sort out with everything".*

> W:4 *"Why can't I do what I want?" [N:l:25] "I want to meet whomever I want and yet I cannot"*

The way the residents communicate between each other flows naturally. They express their needs, desires and negotiate. During the daily 'community meet up', the inhabitants express difficulties they have faced but also their success stories and share about their daily lives. Below are some of the observational categories.

Image 1

> *"I cannot be the only one to clean the bathroom. I do not want to keep cleaning up the bathroom after everybody. Girls don't clean up after themselves, it's not fair."*

This is a fairly clear-cut statement, and it shows the ability to use "I" messages: It also shows some kind of assertiveness and one's exerting their rights.

Image 2

> *"A new carer started working in the flat. She is a young girl. One of the residents became very committed to 'onboarding' her. They state at*

*a community meeting: I will be her mentor, I will tell her everything, how to work with us. After all, it is easy, she should just talk to us about life".*

This shows the willingness to be in touch, as well as the willingness to help and to communicate one's needs.

The quoted examples are only an excerpt from the broader research on disability. Of course, it cannot be claimed that everyone with moderate disabilities communicates in a clear way with their community. This is a manifestation of the cooperation built between residents and carers. The way in which this group of respondents communicate is the result of training, workshops with specialists in the field of communication, but also, or perhaps above all, building and maintaining relationships. The kind of relationships that give residents the right to self-determination and self-expression. It is the open communication between carers and the disabled residents that makes them feel accepted the way they are. This helps them build their self-esteem. Visible is also the theme of relational autonomy, which, as Dorota Podgórska-Jachinik argues, "(...) may be used to seek for and address various social relational dilemmas, different areas of support for people with disabilities and their families, to define the scope and conditions of social responsibility and solidarity, to build competences supporting personal independence".[17]

## Conclusion

Communication is everyone's need, whether they have any deficits or not. It is not the disability that defines a person, but their preparation to communicate with themselves and with other people. With people with moderate disabilities, this is all the more important because it is subject to the vetting of their social participation. Therapists, teachers and parents of people with disabilities

---

[17] D. Podgórska-Jachnik, (*Nie)pełnosprawność a (nie)samodzielność w kontekście autonomii relacyjnej, Niepełnosprawność*. Dyskursy pedagogiki specjalnej. No. 32/2018.

themselves should think of those individuals' capacity to communicate as their drive to express themselves, their rights and live their lives as independently as possible. These are the lives in which people with moderate disabilities can create their own reality with words. A reality that is, after all, available to all of us. In this article, I would like to point out that whether people with moderate disabilities can express themselves, their needs and desires or not largely depends on us therapists, the individuals who play a significant role in the lives of those with disabilities. Of course, I am aware that the community that I have presented herein is provided with comprehensive support and the process behind the acquisition of their skills has been long and complex.

## References

Błeszyński J.J., Komunikacja osób ze spektrum autyzmu – w poszukiwaniu najlepszych rozwiązań, [in:] Autyzm i AAC. Alternatywne i wspomagające sposoby porozumiewania się w edukacji osób z autyzmem. Ed. B.B. Kaczmarek, A. Wojciechowska, Impuls. Kraków 2015.

Borowska-Beszta B., Niepełnosprawność w kontekstach kulturowych i teoretycznych. Impuls. Kraków 2012.

Ciesielska M., Wolanik K., Boström, Öhlander M., *Obserwacja*, [in:] *Badania jakościowe. Metody i narzędzia*. T. 2, Ed. D. Jemielniak, Wydawnictwo PWN, Warsaw 2012.

Grycman M., *Czym są wspomagające sposoby porozumiewania się*, "Biuletyn Stowarzyszenia Mówić bez Słów" 2003, No. 1.

Juszczyk S., Badania jakościowe w naukach społecznych. Szkice metodologiczne, Katowice: Wydawnictwo Uniwersytetu Śląskiego. Katowice 2013.

Kijak R., Dorośli z głębszą niepełnosprawnością intelektualną jako partnerzy, małżonkowie i rodzice. Impuls. Kraków 2017.

Konecki K., *Studia z metodologii badań jakościowych. Teoria ugruntowana*, PWN, Warsaw 2000.

Kościelska M. (2012). Przeżywanie własnej i cudzej dorosłości przez osoby z niepełnosprawnością. In. R.J. Kijak (Ed.), *Niepełnosprawność – w zwierciadle dorosłości.* Impuls. Kraków 2012.

Krause A., Żyta A., Nosarzewska S., Normalizacja środowiska społecznego osób z niepełnosprawnością intelektualną. Akapit. Toruń 2010.

Podgórska-Jachnik D., (Nie)pełnosprawność a (nie)samodzielność w kontekście autonomii relacyjnej, Niepełnosprawność. Dyskursy pedagogiki specjalnej. No. 32/2018.

Rubacha K., Metodologia badan nad edukacją. Wydawnictwo Akademickie i Profesjonalne. Warsaw 2008.

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

AGNIESZKA HAMERLIŃSKA
Nicolaus Copernicus University in Toruń, Poland

# Nicotinism and the knowledge of consequences of laryngectomy among university students

**ABSTRACT**: Agnieszka Hamerlińska, *Nicotinism and the knowledge of consequences of laryngectomy among university students*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 67–87. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.04

Nicotine addiction is currently one of the most serious health and social problems worldwide, which contributes to the development of numerous diseases, including, above all, laryngeal cancer, which may lead to laryngectomy. The consequences of losing one's larynx are irreversible. The objective of the study presented in this paper was to describe the knowledge of the consequences of radical laryngectomy among students pursuing a variety of majors. The study covered 194 people (119 non-smokers and 75 smokers), who took part in diagnostic survey based on a bespoke questionnaire. Based on the study in question, the author determined that the level of knowledge about the consequences of laryngectomy among the majority of students is average to low, while smoking students have an average awareness of these consequences. Moreover, it turned out that age, gender, major and the number of smokers in students' closest circles do not determine the knowledge about the subject at hand. The results of the study indicate that the anti-smoking public service campaigns addressed to youth should include information about both the risk of diseases and their consequences, which may significantly reduce the quality of life and hinder everyday functioning.

**KEY WORDS**: nicotinism, knowledge, laryngeal cancer, health

## Introduction

Nicotine is an alkaloid found in large quantities in tobacco; it binds to the acetylcholine receptors of the autonomic ganglia, adrenal medulla and central nervous system, impacting both the sympathetic and parasympathetic parts of the nervous system.[1] It stimulates the central nervous system, in particular the reward system located in the limbic system, dilates peripheral blood vessels, increases the heart rate and arterial pressure, reduces the tension of striated muscles, accelerates peristalsis and stimulates the secretion of gastrointestinal glands, thus leading to addiction.[2] According to the International Classification of Diseases, nicotine dependence is defined cluster of behavioural, cognitive and physiological phenomena in which the use of tobacco takes on a much higher priority than other behaviours that once had a greater value.[3] The first cigarette is most often smoked between the ages of 16 and 18 and is due to curiosity and peer pressure.[4]

Nicotine addiction is currently one of the most serious health and social problems worldwide, which contributes to the development of numerous diseases, including, above all, laryngeal cancer, which may lead to laryngectomy. The consequences of losing one's larynx are irreversible. The objective of the study presented in this paper is to describe the knowledge of the consequences of radical laryngectomy among students pursuing a variety of majors.

---

[1] Ł. Szczygieł, *Uzależnienie od tytoniu*. Gazeta Farmaceutyczna, 2008, 4, pp. 42–45.

[2] Ibid.

[3] ICD-11 International Classification of Diseases 11th Revision.

[4] M. Szpringer, A. Makowska, M. Olędzka, *Uzależnienie od nikotyny i ocena skuteczności rzucania palenia u dorosłych*. Medycyna Środowiskowa – Enviromental Medicine, 2016, 19(1), pp. 43–50.

## Nicotinism as a lifestyle disease

Nicotinism is also referred to as the tobacco smoking epidemic.[5] As a continent, Europe is characterised by the highest prevalence of smokers in the world, with 68.9% of the adult population and 38.1% of children. Among adults, 44.6% of men and 24.3% of women smoke, with 21.5% boys, 16.6% girls smoking among children. It is also worth noting that tobacco consumption in Poland is one of the highest in the world.[6]

In 2013, a survey was conducted among Poles to gather information on their smoking habits. Most smokers turned out to be men; however, there has been a marked 8% drop in smoking among men compared to the 1980s and 1990s, while the indicators for women have not budged. The authors also pointed out some worrying trend – namely that 14% of boys and 10% of girls aged 14–19 admitted to being addicted to nicotine.[7]

Nicotine addiction is currently one of the most serious health and social problems worldwide, while smokers are unable to name more than 4–5 tobacco-related diseases.[8] What is more, they often make attempts to quit, but mostly go back to smoking; which indicates that the knowledge of the consequences is insufficient.[9] Kanicka et al. note that it is particularly important that future health

---

[5] L. Wengler, P. Popowski, E. Adamska-Pietrzak, M. Balwicka-Szczyrba, Ł. Balwicki, I. Adrych-Brzezińska, K. Trzeciak-Bilska, *Wybrane aspekty polskiego prawa antytytoniowego jako narzędzia ograniczającego epidemię palenia tytoniu*, Annales Academiae Medicae Gedanensis. 2012, 42, pp. 81–94.

[6] J. Książek, J. Korczyńska, S. Terech, *Problem nikotynizmu w aspekcie profilaktyki raka płuca wśród studentów gdańskich uczelni*, Medycyna Rodzinna, 2013, 4, pp. 137–142.

[7] Report from a nationwide survey on attitudes towards smoking, TNS Poland for the Chief Sanitary Inspectorate, Warsaw 2013 [20].

[8] The most frequently mentioned are lung and tongue cancer, arteriosclerosis and hypertension.

[9] M. Szpringer, A. Makowska, M. Olędzka, *Uzależnienie od nikotyny i ocena skuteczności rzucania palenia u dorosłych*. Medycyna Środowiskowa – Enviromental Medicine, 2016, 19(1), pp. 43–50.

professionals, who will be responsible for disease prevention, are the best acquainted with the consequences of smoking.

Cigarette smoking is one of the most important risk factors that can lead to many diseases.[10] Smoking-related diseases shorten the smokers' lives by more than 8–9 years.[11] In the case of cardiovascular diseases (including coronary artery disease), the smoking factor increases the mortality rate by 160%; what is more, smoking results in respiratory diseases, cancers and strokes.[12] Cigarette smoking is also one of the factors impacting dementia.[13]

Various anti-smoking campaigns are being conducted, highlighting the negative consequences of smoking; however, their effectiveness remains too low and subject to verification. One example of this is a survey conducted among Spanish students in 2009. The researchers first established the number of cigarette smokers, then they held prevention classes, featuring a leaflet on the consequences of smoking. On the basis of the study, it turned out that there was no evidence of any effectiveness of the advice, information contained in the leaflet. The prevalence of smoking remained at a high level. In reality, the survey even showed an increase in smoking among respondents over two years.[14]

---

[10] Ł. Bojkowski, Mojs E., *Palenie tytoniu i konsekwencje tego nałogu dla zdrowia osób w podeszłym wieku*, Polski Przegląd Nauk o Zdrowiu, 2017, 2(51), pp. 220–224.

[11] R. Doll, R. Peto, J. Boreham, I. Sutherland, *Mortality in relation to smoking: 50 years' observations on male British doctors*, BMJ, 2004 26, 328(7455), 1519, https://www.bmj.com/content/bmj/328/7455/1519.full.pdf

[12] M. Łukasik, W. Kozubski, *Zespół metaboliczny jako czynnik ryzyka niedokrwiennego udaru mózgu*, Neurologia i Neurochirurgia Polska, 2012, 46, pp. 271–278.

[13] L.J. Launer, K. Andersen, M.E. Dewey, L. Letenneur, A. Ott, L.A. Amaducci, C. Brayne, J.R. Copeland, J.F. Dartigues, P. Kragh-Sorensen, A. Lobo, J.M. Martinez-Lage, T. Stijnen, A. Hofman, "Rates and risk factors for dementia and Alzheimer's disease: results from EURODEM pooled analyses. EURODEM Incidence Research Group and Work Groups", *European Studies of Dementia. Neurology 1999*, 1, 52(1), pp. 78–84.

[14] Galbe, José Traver, P. Navarra, B. Martínez, A. Galve, Z. Aliaga, Y. Duplá, M. Jimenez, V. Torres, S. Cazorla, I. Ibarrondo, R. Magallón-Botaya, B. Oliván-Blázquez, M. Alastuey, L. Escosa, E. Planas, "Brief advice for the prevention of the

Similar studies were conducted in Poland in 2008 among students of medical faculties at the Medical University of Białystok, resulting from an educational project under the "Programme of Health and Socio-Economic Policy for the Reduction of Tobacco Consumption".[15] It turned out that the percentage of smoking students has also increased throughout the two-year period. The only positive outcome of the study concerned respondents' attitude – the majority of students supported the draft act introducing a total ban on smoking in Poland.[16]

Smoking in public places has been banned in Poland since 2010,[17] as a result of the Tobacco Control Act, which came into force on 8.04.2010. The legislation places strong emphasis on protecting the right of non-smokers to live in a smoke-free environment, promoting health by supporting smoke-free lifestyles without tobacco products, as well as educational and information activities.[18] Moreover, the European Union Tobacco Products Directive of 29.04.2014 introduced many changes concerning the appearance, sale and promotion of tobacco products and tobacco derivatives. From 20.05.2016, EU countries need to respect the following rules:

- the obligation to cover at least 65% of the total area of new cigarette packs with warnings concerning the health consequences of smoking;
- the obligation for the manufacturer to place clearer and more visible information on every possible surface of the packaging;

---

nicotinism in students of 2° to 4° of Secondary Obligatory Education of Saragossa", *Pediatria de Atencion Primaria*, 2009, 11, pp. 49–63.

[15] https://pssesiemiatycze.org/promocja-zdrowia/program-ograniczania-zdrowotnych-nastepstw-palenia-tytoniu-w-polsce.html

[16] Bielska D., Trofimiuk E., Kurpas D., *Program nikotynizmu w świetle edukacji na Wydziale Lekarskim i Wydziale Pielęgniarstwa Uniwersytetu Medycznego w Białymstoku*, Przegląd Lekarski, 2008, 65, 10, pp. 568–571.

[17] Act of 9 November 1995 on Health Protection against the Consequences of Tobacco and Tobacco Products.

[18] Wengler L., Popowski P., Adamska-Pietrzak E., Balwicka-Szczyrba M., Balwicki Ł., Adrych-Brzezińska I., Trzeciak-Bilska K., *Wybrane aspekty polskiego prawa antytytoniowego jako narzędzia ograniczającego epidemię palenia tytoniu*, Annales Academiae Medicae Gedanensis. 2012, 42, pp. 81–94.

- the ban on manufacturing small cigarette packs;
- the lower limit of the number of cigarettes in a pack set to 20;
- a ban on promotion of tobacco products;
- ban on on-line trade in tobacco products imposed by EU Member States.[19]

## Consequences of laryngectomy

As previously noted, smoking leads to respiratory diseases and cancer. The carcinogenic effect of tobacco smoke is associated with 80–90% of all laryngeal cancer cases[20], which constitutes a significant clinical problem and is the second most common respiratory cancer in Poland. Laryngeal cancer is most often diagnosed at an advanced stage, which requires surgical treatment, often resulting in total laryngectomy. Complete removal of the larynx *(laryngectomia totalis*) is done in the case of bilateral cancer, including epiglottis and sub-glottis.[21] First a tracheotomy is performed and then the patient is intubated through an opening in the trachea in order to enable breathing.. The laryngectomy procedure includes cutting off the larynx from the top of the tongue and throat and from the bottom of the trachea. During the procedure, the hyoid bone is also removed, along with the pre-epiglottic space. The walls of the lower throat are stitched together and a feeding tube is inserted into the oesophagus as the throat heals. The remaining stump of the trachea is then permanently stitched to the neck skin, forming a permanent opening referred to as tracheostoma.[22]

---

[19] http://ec.europa.eu/health/tobacco/products/index_pl.htm

[20] J. Kamuda-Lewtak, *Typologia zaburzeń mowy w chorobach nowotworowych krtani,* [in:] Grabias S., Kurkowski M. (eds.), *Logopedia – Teoria zaburzeń mowy,* Podręcznik akademicki, Lublin 2015, pp. 515–527.

[21] A. Bruzgielewicz, *Leczenie chirurgiczne,* [in:] Janczewski G., Osuch-Wójcikiewicz E., *Rak krtani i gardła dolnego*, Bielsko-Biała 2002, pp. 143–175.

[22] J. Kamuda-Lewtak, *Typologia zaburzeń mowy w chorobach nowotworowych krtani,* [in:] Grabias S., Kurkowski M. (eds.), *Logopedia – Teoria zaburzeń mowy*, Podręcznik akademicki, Lublin 2015, pp. 515–527.

Laryngectomy is associated with many irreversible changes, which have an impact on the quality of life (Table 1).

**Table 1.** Changes after laryngectomy.

| | | |
|---|---|---|
| **CHANGES AFTER LARYNGECTOMY** | ANATOMICAL | larynx removal<br>possible removal of other elements such as lymph nodes<br>tracheostoma |
| | FUNCTIONAL | inability to breathe in and out through the mouth<br>shortening and inhaling of air with impurities<br>inhalation of unheated air<br>lack of air humidification<br>loss of nasal reflexes<br>loss of voice and phonetic speech<br>loss of the ability to blow, breathe and yawn<br>lack of smell<br>inability to snore<br>no possibility to choke during swallowing<br>impaired cough reflex<br>problems with pushing while defecating and urinating<br>inability to give birth naturally<br>inability to dive and swim |
| | PSYCHICAL[23] | lowered self-esteem<br>depression<br>sense of rejection and loneliness<br>fear of the disease returning |
| | SOCIAL | possible job loss<br>being referred to as a pensioner, disabled, "cripple"<br>possible separation, divorce, family break-up<br>losing the ability to laugh, cry and shout out loud |
| | AESTHETIC | visible scarring<br>need to wear a tracheostomy tube and/or a stoma protection scarf |

Source: Hamerlińska-Latecka, 2017.[24]

---

[23] May be temporary.

[24] A. Hamerlińska-Latecka, *Metodyka logopedyczna w przypadku osób po laryngektomii całkowitej*, Studia Logopaedica, 2017, VI, pp. 89–100.

## Author's own research results

The author conducted a pilot study concerning the knowledge of the consequences of laryngectomy among students with and without nicotine dependence. The theoretical objective of the study was to describe the students' knowledge of the consequences of removal of larynx, with particular emphasis on smokers. The practical aim in turn was to develop guidelines for the development of health education on preventing the consequences of smoking tobacco. The following study questions were formulated:

1. What is the level of knowledge about the consequences of laryngectomy among the students participating in the survey?
   1.1. Which of the activities that change after laryngectomy are known to the respondents?
   1.2. Is there a connection between gender, age, major and the number of smokers in the students' immediate circles and the knowledge of the consequences of laryngectomy?
2. What is the level of knowledge about the consequences of laryngectomy among smoking students participating in the survey?
   2.1. Which of the activities that change after laryngectomy are known to smoking respondents?
   2.2. Is there a connection between gender, age, major and the number of smokers in the smoking students' immediate circles and the knowledge of the consequences of laryngectomy?

The following research hypotheses have been established for the above-mentioned study questions:

1. The level of knowledge about the consequences of laryngectomy among the students participating in the survey varies.
   1.1. Students have different levels of knowledge about all activities that change after laryngectomy.
   1.2. There is a connection between gender, age, major and the number of smokers in the students' immediate circles and the knowledge of the consequences of laryngectomy.

2. The level of knowledge about the consequences of laryngectomy among smoking students participating in the survey is low.
   2.1. Smoking students do not have knowledge concerning all activities that change after laryngectomy.
   2.2. There is a connection between gender, age, major and the number of smokers in the smoking students' immediate circles and the knowledge of the consequences of laryngectomy.

The conducted study assumed the following independent variables: age, gender, major, number of smokers in the closest circles, nicotine dependence. The knowledge of the consequences of laryngectomy was stated to be a dependent variable. Indicators for individual variables are presented in Table 2.

**Table 2.** Variables and indicators used in the study

<table>
<tr><th>Variable type</th><th>Variables</th><th>Indicators</th></tr>
<tr><td rowspan="5">Independent variables</td><td>Age</td><td>In figures, provided by the respondents</td></tr>
<tr><td>Sex</td><td>Woman/Man</td></tr>
<tr><td>Major</td><td>Provided by the respondents</td></tr>
<tr><td>Number of smokers in the closest circles</td><td>Number provided by the respondents</td></tr>
<tr><td>Nicotine dependence</td><td>Smoker<br>Non-smoker</td></tr>
<tr><td>Dependent variable</td><td>Knowledge of the consequences of laryngectomy</td><td>Levels: very low, low, average, high, very high</td></tr>
</table>

The study employed a diagnostic survey, with a bespoke questionnaire prepared by the author, which consisted of a short bio section and a list of 30 actions. The author decided to carry out the study among students, since the period of studying is associated with spending time at social gatherings, which encourages smoking

(as presented in the theoretical part of this paper). In addition, the period of the final exam and education-related stress can be conducive to developing a smoking habit. The study focused on Polish students due to the fact that Poland remains one of the countries of Europe with high prevalence of nicotinism.

The respondents were supposed to indicate which everyday activities change as a result of laryngectomy. Of the 40 answers, 19 were correct. The following score was adopted to determine the levels of knowledge of the consequences of total laryngectomy:

- very low – 0 to 3 correct answers;
- low – 4 to 7 correct answers;
- average – 8 to 11 correct answers;
- high – 12 to 15 correct answers;
- very high – from 16 to 19 correct answers.

The questionnaires were distributed to 218 students, of which 24 were rejected because they were incomplete. The number of respondents finally amounted to 194 people (100%). The average age of the students taking part in the survey was 22 years (minimum 18, maximum 41, standard deviation 2.5). The group of respondents included 141 women (73%) and 53 men (27%). The respondents represented various majors: early school education – 38 people (20%), education – 27 people (14%), speech therapy – 8 people (4%), archive studies – 52 people (27%), vocal studies – 18 people (9%), mechanics and mechanical engineering – 21 people (11%), medicine – 19 people (10%), social work – 4 people (2%), journalism – 3 people (2%), as well as one student representing administration, architecture, forensic biology and obstetrics (1% each), respectively. Among the respondents were 119 (61%) non-smokers and 75 (39%) smokers. The respondents have an average of 2 smokers in their closest circles (minimum 0, maximum 8, standard deviation 1.63).

To begin with, the study determined the level of knowledge about the consequences of laryngectomy of the participating students (Table 3).

Based on the results of the conducted study, it turned out that the majority of the surveyed students [80 respondents (41%)] had an

**Table 3.** The levels of knowledge about the consequences of laryngectomy among the students participating in the survey

| Level of knowledge of the consequences of laryngectomy | N = 194 (100%) |
|---|---|
| Very low | 14 people (7%) |
| Low | 64 people (33%) |
| Average | 80 people (41%) |
| High | 29 people (15%) |
| Very high | 7 people (4%) |

average level of knowledge about the consequences of laryngectomy. The second group was made up of students with low level of knowledge [64 respondents (33%)], with people with high level of knowledge coming in third [29 respondents (15%)], with people with very low level [14 respondents (7%)], and very high level of knowledge [7 respondents (4%)] taking fourth and fifth place, respectively.

There were 19 activities in the survey, which change after the larynx is removed. Figure 1 shows the number of respondents who indicated that a given activity changes due to laryngectomy.

The participants of the study usually associated larynx removal with changes in speech and using one's voice, which resulted in the most frequently marked answers being: singing – 173 respondents (89%), speaking – 170 respondents (88%), shouting – 167 respondents (86%), whispering – 130 respondents (67%). Then, the students had knowledge of the changes resulting from shortened airway, including coughing – 144 respondents (74%), expectoration – 136 respondents (70%), breathing – 117 respondents (60%), blowing – 76 respondents (39%), blowing one's nose – 60 respondents (31%), sniffing and smelling – 48 respondents (25%), yawning – 30 respondents (15%). They also noted a relationship between losing one's larynx and decreased pushing function concerning natural birth – 31 respondents (16%), lifting weights – 13 respondents (7%), defecation – 38 respondents (20%), urination – 1 respondent (1%).

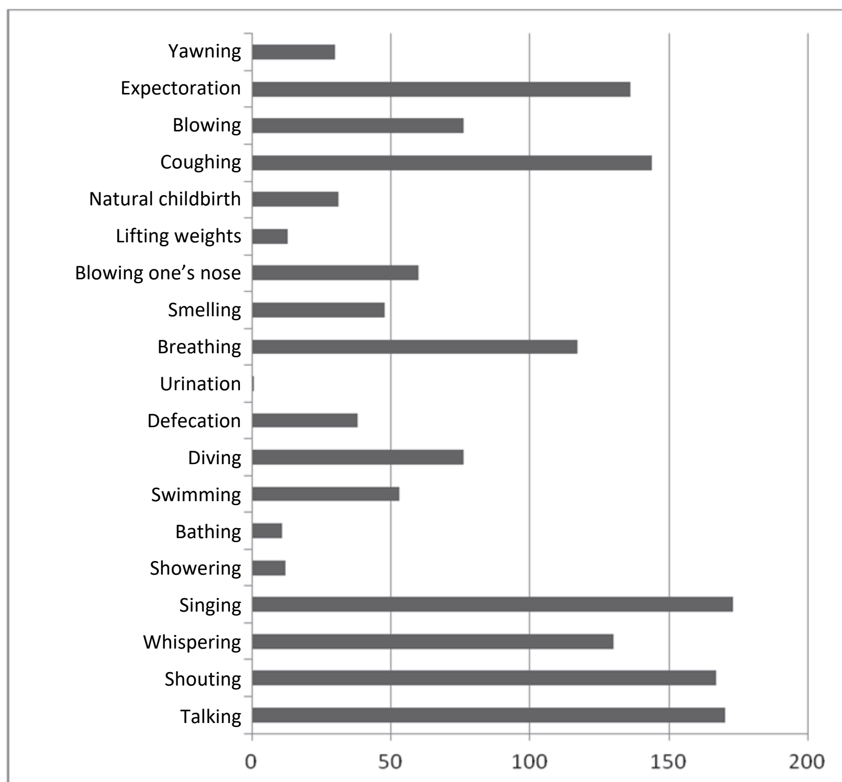



**Fig. 1.** Activities changed after the removal of the larynx and the respondents' answers

The students also took note of the fact that resection of the larynx changes a number of other activities, including diving (17%), swimming – 53 respondents (27%), showering – 12 respondents (6%), and bathing – 11 respondents (6%).

Then the examined variables were analysed statistically. The author assumed that the knowledge of the consequences of laryngectomy is a dependent variable, and age, gender, major, being a smoker/non-smoker, as well as the number of people smoking in the closest circles were selected to be independent variables.

It turned out that there was no correlation between the age of the respondents and their knowledge about the consequences of laryngectomy (Spearman's rank correlation did not display any statistical significance). After applying Mann-Whitney's U test, the results showed that the sex of the examined students also did not lead to differentiated knowledge about the consequences of total laryngectomy. There was also no connection between students' major and knowledge of the consequences of laryngectomy, according to the Kruskal Wallis test. Using Student's t-test, the author established that there was no connection between being a smoker and knowing the consequences of laryngectomy, and using the Kruskal Wallis test did not highlight such a relationship. In addition, no correlation (according to Spearman's rank correlation) was discovered between the number of smokers in the immediate circles of the respondent and their knowledge of the consequences of laryngectomy.

The second part of the analysis focused on smokers – 75 of all respondents, including 62 (83%) women and 13 (17%) men. The average age of the smoking cohort was 21 years (the youngest respondent was 19, the oldest was 27, standard deviation 1.72). The distribution of the group of people with nicotine dependence according to their majors was as follows: 27 respondents (36%) – education, 16 (21%) – archive studies, 6 (8%) – mechanics and mechanical engineering, 5 respondents (7%) – early childhood education, 4 (5%) – vocal studies, 4 (5%) – social work, 3 (4%) – speech therapy, 3 (4%) – medicine, 3 (4%) – journalism (4%), 1 respondent (1%) – obstetrics, 1 respondent (1%) – forensic biology, 1 respondent (1%) – information architecture, 1 respondent (1%) – administration. The smoking respondents have an average of 3 smokers in their closest circles (minimum 0, maximum 8, standard deviation 1.581).

The level of knowledge about the consequences of laryngectomy among the smoking students participating in the survey varied (Table 8).

It turns out that among smoking students, the majority had an average level of knowledge about the consequences of laryngectomy [28(37%)], followed by low level [26(35%)], very low level [9(12%)], high level [8(11%)], and very high level [4 (5%)].

**Table 8.** The levels of knowledge about the consequences of laryngectomy among smoking students participating in the survey

| Level of knowledge of the consequences of laryngectomy | N = 75 (100%) |
|---|---|
| Very low | 9 (12%) |
| Low | 26 (35%) |
| Average | 28 (37%) |
| High | 8 (11%) |
| Very high | 4 (5%) |

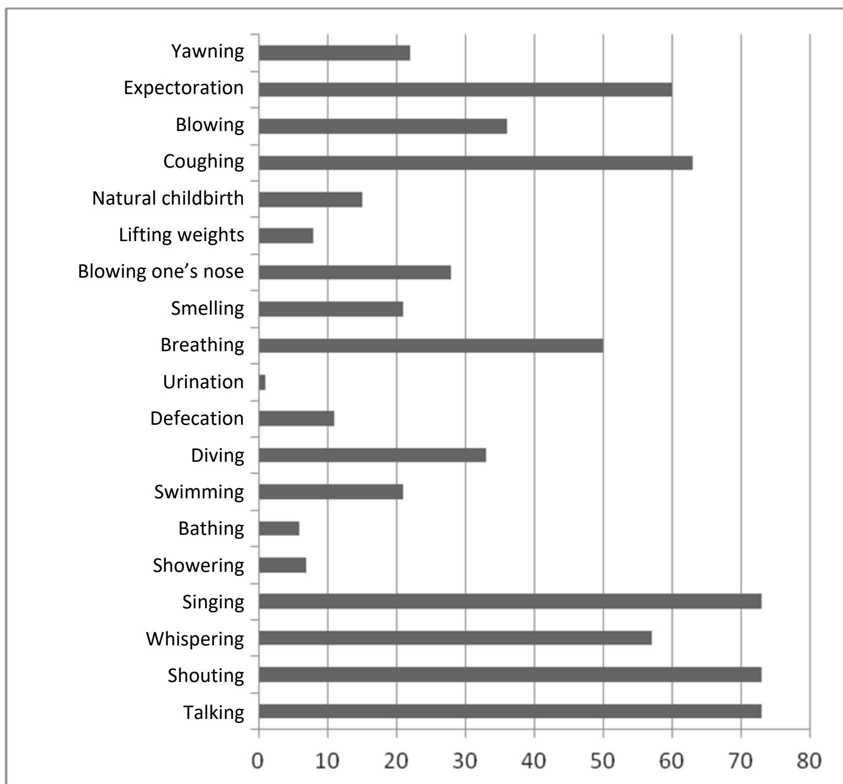



**Fig. 2.** Activities changed after the removal of the larynx and the smoking respondents' answers

Figure 2 shows the number of smoking respondents who indicated that a given activity changes due to laryngectomy.

Cigarette smokers usually associated laryngectomy with changes concerning speech and using one's voice, leading to the most frequent answers being: singing, shouting and speaking – 73 smoking respondents (97%) and whispering- – 57 (76%). Then, the smoking students indicated changes resulting from shortened airway, including coughing – 63 respondents (84%), expectoration – 60 respondents (80%), breathing – 50 respondents (67%), blowing – 36 respondents (48%), blowing one's nose – 28 respondents (37%), sniffing and smelling – 21 respondents (28%), yawning – 22 respondents (29%). They also noted a relationship between losing one's larynx and decreased pushing function concerning natural birth – 15 respondents (20%), lifting weights – 8 respondents (11%), defecation – 11 respondents (15%), urination – 1 respondent (1%). The respondents also were aware of changes concerning a number of other activities, including diving – 33 respondents (44%), swimming – 21 respondents (28%), showering – 7 respondents (9%), and bathing – 6 respondents (8%).

The individual variables were subjected to statistical analysis. It turned out that there was no correlation between the age of the smoking respondents and their knowledge about the consequences of laryngectomy (Spearman's rank correlation did not display any statistical significance). Additionally, the sex of students with nicotine dependence did not differentiate the knowledge about the consequences of total laryngectomy (Mann-Whitney U test did not result in any statistical significance). Likewise, no connection was noted between the student's major and their knowledge of the consequences of laryngectomy, according to the Kruskal Wallis test. There was also no correlation between the number of smokers in the closest circles of the smoking students and their knowledge, according to Spearman's rank correlation, which showed no statistical significance.

## Conclusions of the study and summary

The study of knowledge on the consequences of laryngectomy can be considered as a preventive measure. It is important to know not only the direct consequences of nicotinism, which include cancer, but also its *aftermath,* so to speak. Nicotine dependence is one of the leading causes of laryngeal cancer. In the case of a diagnosed cancer at a highly advanced stage, the most common treatment is total laryngectomy[25], the consequences of which result in a significant impact on everyday life, both physical, mental and social. The study conducted by the author showed that students have mostly low-to-average level of knowledge about the consequences of laryngectomy. The surveyed group, however, also included people with very high, high and very low levels of knowledge. It is worth noting, however, that both smoking and non-smoking cohorts were dominated by respondents with an average level of knowledge of the consequences of laryngectomy, closely followed by people with a low level of knowledge. The study also shows that students' levels of knowledge about the consequences of laryngectomy varies.

Further analysis of the study results shows that students are not aware of all the activities that change in the aftermath of laryngectomy, and this applies to both smokers and non-smokers. Respondents associate larynx removal mainly with loss of speech and changes in voice: inability to shout and sing, with significantly less respondents indicating whispering. The respondents also pointed to the changes resulting from shortened airway. The most common responses referred to coughing, choking, and blowing.[26] Unfortunately, few students were aware of the loss of sense of smell, which can save lives (for example in the case of fire) or improve its quality (when it comes to smelling perfumes or cooking). Half of the re-

---

[25] In Poland, about 500 total laryngectomies are performed annually. In 2015, laryngeal cancer was diagnosed in 2171 men and 355 women, in 2017 in 1933 men and 291 women.

[26] It is unknown how the participating students understood this or how did they imagine such a change, since the first two activities are carried out via the stoma, and the last one is no longer possible due to the loss of the larynx.

spondents noted that the resection of a larynx is associated with the inability to dive, less people indicated swimming (which is only possible with appropriate equipment, but it is worth noting that swimming is associated with the risk of death). Students are also not aware that when taking a shower, patients after laryngectomy need to position themselves properly and protect their stoma from water ingress, and when taking a bath, it is not possible to lie down and soak without stress, because protecting the tracheostomy tube from flooding very often causes anxiety and resulting limitations. The most rarely indicated results concerning the consequences of larynx removal concerned pushing. Only a few respondents noted that laryngectomy results in being unable to have a natural childbirth, lift weights, pass stool or urinate – all of which are also related to pushing.

Based on the statistical analyses carried out, it was established that there is no connection between gender, age, major and the number of smokers in the students' immediate circles and the knowledge of the consequences of laryngectomy. The correlation also applied to smokers.

The majority of smokers in the study group are students of education. One question that remains unanswered is whether the fact of their addiction to nicotine will play a role in prevention and health promotion activities during weekly class meetings.

The ranks of smokers also included students of speech therapy, vocal studies and medicine, namely those who should have high level of knowledge about the factors damaging the larynx and the consequences of smoking, which should convince them not to smoke. Among those students, the level of knowledge also turned out to be varied.

It cannot be overlooked that women dominated the group of smokers, which can be probably linked to the majors dominated by them. However, there is a marked increase in prevalence of nicotinism in women, and thus an increase in the incidence of laryngeal cancer.[27]

---

[27] Z. Wronkowski, S. Brużewicz, *Epidemiologia nowotworów złośliwych w Polsce i na świecie*, [in:] Jeziorski A., Szawłowski A., Towpik E. (eds), *Chirurgia onkologiczna*, vol. 1, PZWL, Warsaw 2017.

Reducing the number of people who smoke cigarettes is currently one of the most important objectives of health policies in countries around the world.[28] National social programmes and the attempts to implement systemic solutions (National Health Programme 2005–2015, as well as social campaigns *Rzuć palenie razem z nami* and *Palenie jest słabe* by MANKO Association, co-financed by the Ministry of Health.[29] Also worthy of note is the Anti-Tobacco Health Education Programme by Burgiel-Matusiewicz and Dziurla,[30] addressed to children aged 9–10. The authors assumed primary school lays down the foundation for further education, introduces students to the world of knowledge, while taking care of their harmonious intellectual, ethical, emotional, physical and health development. The programme is a source of reliable knowledge about smoking, demonstrating the benefits of avoiding nicotine and tobacco.

Giving up smoking becomes an increasingly popular phenomenon; however, all kinds of preventive measures should be directed at reducing the number of people deciding to pick up smoking in the first place. In the opinion of students, knowledge about the harmful effects of smoking should be disseminated primarily in schools.[31] Smoking among students of medical universities is a somewhat worrying issue. This state of affairs shows that having knowledge of consequences is hardly enough as a sufficient deterrent to smoking.[32] Perhaps more emphasis should be put to the way

---

[28] M. Szpringer, A. Makowska, M. Olędzka, *Uzależnienie od nikotyny i ocena skuteczności rzucania palenia u dorosłych*. Medycyna Środowiskowa – Enviromental Medicine, 2016, 19(1), pp. 43–50.

[29] Ł. Bojkowski, E. Mojs, *Palenie tytoniu i konsekwencje tego nałogu dla zdrowia osób w podeszłym wieku*, Polski Przegląd Nauk o Zdrowiu, 2017, 2(51), pp. 220–224.

[30] K. Burgiel-Matusiewicz, R. Dziurla (2010). *Program antytytoniowej edukacji zdrowotnej*. Chief Sanitary Inspectorate, Warsaw.

[31] J. Książek, J. Korczyńska, S. Terech, *Problem nikotynizmu w aspekcie profilaktyki raka płuca wśród studentów gdańskich uczelni*, Medycyna Rodzinna, 2013, 4, pp. 137–142.

[32] A. Kułak, A. Shpakow, P. Kułak, *Wstępna analiza problemu nikotynizmu, alkoholizmu i narkomanii w populacji studentów*. Problemy Higieny i Epidemiologii, 2011, 92(1), pp. 137–145.

this knowledge is disseminated and communicated, which is shown by the study conducted by Kruk, Hubert-Lutecka, Zając and Cichocka.[33] Researchers showed that knowledge of the health effects of smoking was the biggest motivation for public health students to quit smoking.

The enormous progress of medicine, earlier diagnostics and better treatment result in higher chances of recovery, despite coming down with a fatal disease in life. However, the treatment often results in irreversible changes in the form of losing access to selected activities or needing to change the way they are carried out. As Stokłosa, Skoczylas, Rudnicka, Bednarek, Krzyżanowski and Górecka note[34]:

> "this shows a strong need to educate the public on health knowledge – the health-related motivations are usually the key to making binding decisions on quitting smoking".

As Bielska et al. point out, the topics related to nicotinism are not prevalent enough in the medical studies curriculum.[35] The authors propose that family medicine subject should concern practical interventions and nicotine dependence prevention.

It would be worthwhile to include information on the consequences of treatment of selected diseases in the campaigns. Health education is an important element of the overall educational impact, and it is advisable that smoking prevention is one of the important educational tasks, even among the youngest students.

---

[33] W. Kruk, A. Hubert-Lutecka, K. Zając, I. Cichocka, *Palenie tytoniu przez studentów – skala problemu*, Medycyna Ogólna i Nauki o Zdrowiu, 2004, 20(4), pp. 433–438.

[34] A. Stokłosa, A. Skoczylas, A. Rudnicka, M. Bednarek, K. Krzyżanowski, D. Górecka, *Ocena motywacji do rzucenia palenia u pacjentów poradni antynikotynowej*, Pneumonolgia i Alergologia Polska, 2010, 3, pp. 211–215

[35] D. Bielska, E. Trofimiuk, D. Kurpas, *Program nikotynizmu w świetle edukacji na Wydziale Lekarskim i Wydziale Pielęgniarstwa Uniwersytetu Medycznego w Białymstoku*, Przegląd Lekarski, 2008, 65, 10, pp. 568–571.

## References

Bielska D., Trofimiuk E., Kurpas D., "Program nikotynizmu w świetle edukacji na Wydziale Lekarskim i Wydziale Pielęgniarstwa Uniwersytetu Medycznego w Białymstoku", *Przegląd Lekarski*, 2008, 65, 10, pp. 568–571.

Bojkowski Ł., Mojs E., "Palenie tytoniu i konsekwencje tego nałogu dla zdrowia osób w podeszłym wieku", *Polski Przegląd Nauk o Zdrowiu*, 2017, 2(51), pp. 220–224.

Brzezińska I., Trzeciak-Bilska K., "Wybrane aspekty polskiego prawa antytytoniowego jako narzędzia ograniczającego epidemię palenia tytoniu", *Annales Academiae Medicae Gedanensis*, 2012. 42, pp. 81–94.

Bruzgielewicz A., "Leczenie chirurgiczne", [in:] Janczewski G., Osuch-Wójcikiewicz E. Rak krtani i gardła dolnego, Bielsko-Biała 2002, pp. 143–175.

Burgiel-Matusiewicz K., Dziurla R. (2010). Program antytytoniowej edukacji zdrowotnej. Chief Sanitary Inspectorate, Warsaw.

Doll R., Peto R., Boreham J., Sutherland I., "Mortality in relation to smoking: 50 years' observations on male British doctors", *BMJ*, 2004 26, 328(7455), 1519, https://www.bmj.com/content/bmj/328/7455/1519.full.pdf

Galbe, José Traver, P. Navarra, B. Martínez, A. Galve, Z. Aliaga, Y. Duplá, M. Jimenez, V. Torres, S. Cazorla, Ibarrondo, I. Magallón-Botaya, R. Oliván-Blázquez, B. Alastuey, M. Escosa, L. Planas, E., "Brief advice for the prevention of the nicotinism in students of 2° to 4° of Secondary Obligatory Education of Saragossa", *Pediatria de Atencion Primaria*, 2009, 11, pp. 49–63.

Hamerlińska-Latecka A., "Metodyka logopedyczna w przypadku osób po laryngektomii całkowitej", *Studia Logopaedica*, 2017, VI, pp. 89–100.

Kamuda-Lewtak J., "Typologia zaburzeń mowy w chorobach nowotworowych krtani", [in:] Grabias S., Kurkowski M. (eds.), *Logopedia* – Teoria zaburzeń mowy, Podręcznik akademicki, Lublin, 2015, pp. 515–527.

Kanicka M., Krupicka A., Krysińska M., Lewkowicz M., Mania S., Kowalska A., Szpak A., "Wiedza i postawy studentów kierunku Zdrowie Publiczne Uniwersytetu Medycznego w Białymstoku dotycząca nikotynizmu", *Problemy Higieny i Epidemiologii*, 2010, 90(3), pp. 415–423.

Kruk W., Hubert-Lutecka A., Zając K., Cichocka I., "Palenie tytoniu przez studentów – skala problemu", *Medycyna Ogólna i Nauki o Zdrowiu*, 2004, 20 (4), pp. 433–438.

Książek J., Korczyńska J., Terech S., "Problem nikotynizmu w aspekcie profilaktyki raka płuca wśród studentów gdańskich uczelni", *Medycyna Rodzinna*, 2013, 4, pp. 137–142.

Kułak A., Shpakow A., Kułak P., "Wstępna analiza problemu nikotynizmu, alkoholizmu i narkomanii w populacji studentów". *Problemy Higieny i Epidemiologii*, 2011, 92(1), pp. 137–145.

Launer L.J., Andersen K., Dewey M.E., Letenneur L., Ott A., Amaducci L.A., Brayne C., Copeland J.R., Dartigues J.F., Kragh-Sorensen P., Lobo A., Martinez-Lage J.M., Stijnen T., Hofman A., "Rates and risk factors for dementia and Alzheimer's disease: results from EURODEM pooled analyses. EURODEM Incidence Research Group and Work Groups", *European Studies of Dementia. Neurology 1999*, 1, 52(1), pp. 78–84.

Łukasik M., Kozubski W., "Zespół metaboliczny jako czynnik ryzyka niedokrwiennego udaru mózgu", *Neurologia i Neurochirurgia Polska*, 2012, 46, pp. 271–278.

Stokłosa A., Skoczylas A., Rudnicka A., Bednarek M., Krzyżanowski K., Górecka D., "Ocena motywacji do rzucenia palenia u pacjentów poradni antynikotynowej", *Pneumonolgia i Alergologia Polska*, 2010, 3, pp. 211–215.

Szczygieł Ł., "Uzależnienie od tytoniu". *Gazeta Farmaceutyczna*, 2008, 4, pp. 42–45.

Szpringer M., Makowska A., Olędzka M., "Uzależnienie od nikotyny i ocena skuteczności rzucania palenia u dorosłych". *Medycyna Środowiskowa – Enviromental Medicine*, 2016, 19(1), pp. 43–50.

Wengler L., Popowski P., Adamska-Pietrzak E., Balwicka-Szczyrba M., Balwicki Ł., Adrych-Brzezińska I., Trzeciak-Bilska K., "Wybrane aspekty polskiego prawa antytytoniowego jako narzędzia ograniczającego epidemię palenia tytoniu", *Annales Academiae Medicae Gedanensis*. 2012, 42, pp. 81–94.

Wronkowski Z., Brużewicz S., "Epidemiologia nowotworów złośliwych w Polsce i na świecie", [in:] Jeziorski A., Szawłowski A., Towpik E. (eds), *Chirurgia onkologiczna*, vol. 1, PZWL, Warsaw, 2017.

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

MONIKA KAŹMIERCZAK

University of Łódź, Poland

# What is communication? Investigations with kindergarten children

**ABSTRACT**: Monika Kaźmierczak, *What is communication? Investigations with kindergarten children*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 88–107. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.05

Matthew Lipman's P4C (Philosophy for Children) method, which in Poland took the names: philosophising with children, philosophical investigations with children, workshops in philosophy, workshop classes in philosophy, workshops on philosophical research, is based on a discussion in which children are the active participants and creators of the classes. In the course of the investigations, one can observe children's communication behaviour in the dialogue, the level of language and communication skills, the specificity of the child's thinking and the ability to negotiate or interpret meanings in a peer group. The conducted research on communication shows that for five- and six-year-old children 'communication' is primarily about building relationships and reciprocity of linguistic actions.

**KEY WORDS**: communication, dialogue, inquiry, investigation, Philosophy for Children (P4C), kindergarten age children

> "[…] it's children, as novices in the world, […] who believe in the reason for asking questions and looking for answers"[1]

---

[1] E. Martens, *Dzieci są filozofami, filozofowie są dziećmi*, transl. by E. Nowak, „Ethics in Progress Quarterly" 2011, no. 2 p. 4.

## Introduction

Human development, from the very beginning, is considered from the perspective of controlled changes that lead to "provision of an ever more perfect balance between the individual and their environment, of the perfection of the forms of the adjustment of its relation with the environment"[2], hence, they are progressive. Over the course of developmental changes, a significant mechanism is found in the acquisition of experiences within a specific environment constituting a source of stimuli and information. Within the kindergarten, one can observe both individual as well as social development, in which diverse types of thought processes and linguistic behaviour patterns of the child play an important role. The symbiotic existence of speech and thought, execution and perception activities, is found in the definition of *speech* offered by Stanisław Grabias.[3] The researcher indicates that language competences are exercised within situation and grammatical skills, with communication being exercised in course of dialogue and narrative statements[4]. The phrase "transferring […] its interpretation to others […]", included in the definition of *speech* indicates a necessary condition of communication – language interaction, in course of which thoughts are exchanged and meanings are determined intersubjectively. A preschooler already "begins to differentiate their convictions about reality from reality itself, and from then on, they differentiate their own and others' convictions about that same fragment of reality".[5]

---

[2] M. Przetacznik-Gierowska, G. Makiełło-Jarża, *Psychologia rozwojowa i wychowawcza wieku dziecięcego*, Wydawnictwa Szkolne i Pedagogiczne, Warszawa 1985, p. 23.

[3] "A set of activities performed by man using language, getting to know reality and transferring its interpretation to other participants of social life", *Logopedia. Teoria zaburzeń mowy,* ed. by S. Grabias, M. Kurkowski, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin, p. 16.

[4] S. Grabias, *Język w zachowaniach społecznych. Podstawy socjolingwistyki i logopedii*, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2019.

[5] J. Trempała, *Wczesne kompetencje poznawcze w rozwoju dziecka*, „Warmińsko-Mazurski Kwartalnik Naukowy, Nauki Społeczne" 2012, no. 2, p. 13.

Janusz Trempała indicates that this breakthrough takes place around the fourth year of age.

Thanks to the the common tool of the word, intersubjective rooting of meanings and sense is constantly interpreted or negotiated using spoken language that is aimed at *co-creation*, "understood as confirmation of certain portions of meanings, as if they were to be constantly updated so as to neutralise retention (the inevitable past) and move to protention – the future as design of the common understanding".[6] The holistic attitude of the sender and recipient indicated by Jacek Warchala is based on the assumption of active participation in the act of language communication, facilitating the solidification of identity and the establishment of each actual subject. In tasks not exceeding the operational capacities of cognitive processing and participation in dialogue ("dialogue": *dia* – through, *logos* – rational word, speech, mind, sense, order, hence *dialogue* means 'through rational word'), even with limited metalinguistic knowledge and semantic skills of preschoolers, their level of language and communication competences and skills, the specifics of their thinking and openness to intersubjective determination of meanings can be analysed. In contrast to questioning every one [child] separately, dialogue prevents the child from being closed within just their own thought.[7] Linguistic action in community, in an area that is interesting and democratically selected for discussion by a group of preschoolers, also teaches the adult – among others, to suspend their own knowledge, follow the children, to authentically participate in interpretation of reality and transfer of the relevant results to others. Such an attitude allows one to open up to the children's understanding of communication, and to better understand the mode of communication itself.

---

[6] J. Warchala, *Kategoria potoczności w języku*, Wyd. Uniwersytetu Śląskiego, Katowice 2003, p. 266.

[7] According to B. Maryniak, this can be compared to the ancient labyrinth of king Minos, missing *here and now* some "general frescos" using which the Minotaur could alone learn the rules of induction and deduction to be led out from the corridor mazes "to the stairs of abstraction", B. Maryniak, *Logos i paideia*, "Logopaedica Lodziensia" 2017, no. 1, pp. 63–77.

## From philosophy *for* children to philosophy *with* children

Professor Matthew Lipman of the Institute for Advancement of Philosophy for Children (IAPC) at Montclair State University in the United States had between the 1960s and 1970s formulated the education curriculum known as *Philosophy for Children* (P4C). It served the popularisation of the idea of introducing philosophy in the initial stages of school education.

The original assumptions of philosophy *for* children show a certain kind of paternalism: Children tend to philosophise, their innate curiosity and spontaneous questions, as well as surprising observations, show signs of philosophising, allowing these activities to be considered prephilosophy[8], or a different kind of philosophy than the one practiced by adults. The children's introduction to true, mature philosophy of adults (philosophy in the proper sense of the word, as practised by *cultivated philosophers*[9]), requires the development of separate education methods and materials[10], which, together with suitable teacher competences, would allow the children to learn "true philosophy". In the view of adults, they offer the children the opportunity to learn, which they never had before. Thanks to the curriculum developed specifically for children, the content (only selected – thoughts of key philosophers) are provided in a simpler form.[11] The preposition *for* in the original scheme name,

---

[8] A. Łagodzka, *Dyskusja dialogiczna – filozofia dzieciństwa i filozofia dorosłych*, „Analiza i Egzystencja" 2014, no. 25, pp. 99–123.

[9] G.B. Matthews suggested for *philosophy of childhood* to be treated analogously to other subareas, such as philosophy of religion, science, art or other subjects included in academic teaching curricula, G. Matthews, *The Philosophy of Childhood*. Harvard University Press, Cambridge MA 1994.

[10] *Philosophy for children* encompasses all educational suggestions developed with non-adults in mind. They cover both erudite knowledge of philosophy, as well as philosophical investigations.

[11] In Poland, suggestions for the programme were included in many publications meant for children, e.g. S. Boizard, *Filozofowie do dzieci*, transl. by T. Skowroński, Wydawnictwo Muchomor, Warszawa 2011; M. Fabjański, *Wędrówki filozoficzne*, Wydawnictwo Wilga, Warszawa 2003; M. Bacchini, E. Di Marco, *Zemsta*

being a necessary construct as a counter-reservation would, according to M. Lipman, be required until philosophy without this preposition would be identified with philosophy of adults.

The popularity that the P4C quickly gained, influenced the critical view of the didactic undertaking and a change of the name itself: from *philosophy* to *philosophising* and the replacement of the preposition *for* with *with*: *philosophising with children*. This semantic shift shows the difference between the product (something encountered, communicated; erudite knowledge of) and the activities themselves (production through communication), indicates the shift from the expression of erudite knowledge about phenomena as well as reflective and critical consideration[12] of phenomena and recalled knowledge – to the skill of verification or production of meanings in an act of negotiation/ interpretation during a discussion as a repeated communication and personal experience: "in a thinking group, children think like a »single head«. The individual statements inspire other dialogue participants to formulate their own thoughts, pose further questions, mutual argumentation verifies both the finality and the logic of expressions".[13] In a group, children gain the possibility of seeing a multitude of interpretations, of forming their own opinions or changing their attitudes, they also attempt to find the best thought-out, substantiated and comprehensive response to a selected issue. This requires both efficient argumentation, the presentation of suitable and convincing examples as well as the skill to aptly yet critically listen to others.[14]

A change of thinking about the undertaken linguistic activities makes thinking itself gain the proper quality during attempts at

---

*Ateny*, *Platon w krainie paradoksów*, *Uczta Platona*, *Wspaniała kraina Atlantydy*, WAM, Kraków 2008.

[12] For the thinking subject, the *consideration* or *pondering* is a mental activity that by its nature does not need the communication of results to others (cerebration in the acommunicative aspect).

[13] P. Walczak, *Dziecko i filozofia. Spór o filozofowanie dzieci* „Analiza i Egzystencja" 2017, no. 38, pp. 16–17.

[14] A. Pobojewska, *Edukacja do samodzielności Warsztaty z dociekań filozoficznych. Teoria i metodyka*, Wydawnictwo UŁ, Łódź 2019.

common understanding of issues, phenomena, attitudes or texts already existing. At the same time, the creative power of the thinking-speaking-communicating subject (verbalising thoughts in a group, in the open) is stressed, meaning, the shift from a re-creative act to creative independence.[15] This lack of knowledge and experience is considered a strength, as it allows an unbiased view of things.[16] Children are open to new experiences, capable of reflection untainted by tendencies, and their outside-the-box thinking and spontaneity means that they are called „natural philosophers".[17] Gareth B. Matthews, seeking the relations between childhood and philosophy, concluded about the almost natural need of philosophising in children, in particular aged between three and seven years.[18] Such an approach constitutes the children's right to deal with philosophy, including full participation in dialogue[19] and philosophical investigations.

---

[15] As A. Pobojewska, one of the supporters of the Lipman programme in Poland, stressed, "philosophy classes do not have erudite objectives (with this task being left to other classes), but try to elicit specific skills, attitudes and motivations. The main competence to be shaped here in the participants, is intellectual and moral sovereignty", A. Pobojewska, *Zajęcia warsztatowe z filozofii a relatywizm. Dyrektywa wycofania się prowadzącego z merytorycznej warstwy dialogu*, „Przegląd Filozoficzny – Nowa Seria" 2012, no. 3, p. 351.

[16] P. Walczak, *Dziecko i filozofia. Spór o filozofowanie dzieci* „Analiza i Egzystencja" 2017, no. 38, pp. 5–19.

[17] Conf. G. Matthews, *The Philosophy of Childhood*. Harvard University Press, Cambridge MA 1994; G. Matthews, *The child as natural philosopher*, [in:] *Growing up with philosophy*, ed. by M. Lipman, A.M. Sharp, Temple University Press, Philadelphia 1978, pp. 63–77; K. Murris, *Are children natural philosophers?* "Teaching Thinking" 2001, no. 9, pp. 46–49; K. Murris, *Can Children Do Philosophy?*, "Journal of Philosophy of Education" 2000, no. 34(2), pp. 261–279.

[18] In older children, philosophising is less frequent or less revealed. Adult expectations, particularly strong in education space, focus child behaviour on growing up, or development, the objective of which is maturity (subsequent development stages give way to stages of higher maturity). Each earlier activity should in the end serve adulthood, and gains significance primarily in this perspective. A person is most commonly understood as and associated with an adult.

[19] In dialogue (the Socratic method), a question put to a child by an adult is subjected to internal reflection, the effect of which is a statement or response (cerebra-

Investigation is a term related to the area of linguistic communication, with the presence of others, meaning, direct participants of the didactic-communication situation, in which the communicating subject considers the questions submitted and formulated by themselves or by peers, not just submitting to thinking on statements or questions suggested by adults. A characteristic property of investigation are thought-linguistic activities in a group and simultaneous statements together with the relevant author, putting participants in such situations that every one could ponder their thoughts among others, to confront the effects of thinking and – perhaps – verify or solidify one's views. The meaning of terms and statements is thus established through intellectual dialogue[20], in which the truth can be conveyed by language – an intersubjective tool.

During investigations with children, the adult plays the role of activity organiser and moderator. One of the guidelines for the teacher or host "is the [methodical] recommendation not to take a position on the material issues considered during the class".[21]

---

tion in the *quasi*-communicative aspect), subsequently verbalised. The adult poses questions used to follow the child's train of thought, and gains knowledge from them, instead of running in front of this thought, believing what it might mean. In the prototypical dialogue, the adult moderates the situation, asking (*Why?*, *What for?*, *What is…?*, *What are its properties?*), leading the child to a solution by posing questions.

[20] More broadly on intellectual dialogue see e.g.: A. Pobojewska, *Edukacja do samodzielności Warsztaty z dociekań filozoficznych. Teoria i metodyka*, Wyd. UŁ, Łódź 2019; A. Pobojewska, *Warsztaty z dociekań filozoficznych – narzędzie edukacji filozoficznej (i nie tylko)*, [in:] *Filozofia – edukacja interaktywna. Metody – środki – scenariusze*, ed. by A. Pobojewska, Stentor, Warszawa 2012, pp. 171–216; A. Pobojewska, *O dialogu (w kontekście edukacji)*, [in:] *Od twórczości do podmiotowości*, ed. by M.K. Stasiak, L. Frydzyńska-Świątczak, Wydawnictwo WSHE, Łódź 2005, pp. 36–48.

[21] A. Pobojewska, *Zajęcia warsztatowe z filozofii a relatywizm. Dyrektywa wycofania się prowadzącego z merytorycznej warstwy dialogu*, „Przegląd Filozoficzny – Nowa Seria" 2012, no. 3, p. 351. Critique of withdrawal of the host was developed by e.g.: Z. Zdunowski, *Edukacja filozoficzna wobec wyzwania relatywizmu na przykładzie programu Matthew Lipmana „Filozofia w szkole"*, „Analiza i Egzystencja" 2009, no. 10, pp. 173–185; J. Zubelewicz, *Lipmana filozofia dla dzieci – analiza krytyczna*, „Kwartalnik Pedagogiczny" 2001, no. 2(180), pp. 67–100.

With the adult withdrawing from the material layer of the investigation, the intellectual and moral independence of the children has a chance to develop. In the core part of the workshop, verbal activity of the adult boils down mainly to posing supporting questions (*Why do you think so? How is this related to…? What do you mean when you say...? Can you give an example?* etc.), simplifying the formulation of arguments, making differentiations, giving substantiations, interpreting own and others' statements, specifying term meanings, undertaking diverse other thought-verbal activities facilitating the course of the investigation. As the organiser, the adult is obliged to respect the workshop structure, made up of five components:

1. Seating the participants in a circle.
2. Loud reading of a text or watching a visual material, or performing an exercise.
3. Formulation of questions by users.
4. Selection of questions for discussion.
5. Discussion.

## *What does it mean "to communicate"?* Investigations with five- and six-year-olds

Investigations with five- and six-year-olds, the objective of which is to determine, what is communication according to children, were conducted at a kindergarten in Łódź, Poland. Four groups took part in the workshops: two groups of five-year-olds (I and II, both five-person) and two groups of six-year-olds (III, with six persons, and IV, with eight persons). Cognitive development of all of the preschoolers was normative, the speech impediments diagnosed by the kindergarten speech therapist did not influence the quality of participation in the meetings. None of the children had ever participated in such workshops.

At the beginning of the workshop, an image was placed presenting a boy or a girl (fig. 1) before each group that sat in a circle (the children were free to choose their specific place) – each group had

only one of the two images chosen for them at random. It was drawn by hand and schematically so that it would not draw too much attention during the meeting.

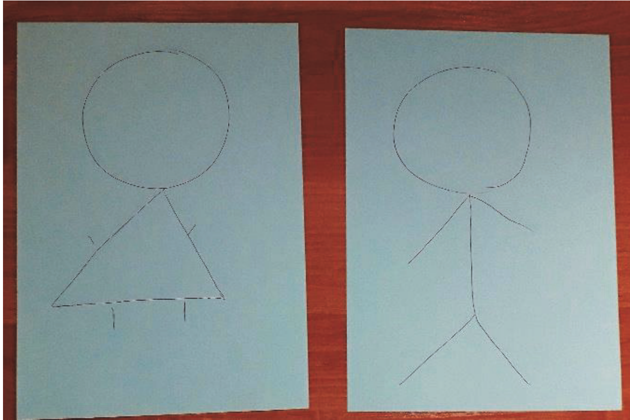


**Fig. 1.** Boy and girl images used during investigations with preschoolers

Source: private archive

Above the image, a colour inscription "I SPEAK" was placed, with a small question mark lying in front of each child on a smaller piece of paper (fig. 2). Before commencement of the workshop proper, the host read the inscription to the children and explained the significance of the question mark.

At the beginning of class, the leader set out rules bringing the workshop course to order. The children indicated:

1. Speaking one after another
2. Raising one's hand before speaking
3. Listening to statements by others until the end, without interrupting.

The host suggested in addition:

4. Respecting the ideas of others (not ridiculing others),
5. Remaining at the same spot during the class.

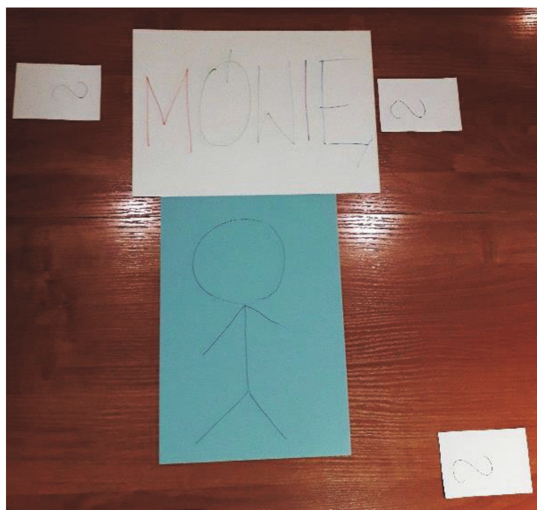


**Fig. 2.** Distribution of the aids prepared for each workshop group

Source: private archive

The acceptance of a uniform set of rules during class brings the organisation to order, preventing the disintegration of the text spoken by a participant, e.g. intervening in the message to be transmitted even during its formulation (*ad hoc* corrections of noticed errors, inconsistencies, expressing different opinions during statements by others, etc.).

For the workshop proper, each group was given the same task: *What question comes to your mind when you look at the sheets?* or *What would you like to ask when you look at the sheets?*[22] Among the groups, three, I, III and IV, considered all prepared aids, however only two, I and IV[23] focused on communication – the effects of the investigations will be presented in the latter part of the study.

---

[22] The question form was modified depending on the group, so that children understood the command.

[23] In group III, the children selected the question: *Who is the girl?*, even though questions included those related to linguistic communication. In group II, the ques-

Following careful observation of the aids and a short period of thinking, the children from both groups formulated the following questions[24]:

*What does it mean, is the figure speaking?*
*Is the figure walking along the street?*
*Is somebody speaking to them?*
*Is somebody speaking to them and* [they] *are answering?*
*Are they going… to preschool/ to school/ to the station/ home/ to the store/ to work?*
*Are they on the phone?*
*Are they praying?*
*Are they going to confess and praying?*
*Is the word in their head?*
*Are they going to pee?*
*Who is he/ she?*
*Is he a boy?*

The host would write down[25] the questions on a sheet of paper, and after the "brainstorm" ended, read them out again and held a vote. In course of the workshop, two groups: one of five- and one of six-year-olds, selected from among the questions posed by their peers the same one with a majority vote: *Is somebody speaking to them and* [they] *are answering?* Hence, the children decided to consider, **what does it mean "to communicate"**.

During the discussion, the young participants attempted to explain their understanding of the term very precisely, and to support the arguments, they gave numerous examples from own communication experience. The examples applied mainly to behaviour ob-

---

tions circled around "the person's trip" (purpose, reasons, preparations, companions, etc.), when formulating questions the children generally failed to consider the 'I speak' sheet.

[24] The forms of questions with the same content and sounding similarly were unified for the paper.

[25] During investigations with older participants, one of the workshop participants becomes a secretary, howver, preschoolers should be relieved of this task.

served at the kindergarten, but also home and in the immediate environment. According to preschoolers, the definition of "communication" includes such components as:

1. **Relations between interlocutors**: e.g. *be the same, similar*; *one can play with someone*; *play ball; when someone hits you, they say they're sorry*; *don't argue;* make *friends; get* married. Statements concerning relations and attitudes as well as relevant examples, also characterising adult lives, were most numerous during discussions in both groups.
2. **Mutual linguistic activity of at least two participants in a communication event**: e.g. *speak/ talk with someone*; *talk with a friend; and what if they don't respond…?* THe children clearly stressed differences between the transitive form (unilateral conveyance of a message) and interaction (message exchange, linguistic behaviour observed in the social process), in which direct influence of someone on another occurs.
3. **Diversity of forms making up the message**: e.g. *expressing my voice; talking with hands* [gestures]; *you have to greet the other person*; *"high five"*. Due to limited metalinguistic awareness, preschoolers were unable to precisely name the various kinds of communication channels, however, they did notice the coexistence of many levels, on which communication takes place, among them: verbal, phonic, kinesic, proxemic, behavioural, etc.
4. **Conditions of effective linguistic communication**: e.g. *you understand what someone is saying*; *come to terms; that you can hear them*; *you have to listen; you have to speak*; *you have to use your ears and head*. The children enumerated components related to the initiation of verbal contact, the comprehension of the intent of the sender or the rules of linguistic etiquette.

The last discussion area (conditions of effective communication) became in both groups the invitation to a participant-initiated[26] in-

---

[26] The open crayon box lying on the table turned out to be an unspoken encouragement for the children to draw on the other sides of the question mark sheets. The

tersemiotic translation. The children expressed the need to graphically represent body parts necessary to communicate, with each group completing the undertaken task in a different manner.

In group I, each child drew a figure[27] on their sheet, with components necessary for communication (fig. 3), with group IV amending the girl image with parts of her body that are important for the communication process yet not included or not sufficiently stressed on her schematic drawing (fig. 4):

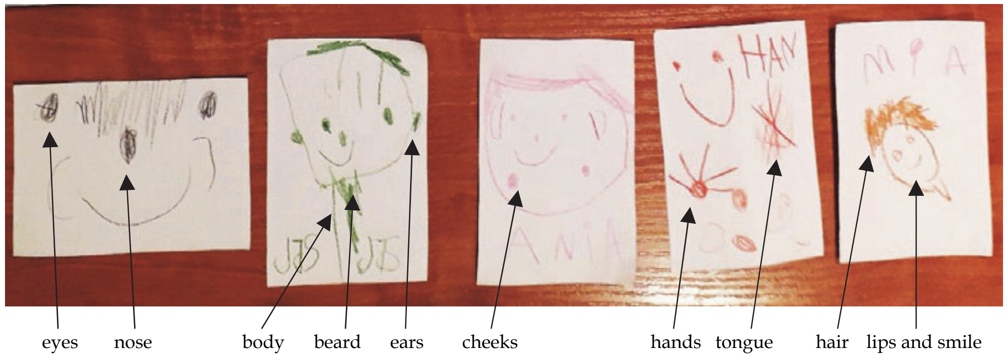



**Fig. 3.** Body parts necessary for communication – according to group I

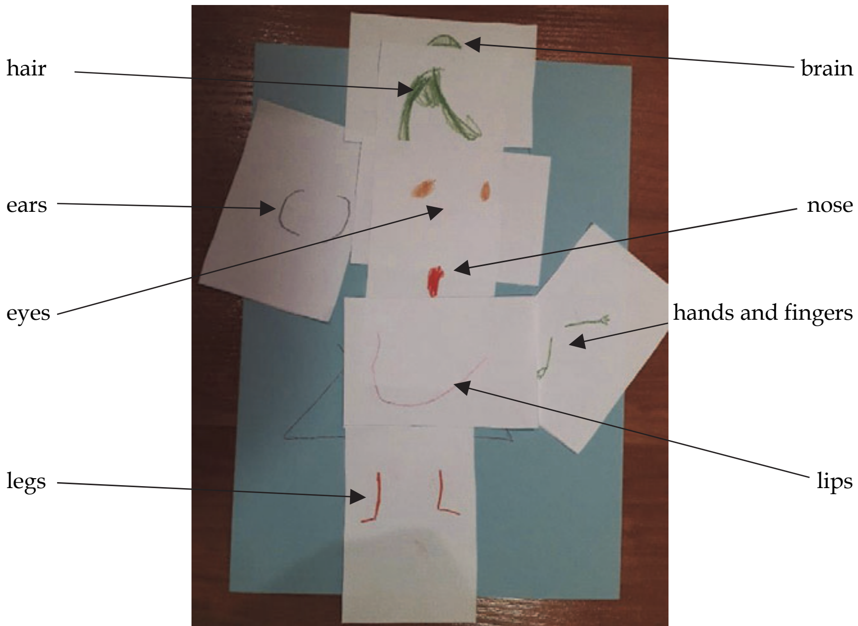
Source: private archive.

When the drawing was completed, the host asked the children to explain why the components they recreated are important for communication, and in what way do they condition it. Apart from the most obvious components of systems and organs utilised while speaking and comprehending (eyes: *you have to see, who you are talking to*; *whether they did not go away*; *whether they see that I am talking to them*;

---

consent of the host to the first and subsequent questions of the children: *Auntie, can I draw…* and following the children at this stage amended the workshop with an unplanned component.

[27] The term from the original Polish language version of the paper, 'ludzik', is a general one meaning roughly 'small person' [translator's note]




ears: *that you can hear something*; *you need to listen; you need to use your ears and head*; lips and smile: *you talk with your mouth; when I smile, I say that I like someone*, tongue: *I once bit it when training football, it hurt, and I did not talk*); one of the six-year-olds drew a brain, explaining: *you have to think about what to say and what the other person is saying*. Children in both groups explained that the beards and cheeks move, hence *you can see that somebody is talking*. Moreover, the cheeks turn red when somebody is nervous, but they have to say they're sorry for bad behaviour (*when somebody hits [you]…*), hence, *the legs talk* (nervour stomping on the ground, a heavy gait, feet shuffling or stomping because of discontent). The nose *can say the smell is bad*, and the hair *that I have a nice hairpin*. Hands and fingers show what one is saying (*talking with hands*) or execute the will to greet another (*"high five"*). In general, *the entire body talks* to the other person – one of the five-year-olds summarised the workshop at the end.

## Discussion and conclusions

The conducted research shows that the Polish version of the M. Lipman method may be successfully used to define (*define* – 'explain meaning; *definition*[28] – "explaining word, phrase or term meanings", Dictionary of the Polish Language) terms already with preschoolers who know terms from preerudite experience. The presented research results, like other projects executed in Poland using philosophical investigations[29] confirm that this method provides the children with the possibility to convey their individual understanding of reality and to interpret or negotiate meanings in dialogue.

Such intersubjective negotiation of terms requires a holistic approach to verbal communication, including attention focus on each participant in spoken dialogue (speaker-listener, listener), the relation between them, the situation and the context, in which the statement is interpreted (speech act or a sequence thereof), based on spoken word. During the workshops, the children eagerly posed questions, formulating them suitably to the presented materials, expanded upon and amended peer ideas. They had exhibited readiness to handle a question posed by another, were keen to make the joint effort to consider an issue, with talking itself giving them pleasure. A certain impatience and distraction became noticeable towards the end of the class, when the children considered the topic to have been exhausted.

Joint investigations significantly reduced the fear of speaking out or responding.[30] preschoolers entered the dialogue on the basis

---

[28] Linguistics differentiate between *defintion* and *explication*. When explicating, the sender moves from word to object, when defining – vice versa, from the object to the word, B. Boniecka, *Definicje i eksplikacje dziecięce*, [in:]: *Zaburzenia mowy. Mowa. Teoria. Praktyka*, ed. by S. Grabias, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2001, pp. 159–174.

[29] Conf. Wąsik B., *Dziecko filozofem. O projekcie edukacyjnym FiloZosia – filozofia dla przedszkolaków*, „ARGUMENT: Biannual Philosophical Journal" 2018, no. 8(1), pp. 87–204.

[30] Fear of errors, lack of knowledge or speaking in groups may be noticed during discussions with preschool groups or in individual contacts with children (e.g. during diagnosis).

of sovereign decisions (during the class, each preschooler spoke at least three times), they were able to effectively participate in the discussion, respected its fundamental rules and terms of participation set out at the beginning of the class. Thanks to adherence to orderliness, the children focused on the task and encouraged themselves mutually to perform linguistic tasks – submitted their own ideas, referred to peer opinions and compared attitudes (*Me too…, And I in turn…*), amended and explained own observations (*…I wanted to add that…*), gave numerous examples, defended their positions, respecting others' opinions. The rules of statement authenticity[31] applied by the children gave rise to the presence of true intellectual dialogue.

In their statements, the preschoolers frequently formulated conclusions in line with the relevant discipline. The studied groups showed components referring closely to the dictionary definition of *communication*, meaning, concerning "making contact with someone", or communicating with another primarily by words, and "coming to an understanding on a certain issue" (Dictionary of the Polish Language). Attempts at explication were apt, even though in actual dialogue the children would frequently amend peer statements, hence, failing to consider all formal-linguistic definition components. Preschoolers noted many properties and conditions of communication that were not included in the dictionary definition (e.g. layer diversity, conditions of effective communication).

The semantic skills of preschoolers, or the ability to differentiate between information emerging along the line: language – thinking – reality[32], may surprise an adult able to get to know the train of thought of children and the world view embedded in preschooler

---

[31] The rule of statement authenticity is "voluntary statement of opinions, about which [participants] themselves are convinced", A. Pobojewska, *Zajęcia warsztatowe z filozofii a relatywizm. Dyrektywa wycofania się prowadzącego z merytorycznej warstwy dialogu*, „Przegląd Filozoficzny – Nowa Seria" 2012, no. 3, p. 353.

[32] H. Borowiec, *Sprawność semantyczna dzieci w wieku przedszkolnym*, [in:] *Zaburzenia mowy. Mowa. Teoria. Praktyka*, ed. by S. Grabias, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2001, pp. 151–157.

language during the investigation. In course of the initiated dialogue, it turned out that for preschoolers communication is mainly building relations, and "Personal relation excludes reification of a human being, domination or subordination of any of the parties to the dialogue".[33] The need to be within a communicating community is expressed by the children through mutual linguistic activities[34], which are more to them than just transmission of data, verbal conveyance or enforcement of memorised content. As Aldona Pobojewska notes, investigation workshops "may be used on all education levels, from preschool to university of the third age, in all types of schools and education facilities, as well as at other education institutions (youth detection centres, culture centres, language schools, during projects, etc.)"[35], as they serve the preliminary consideration of diverse types of issues related to the topic at hand and the world around us.

## References

Bacchini M., Di Marco E., *Zemsta Ateny, Platon w krainie paradoksów, Uczta Platona, Wspaniała kraina Atlantydy*, WAM, Kraków 2008.

Boizard S., *Filozofowie do dzieci*, transl. by T. Skowroński, Wydawnictwo Muchomor, Warszawa 2011.

Boniecka B., *Definicje i eksplikacje dziecięce*, [in:] *Zaburzenia mowy. Mowa. Teoria. Praktyka*, ed. by Grabias S., Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2001, pp. 159–174.

---

[33] M. Kaźmierczak, Binary and Ternary Relation between Participants ofthe Diagnostic and Therapeutic Process in Speech-language Pathology. Interdisciplinary Contexts of Special Pedagogy, No. 20, Poznań 2018. p. 156.

[34] B. Dobek-Ostrowska mentions over one hundred definitions of communicating and communication, developed by researchers in diverse fields. Even though they note various aspects (message and information exchange, usage of verbal and non-verbal resources, transactionality, creation of meaning, construction of social relations, exercising control), they agree that communication is a process, hence, an activity, B. Dobek-Ostrowska *Komunikowanie polityczne i publiczne*, Wyd. Nauk. PWN, Warszawa 2006.

[35] A. Pobojewska, *Edukacja do samodzielności. Warsztaty z dociekań filozoficznych. Teoria i metodyka*, Wyd. UŁ, Łódź 2019, p. 17.

Borowiec H., *Sprawność semantyczna dzieci w wieku przedszkolnym*, [in:] *Zaburzenia mowy. Mowa. Teoria. Praktyka*, ed. by Grabias S., Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2001, pp. 151–157.

Dobek-Ostrowska B., *Komunikowanie polityczne i publiczne*, Wyd. Nauk. PWN, Warszawa 2006.

Fabjański M., *Wędrówki filozoficzne*, Wydawnictwo Wilga, Warszawa 2003.

Grabias S., *Język w zachowaniach społecznych. Podstawy socjolingwistyki i logopedii*, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2019.

Kaźmierczak M., Binary and Ternary Relation between Participants ofthe Diagnostic and Therapeutic Process in Speech-language Pathology. Interdisciplinary Contexts of Special Pedagogy, No. 20, Poznań 2018. p. 156.

*Logopedia. Teoria zaburzeń mowy,* ed. by S. Grabias, M. Kurkowski, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2014.

Łagodzka A., *Dyskusja dialogiczna – filozofia dzieciństwa i filozofia dorosłych*, „Analiza i Egzystencja" 2014, no. 25, pp. 99–123.

Matthews G., *The Philosophy of Childhood*, Harvard University Press, Cambridge MA 1994.

Matthews G., *The child as natural philosopher*, [in:] *Growing up with philosophy*, ed. by M. Lipman, A.M. Sharp, Temple University Press, Philadelphia 1978, pp. 63–77.

Maryniak B., *Logos i paideia*, „Logopaedica Lodziensia" 2017, no. 1, pp. 63–77,

Murris K., *Can Children Do Philosophy?*, "Journal of Philosophy of Education" 2000, no. 34(2), pp. 261–279.

Murris K., *Are children natural philosophers?*, "Teaching Thinking" 2001, no. 9, pp. 46–49.

Pobojewska A, *Edukacja do samodzielności. Warsztaty z dociekań filozoficznych. Teoria i metodyka*, Wyd. UŁ, Łódź 2019.

Pobojewska A, *Zajęcia warsztatowe z filozofii a relatywizm. Dyrektywa wycofania się prowadzącego z merytorycznej warstwy dialogu*, „Przegląd Filozoficzny – Nowa Seria" 2012, no. 3, pp. 351–363.

Pobojewska A., *Warsztaty z dociekań filozoficznych – narzędzie edukacji filozoficznej (i nie tylko)*, [in:] *Filozofia – edukacja interaktywna. Metody – środki – scenariusze*, ed. by A. Pobojewska, Stentor, Warszawa 2012, pp. 171–216.

Pobojewska A., *O dialogu (w kontekście edukacji)*, [in:] *Od twórczości do podmiotowości*, M.K. Stasiak, L. Frydzyńska-Świątczak, Wydawnictwo WSHE, Łódź 2005, pp. 36–48.

Przetacznik-Gierowska M., Makiełło-Jarża G., *Psychologia rozwojowa i wychowawcza wieku dziecięcego*, Wydawnictwa Szkolne i Pedagogiczne, Warszawa 1985.

Trempała J., *Wczesne kompetencje poznawcze w rozwoju dziecka*, „Warmińsko-Mazurski Kwartalnik Naukowy, Nauki Społeczne" 2012, no. 2, pp. 9–22.

Walczak P., *Dziecko i filozofia. Spór o filozofowanie dzieci* „Analiza i Egzystencja" 2017, no. 38, pp. 5–19.

Warchala J., *Kategoria potoczności w języku*, Wyd. Uniwersytetu Śląskiego, Katowice 2003.

Wąsik B., *Dziecko filozofem. O projekcie edukacyjnym FiloZosia – filozofia dla przedszkolaków*, „ARGUMENT: Biannual Philosophical Journal” 2018, no. 8 (1), pp. 87–204.
Zdunowski Z. *Edukacja filozoficzna wobec wyzwania relatywizmu na przykładzie programu Matthew Lipmana „Filozofia w szkole”*, „Analiza i Egzystencja” 2009, no. 10, pp. 173–185.
Zubelewicz J., *Lipmana filozofia dla dzieci – analiza krytyczna*, „Kwartalnik Pedagogiczny” 2001, no. 2 (180), pp. 67–100.

## On-line literature

Martens E., *Dzieci są filozofami, filozofowie są dziećmi*, transl. by E. Nowak, “Ethics in Progress Quarterly” 2011, no. 2, www.ethicsinprogress.org, access: 15.02.2020.
*Słownik języka polskiego*, PWN, https://sjp.pwn.pl/, access: 28.02.2020.

## List of abbreviations

SJP – *Dictionary of the Polish Language*

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

Ewa Gacka

University of Łódź, Poland

# Secondary speech therapy prophylaxis aimed at children with low birth weight – a part of research

**Abstract**: Ewa Gacka, *Secondary speech therapy prophylaxis aimed at children with low birth weight – a part of research*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 109–123. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.06

In the paper, the results of the study of secondary speech therapy prophylaxis aimed at children with low birth weight (preterm babies and babies born at term but with intrauterine growth retardation). The study group consisted of 187 children with a birth weight below 2500 g. Low birth weight is one of the risk factors for various developmental disorders, including disorders of the development of language communication. That is why early identification of the first symptoms of language acquisition (speech development) disorders is so important. The aim of the undertaken research was to analyse the activities in the field of secondary speech therapy prophylaxis, covering this risk group.

**Key words**: secondary speech therapy prophylaxis, screening tests, low birth weight, preterm birth, intrauterine foetal growth retardation

## Theoretical introduction to research issues

Prophylactic activities are an important part of the work of speech therapists. They consist in preventing the occurrence of speech disorders, early diagnosis of problems in the field of lan-

guage communication, as well as minimising the negative effects of already diagnosed disorders, which is the basis for effective help. Speech therapy follows a principle adopted from medicine, according to which it is better to prevent than to cure. Speech therapy prophylaxis is "(…) the entirety of organisational forms, content, methods, rules and measures that create a coherent structure used to prevent – firstly – communication impairment[1] of a human being biologically and/or environmentally determined, and secondly – the effects of communication impairment on human functioning".[2] In the source literature, there are various classifications of speech therapy prophylaxis. The most common classification includes first-line, second-line and third-line prophylaxis.[3] First-line (primary, stage 1, 1st degree) prophylaxis consists in disseminating knowledge about speech, conditions for its proper development, as well as speech and voice disorders, and the possibility of specialist diagnostic and therapeutic help among the general population. Second-line (secondary, stage 2, 2nd degree) prophylaxis is "(…) early identification of symptoms of disorders enabling the earliest possible therapeutic intervention".[4] Third-line (tertiary, stage 3, 3rd degree) prophylaxis covers people who have already experienced speech

---

[1] The term of "communication impairment" (CI ) appears in the works of Grażyna Gunia and Viktor Lechta, (*Wprowadzenie do logopedii*, ed. G. Gunia, V. Lechta, Oficyna Wydawnicza Impuls, Cracow 2011), as well as of Ewa Małgorzata Skorek (*Wielowymiarowość przestrzeni profilaktyki logopedycznej*, ed. E.M. Skorek, University of Zielona Góra, Zielona Góra 2017). The term is synonymous with "speech disorders" or "language communication disorders".

[2] E.M. Skorek, *Profilaktyka logopedyczna – poziomy i strategie*, [in:] *Wielowymiarowość przestrzeni profilaktyki logopedycznej*, ed. E.M. Skorek, Uniwersytet Zielonogórski, University of Zielona Góra 2017, p. 51.

[3] Confer: E.M. Skorek, *Profilaktyka logopedyczna-poziomy i strategie,* [in:] *Wielowymiarowość przestrzeni profilaktyki logopedycznej,* ed. Skorek E.M., Uniwersytet Zielonogórski, Zielona Góra 2017, pp. 51–92; K. Węsierska, *Profilaktyka logopedyczna w ujęciu systemowym*, [in:] *Profilaktyka logopedyczna w praktyce edukacyjnej*, ed. Węsierska K., vol. 1, Wydawnictwo Uniwersytetu Śląskiego, Katowice 2012, pp. 25–47; V. Lechta, *Podstawy teoretyczne logopedii,* [in:] *Wprowadzenie do logopedii*, ed. G. Gunia, V. Lechta, Oficyna Wydawnicza "Impuls", Cracow 2011, pp. 15–32;

[4] K. Węsierska, op. cit., p. 38.

disorders, and its aim is to reduce the negative consequences of abnormalities in language and voice communication.

Secondary prophylaxis concerns people who are more likely to develop speech or voice disorders. Screening test is the most effective form in the area of the activities of secondary prophylaxis. Most often, secondary prevention is associated with treatment aimed at children, but in accordance with the paradigm of modern speech therapy (the subject of its interest is a human being throughout their lives), it should also be addressed to adults, e.g. teachers who, due to overload of the voice organ, are exposed to greater risk of dysphonia than the general population. Its recipients should also include elderly people with an increased risk of Alzheimer's disease, and speech therapy screening tests would allow for a diagnosis of the first symptoms of language communication disorders (e.g. lexical and semantic difficulties) accompanying Alzheimer's dementia.[5]

Children with low birth weight are the risk group for speech development disorders. Children at risk of speech development disorders include groups of children with an increased probability of abnormalities in the development of language communication, related to the presence of unfavourable factors in the prenatal period, during childbirth, neonatal period and infancy.[6]

The risk factors for speech development disorders include, among others, low birth weight. Other risk factors are: CNS injury (e.g. periventricular leukomalacia), intracranial bleeding that may lead to CNS injury, hyperbilirubinemia, respiratory distress syndrome, bronchopulmonary dysplasia, abnormal muscle tone, 5-minute Apgar score below 6 points, abnormal orofacial reflexes, visual and hearing impairment.[7] Risk factors for developmental disorders (which may also manifest as abnormalities in the development of

---

[5] The likelihood of developing Alzheimer's disease increases with age.

[6] E. Gacka, *Czynniki ryzyka wystąpienia nieprawidłowości w kształtowaniu się mowy u dzieci urodzonych przed terminem (wcześniaków) w świetle założeń profilaktyki logopedycznej,* [in:] *Współczesne tendencje w diagnozie i terapii logopedycznej*, ed. Pluta-Wojciechowska D., Sambor B., Harmonia Universalis, Gdańsk 2017, pp. 191–202.

[7] E. Gacka, op. cit.

language communication) additionally include: chromosome aberrations, hereditary enzymopathies, maternal illnesses during pregnancy (diabetes, thyroid diseases, infectious diseases), toxemia of pregnancy, inflammatory processes and CNS diseases present in a child.[8] Research results confirm that low birth weight increases the probability of various developmental abnormalities, e.g. cerebral palsy (CP), intellectual disability, epilepsy, psychomotor agitation, hearing disorders, and speech disorders.[9] Therefore, the speech development of children with low birth weight should be monitored.

---

[8] Confer: R. Michałowicz, J. Ślenzak J., *Choroby układu nerwowego dzieci i młodzieży*. PWN. Warsaw 1985; W. Fedorowska, B. Wardowska, *Wywiad biologiczno-środowiskowy do wykrywania wczesnych uwarunkowań rozwoju mowy*. Gdańsk 1992.

[9] A. Stewart, V. Kirkbride, *Very preterm infants at fourteen years: relationship with neonatal ultrasound brain scans and neurodevelopmental status at one year*. "Acta Paediatrica" 1996, 416, pp. 44–47; A. Gosch, M. Brambring, H. Gennat, A. Rohlmann, *Longitudinal study of neuropsychological outcome in blind extremely-low-birth weight children.* "Developmental Medicine and Child Neurology" *1997*, no. 39, pp. 297–304; M. Cherkes-Julkowski, *Learning disability, attention deficit disorder and language impairment as outcomes of prematurity: a longitudinal descriptive study*. "Journal of Learning Disabilities" 1998, no. 31, pp. 294–306; A.T. Bhutta, M.A. Cleves, P.H. Casey, M.M. Cradock, K.J. Anand, *Cognitive and behavioral outcomes of school-aged children who were born preterm: a meta-analysis*. "The Journal of the American Medical Association" 2002, no. 288, pp. 728–737; V. Tommiska, K. Heinonen, P. Kero, M.L. Pokela, O. Tammela, A.L. Järvenpää., T. Salokorpi, M. Virtanen, V. Fellman, *A national two year follow up study of extremely low birthweight infants born in 1996–1997.* "Archives of Disease in Childhood – Fetal and Neonatal Edition" 2003, no. 88, pp. 29–35; G. Kmita, *Rozwój psychiczny dzieci urodzonych przedwcześnie*, [in:] *Noworodek przedwcześnie urodzony – pierwsze lata życia,* ed. Kornacka M.W. Wydawnictwo Lekarskie PZWL, Warsaw 2003, pp. 55–67; K.M. Linnet, K. Wisborg, E. Agerbo, N.J. Secher, P.H. Thomsen, T.B. Henriksen, *Gestational age, birth weight and the risk of hyperkinetic disorder*. "Archives of Disease in Childhood" 2006, nr 91, pp. 655–660; L.A. Ribeiro, H.D. Zachrisson, S. Schjolberg, H. Aase, N. Rohrer-Baumgartner, P. Magnus, *Attention problems and language development in preterm low-birth-weight children: cross-lagged relations from 18 to 36 months.* "BMC Pediatrics" 2011, no. 11, pp. 59–78; A. Simić Klarić, Z. Kolundžić, S. Galić, V. Mejaški Bošnjak, *Language development in preschool children born after asymmetrical intrauterine growth retardation*. "European Journal of Paediatric Neurology" 2012, no. 16(2), pp. 132–137; P.A. May, A. Baete, J. Russo, et al., *Prevalence and Characteristics of Fetal Alcohol Spectrum Disorders* "Pediatrics" 2014, Nov. 134(5), pp. 855–866; M.K. Kornacka, R. Bokiniec, *Noworodek z małą urodzeniowa*

Low birth weight is defined as less than 2500 grams.[10] Based on birth weight, neonates can be divided into children who are:

- AGA (*appropriate for gestational age*), whose body weight and length are within average values for a given gestational age[11],
- SGA *(small for gestational age),* whose body weight and length are too small in relation to the average expected values for a given gestational age (they can be identified with hypotrophic neonates);
- LGA (*large for gestational age)*, whose body weight and length exceed the expected values for a given gestational age.[12]

Children with low birth weight include preterm babies and hypotrophic (too small for gestational age) babies born at term.[13] The latter include children with intrauterine growth retardation (IUGR) and constitutionally small ones (low birth weight does not result from a pathological process, but is genetically determined). It must be emphasized that "IUGR only occurs when the intrauterine disease process reduces the rate of foetal growth".[14] They are diagnosed when two measurements of the foetus in the womb of the mother show too slow growth rate and/or when the birth weight and length of the child are below the 10th percentile.[15]

---

*masą ciała*, [in:] *Neonatologia*, ed. J. Szczapa, Wydawnictwo Lekarskie PZWL, Warsaw 2015, pp. 79–102.

[10] M.K. Kornacka, R. Bokiniec, op. cit.

[11] Growth charts are used to determine normal intrauterine development (foetal weight and length). In Poland, charts developed by WHO are used. A baby with a low birth weight is a baby weighing less than the 10th percentile. (Confer: J. Świetliński, *Opieka nad zdrowym noworodkiem*, [in:] *Neonatologia i opieka nad noworodkiem,* ed. J. Świetliński, vol. 1, Wydawnictwo Lekarskie PZWL, Warsaw 2016, pp. 85–136).

[12] J. Świetliński, op. cit.

[13] J. Gadzinowski, M. Kęsiak, *Definicja, terminologia, zasady organizacji opieki nad noworodkiem,* [in:] *Neonatologia*, ed. J. Szczapa, Wydawnictwo Lekarskie PZWL, Warsaw 2015, pp. 1–22.

[14] J. Gadzinowski, M. Kęsiak, op. cit., p. 8.

[15] P. Chatelain, *Children born with intra-uterine growth retardation (iugr) or small for gestational age (sga): long term growth and metabolic consequences*. "Endocrine Regulations" 2000, no. 33, pp. 33–36.

A preterm baby is every child born before 37 hbd (weeks of pregnancy), regardless of the birth weight. The common feature of preterm babies is therefore the time of delivery (delivery takes place before 37 weeks of pregnancy) and low birth weight, most often below 2500 g, although there are also neonates with a body weight over 2500 g (most often these are babies born close to the correctly defined due date).[16]

## Methodological foundations of own research

The aim of the conducted research was to analyse and evaluate the activities in the field of secondary speech therapy prophylaxis covering children with low birth weight.[17] The study was supposed to answer the question: if, and if so, what activities in the field of secondary speech therapy prophylaxis are undertaken in relation to children with low birth weight?

The study group consisted of 187 children with a birth weight below 2500 g, including 156 preterm babies and 31 children with IUGR (intrauterine growth retardation). The study group included children born at term with the diagnosis of IUGR in the specialist documentation. Among these children, 11 cases were diagnosed with foetal alcohol syndrome (FAS), i.e. neurobehavioural disorders occurring in children of mothers consuming alcohol during pregnancy, e.g. damage to the brain and nervous system, craniofacial anomalies, visual and auditory dysfunctions, movement, gait and motor coordination disorders, muscle tone disorders, behaviour, social adjustment and communication disturbances.[18] The FAS criteria (Q 86.0) (ICD-10, 1996) include:

– growth inhibition in the womb or later (low birth weight),
– facial dysmorphic features,

---

[16] J. Gadzinowski, M. Kęsiak, op. cit.

[17] The presented research is part of a larger, ongoing research project on the development of language communication in children with low birth weight.

[18] All 11 children are brought up in adoptive or foster families.

– abnormal development of the CNS,
– if the above criteria are met, it is not necessary to confirm that the mother consumed alcohol during pregnancy.[19]

Full-blown FAS accounts for only a fraction of all developmental abnormalities associated with foetal ethanol exposure.[20] The source literature also includes the term FASD (*foetal alcohol spectrum disorder)* – a spectrum of foetal alcohol damage/a spectrum of foetal alcohol disorders, which includes, in addition to foetal alcohol syndrome (FAS), alcohol-related neurodevelopmental disorder (ARND) and partial FAS (partial foetal, alcohol syndrome).[21]

The study group included: 109 children with low birth weight (*LBW*) (2499–1500 g) 40 children with very low birth weight (*VLBW*) (1499–1000 g) 25 children with extremely low birth weight (*ELBW*) (999–750 g) 13 children with incredibly low birth weight (*ILBW*), below 750 g. The smallest birth weight of a child in the study group was 620 g, and the highest one 2490 g.

The research was based on the analysis of specialist documentation (hospital discharge summary record, child medical record book, results of specialist consultations) and an interview with the parents of children. The interview included questions about the course of pregnancy and delivery, the scope and forms of interdisciplinary care for a neonate, possible problems related to the development of primary functions of speech[22], forms and scope of the obtained speech therapy treatment (time of its delivery), way to inform par-

---

[19] P.A. May et al., op. cit.

[20] In the analysed documents of children whose mothers consumed alcohol during pregnancy a diagnosis of FAS was indicated, and this is the term used by the author of the article.

[21] T. Jadczak-Szumiło, *Rozwój mowy dzieci z FASD*, [in:] *Wczesna interwencja logopedyczna*, ed. K. Kaczorowska-Bray, S. Milewski, Harmonia Universlis, Gdańsk 2016, pp. 180–210.

[22] Primary activities (primary to speech) are orofacial reflexes, breathing, eating and drinking, as well as other non-verbal activities within the mouth and face, e.g. orofacial auto-games (Confer: D. Pluta-Wojciechowska, *Mowa dzieci* z rozszczepem wargi i podniebienia. Wydawnictwo Naukowe Uniwersytetu Pedagogicznego w Krakowie, Cracow 2011).

ents about the need for speech therapy assessment of the child, possible forms of monitoring the development of children's language communication, the availability of secondary speech therapy prophylaxis.

## Presentation and analysis of the results of the study

Screening tests are the basic form of secondary prophylaxis, which should cover all children at risk, including children with low birth weight. The research procedure showed that only 6 children underwent speech therapy assessment in neonatal departments, which constitutes 3.2% of the participants. As many as 96.8% (n = 181) were not subjected to the initial speech therapy diagnosis during their hospital stay.

Secondary prophylaxis consists in monitoring the development of speech in order to notice the first symptoms of abnormalities in the development of language communication (it should be remembered that symptoms may appear already in the neonatal or infancy period, e.g. abnormalities in primary activities). In the discharge recommendations (included in hospital discharge summary records), information about the need for speech therapy consultation was found in the case of 9 children (5% of the participants). In addition, according to the interviews, the parents were not orally informed about the need to provide their child with speech therapy treatment. This is of particular concern because, apart from low birth weight, in 71% of the participants (n = 132), physicians identified (as early as in the neonatal unit) other risk factors for speech development disorders – low Apgar score, difficulty in eating (of varying severity), decreased or increased muscle tone, hyperbilirubinemia, bronchopulmonary dysplasia, CNS injury, intracranial bleeding, genetic disorders, visual and hearing impairment. Information about this type of abnormalities was included in the medical records, and they were also indicated by the parents of children with low birth weight. Therefore, it seems that the medical staff

does not have sufficient knowledge about the early determinants of speech development and the need to monitor the development of language communication in children at risk To a great extent, it is up to the physicians (neonatologists and paediatricians) whether and when children with low birth weight will be referred to a speech therapist.

For comparison, in all analysed documents (n = 187) there was a provision about the need to consult such specialists as: neurologist, ENT specialist and/or audiologist, ophthalmologist. In addition, 157 records indicated the need for care by a cardiologist, orthopaedist and rehabilitator. The recommendations also included the need to visit: a neurosurgeon (in 35 cases), a nephrologist (in 24 cases), a gastroenterologist (in 15 cases), and a psychologist (in 8 cases). Of course, this does not mean that the above-mentioned children had neurological, cardiological or ophthalmological problems, but neonatologists ordered a specialist control, because of the increased risk of developmental disorders in the patients they treated. The presented data correlate with the results of the study conducted at the Medical University of Warsaw concerning the quality of care for preterm babies with extremely low birth weight (less than 1000 g), which shows that e.g. 74% of children discharged from the neonatal unit remain under the care of a neurologist, while only 9% undergo speech therapy.[23]

Almost all parents (96%), n = 179, declared that they did not have knowledge about the need to provide their children with speech therapy treatment at the initial stage of life (in infancy and toddler period). They did not obtain it neither from doctors nor nurses from neonatal units. Since in the discharge recommendations there was no note about the need for speech therapy treatment, they decided that it was not advisable. The method of monitoring the development of speech in children, after leaving the hospital, was

[23] A. Góralska, M.K. Borszewska-Karnacka, *Ocena jakości opieki nad noworodkiem urodzonym z masą ciała* < *1000 g po wypisie z oddziału neonatologicznego*. "Family Medicine & Primary Care Review" 2009, vol. 11, no. 4, pp. 861–868.

also assessed as insufficient/unsatisfactory. Often (in the later period of the child's life) they sought "on their own account"[24] the help of a speech therapist, using the experience of other parents.

As for the age of children at which the first speech therapy assessment (first speech therapy consultation) took place, in 11 cases (5.8%) it was up to 12 months of age, in 26 cases (13.9%) between 13–24 months of age, in 53 cases (28.3%) between 25–36 months of age, in 47 cases (25.1%) between 37–48 months of age, in 35 cases (18.7%) over 48 months of age. In 15 cases (8.2%), the parents stated that the children were not subjected to speech therapy assessment or that it was difficult for them to answer the question, because they might have taken place in kindergarten and they had not been informed about their results. The above-mentioned data is presented in Figure 1.

90 children, which constitutes 48% of the participants, were covered by the speech therapy diagnosis up to the age of 3, which can

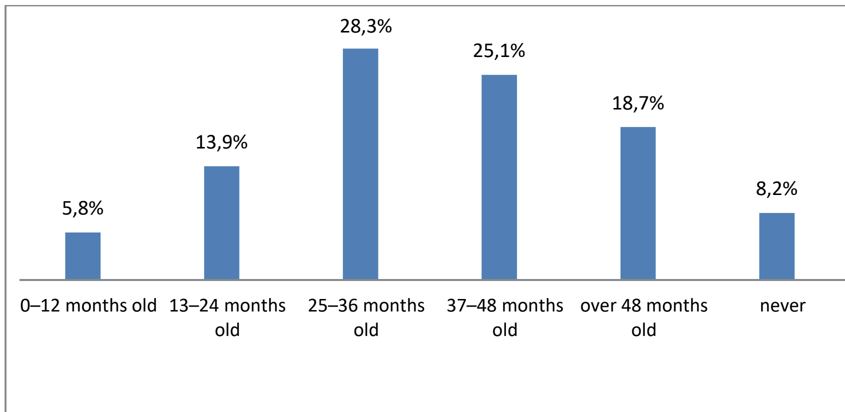



**Fig. 1.** Division of children into groups according to the age at which the first speech therapy assessment took place

Source: own work

[24] Term used by the interviewed parents.

be considered to be within the framework of early intervention. Provided the fact that 79% of children (n = 148) were diagnosed with various types of speech development disorders (e.g. SD[25] associated with: psychomotor retardation/ intellectual disability, hearing loss, dysarthria, aphasia-type speech disorder, specific language impairment – SLI, autism, as well as spontaneous speech delay – SSD, and dyslalias of peripheral origin) this situation should be alarming.[26] Since the risk factors for speech development disorders had been identified as early as in neonatal units, actions should be taken immediately after the diagnosis/registration of alarming symptoms – this is one of the main principles of early speech therapy intervention.

The age at which children were subjected to a speech therapy assessment largely depended on the type of facility they were referred to after the discharge (who and where looked after their general health and psychomotor development). Children who are under the care of various types of foundations, associations and ECDS (early childhood development support) centres were provided with the help of a speech therapist in the easiest and fastest way.[27] Out of 90 children diagnosed by a speech therapist up to the age of 3, as many as 69% (n = 62) were helped in the above-mentioned facilities. It was much more difficult for parents who used the services of a paediatrician as part of Primary Health Care or a neonatal hospital out-patient clinic (neonatal pathology clinic). Eleven children (12%) were referred to a speech therapist by a paediatrician at the request of their parents, concerned about the insufficient speech development of their children.[28] In the case of seven children (8%), a referral

---

[25] Speech delay

[26] The analysis of the language skills of all tested children and those undergoing a speech therapy diagnosis will be discussed in a separate study.

[27] Most often, parents of children with low birth weight presented to this type of facilities on the basis of information obtained from other parents (reading internet forums) and looking for facilities providing multi-specialist services.

[28] The parents were worried that their 2 or 2,5-year-old child did not say any words.

to a speech therapist was issued by a physician from a neonatal/neonatal pathology clinic, while in three children it was the initiative of a physician, and in the case of the remaining four children of their parents (information about the need for a speech therapy consultation was provided by the rehabilitator).

In the case of children who were consulted by a speech therapist after the age of 3 years (n = 82), the need for diagnosis and speech therapy was noticed by the parents (in 39 cases), followed by psychologists and rehabilitation specialists (in 15 cases) kindergarten teachers (in 12 cases), medical specialists – most often neurologists (in 11 cases), paediatricians (in 5 cases). In total, parents of 104 children (who had undergone speech therapy assessment before the age of 3 years or after the age of 3 years) sought help on their own initiative, which constitutes 56% of the respondents.

## Conclusions from the study

The results of the conducted study indicate that the activities in the field of secondary speech prophylaxis aimed at children with low birth weight should be considered highly unsatisfactory. Only 3% of the infants from the risk group underwent screening tests in neonatal units. The method of monitoring the speech development of children with low birth weight, also after discharge from the hospital, may raise many concerns. In the discharge recommendations for 95% of children there is no information about the need for a speech therapy consultation. Parents did not obtain information from neonatologists about the reasonableness and possibilities of providing a child with speech therapy treatment. The method of informing about the need to control the speech development of children with low birth weight by Primary Health Care paediatricians is unsatisfactory. Therefore, the opinion that "(…) there is a need for better organisation and care for children born prematurely[29] dis-

[29] These words apply to all low birth weight babies – preterm babies as well as babies with IUGR.

charged from neonatal intensive care units, as well as for assistance, especially in the area of access to information for parents"[30] is still valid.

Post-discharge care for a child with a low birth weight (in infancy) is of a primarily medical nature – children remain under the supervision of numerous specialist physicians, but a speech therapy consultation up to 12 months of age is rare. It covered only 6% of the participants, and other risk factors for speech disorders (apart from low birth weight) were noted in 71% of children as early as during their stay in the neonatal unit.

The study confirms that children with low birth weight are at risk of developing speech disorders. Various types of language communication disorders occurred in 79% of the participants, therefore it is necessary to monitor the speech development of children with birth weight below 2,500 g. There is a discrepancy between the postulates concerning early speech therapy intervention (in line with the principles of secondary prophylaxis) and the practice of everyday life. Almost 44% of the study children were not consulted by a speech therapist until they were 3 years old.

It is difficult to talk about systemic solutions in monitoring the speech development of children with low birth weight, since in 56%, the initiators of consultations by a speech therapist were the parents of the study children. Neonatologists and pediatricians who look after all newborn children have an important role to play. The idea of early monitoring of speech development in children from risk groups is not common among medical staff. Therefore, activities in the field of primary (1st degree) prophylaxis, promoting among doctors the basics of knowledge about the early determinants of speech development, should also be developed. In this context, it is necessary to emphasise the significance of real, and not only the declared cooperation between specialists taking care of children at risk, the importance of teamwork and an appropriate

[30] M.K. Borszewska-Kornacka, *Kompendium wiedzy o wcześniaku*. "Standardy Medyczne/Pediatria" 2013, vol. 10, p. 607.

flow of information between team members, which would obviously translate into real help for patients.

Therefore, it seems justified to introduce speech therapy assessment in the shape of a child health check-up. The introduction of general and free speech therapy assessment for children with low birth weight at the time of neonatal unit discharge, and then at the age of 1, 2, and 3 would be the implementation of the principles of secondary speech therapy.

## References

Bhutta A.T., Cleves M.A., Casey P.H., Cradock M.M., Anand K.J., *Cognitive and behavioral outcomes of school-aged children who were born preterm: a meta-analysis*. "The Journal of the American Medical Association" *2002*, no. 288, pp. 728–737.

Borszewska-Kornacka M.K., *Kompendium wiedzy o wcześniaku*. "Standardy Medyczne/Pediatria" 2013, vol. 10, pp. 597–611.

Chatelain P., *Children born with intra-uterine growth retardation (iugr) or small for gestational age (sga): long term growth and metabolic consequences*. "Endocrine Regulations" 2000, no. 33, pp. 33–36.

Cherkes-Julkowski M., *Learning disability, attention deficit disorder and language impairment as outcomes of prematurity: a longitudinal descriptive study*. "Journal of Learning Disabilities" 1998, no. 31, pp. 294–306.

Fedorowska W., Wardowska B., *Wywiad biologiczno-środowiskowy do wykrywania wczesnych uwarunkowań rozwoju mowy*. Gdańsk 1992.

Gacka E., *Czynniki ryzyka wystąpienia nieprawidłowości w kształtowaniu się mowy u dzieci urodzonych przed terminem (wcześniaków) w świetle założeń profilaktyki logopedycznej,* [in:] *Współczesne tendencje w diagnozie i terapii logopedycznej*, ed. Pluta-Wojciechowska D., Sambor B., Harmonia Universalis, Gdańsk 2017, pp. 191–202.

Gadzinowski J., Kęsiak M., *Definicja, terminologia, zasady organizacji opieki nad noworodkiem,* [in:] *Neonatologia*, ed. Szczapa J., Wydawnictwo Lekarskie PZWL, Warsaw 2015, pp. 1–22.

Gosch A., Brambring M., Gennat H., Rohlmann A., *Longitudinal study of neuropsychological outcome in blind extremely-low-birth weight children.* "Developmental Medicine and Child Neurology" *1997*, no. 39, pp. 297–304.

Góralska A., Borszewska-Karnacka M.K., *Ocena jakości opieki nad noworodkiem urodzonym z masą ciała<1000 g po wypisie z oddziału neonatologicznego*. "Family Medicine & Primary Care Review" 2009, vol. 11, no. 4, pp. 861–868.

Jadczak-Szumiło T., *Rozwój mowy dzieci z FASD*, [in:] *Wczesna interwencja logopedyczna*, ed. Kaczorowska-Bray K., Milewski S., Harmonia Universlis, Gdańsk 2016, pp. 180–210.

Kmita G., *Rozwój psychiczny dzieci urodzonych przedwcześnie*, [in:] *Noworodek przedwcześnie urodzony – pierwsze lata życia, ed*. Kornacka M.W. Wydawnictwo Lekarskie PZWL, Warsaw 2003, pp. 55-67.

Kornacka M.K., Bokiniec R., *Noworodek z małą urodzeniowa masą ciała*, [in:] *Neonatologia*, ed. Szczapa J. Wydawnictwo Lekarskie PZWL, Warsaw 2015, pp. 79–102.

Lechta V., *Podstawy teoretyczne logopedii,* [in:] *Wprowadzenie do logopedii*, ed. Gunia G., Lechta V., Oficyna Wydawnicza "Impuls", Cracow 2011, pp. 15–32.

Linnet K.M., Wisborg K., Agerbo E., Secher N.J., Thomsen P.H., Henriksen T.B., *Gestational age, birth weight and the risk of hyperkinetic disorder*. "Archives of Disease in Childhood" 2006, no. 91, pp. 655–660.

May P.A., Baete A., Russo J., et al., *Prevalence and Characteristics of Fetal Alcohol Spectrum Disorders* "Pediatrics" 2014, Nov. 134(5), pp. 855–866.

Michałowicz R., Ślenzak J., *Choroby układu nerwowego dzieci i młodzieży*. PWN. Warsaw 1985.

Pluta-Wojciechowska D., Mowa dzieci z rozszczepem wargi i podniebienia. Wydawnictwo Naukowe Uniwersytetu Pedagogicznego w Krakowie, Cracow 2011.

Ribeiro L.A., Zachrisson H.D., Schjolberg S., Aase H., Rohrer-Baumgartner N., Magnus P., *Attention problems and language development in preterm low-birth-weight children: cross-lagged relations from 18 to 36 months.* "BMC Pediatrics" 2011, no. 11, pp. 59–78.

Simić Klarić A., Kolundžić Z., Galić S. Mejaški Bošnjak V., *Language development in preschool children born after asymmetrical intrauterine growth retardation*. "European Journal of Paediatric Neurology" 2012, no. 16(2), pp. 132–137.

Skorek E.M., *Profilaktyka logopedyczna-poziomy i strategie,* [in:] *Wielowymiarowość przestrzeni profilaktyki logopedycznej,* ed. Skorek E.M., University of Zielona Góra, Zielona Góra 2017, pp. 51-92.

Stewart A., Kirkbride V., *Very preterm infants at fourteen years: relationship with neonatal ultrasound brain scans and neurodevelopmental status at one year*. "Acta Paediatrica" 1996, 416, pp. 44–47.

Tommiska V., Heinonen K., Kero P., Pokela M.L., Tammela O., Järvenpää A.L., Salokorpi T., Virtanen M., Fellman V., *A national two year follow up study of extremely low birthweight infants born in 1996–1997*. "Archives of Disease in Childhood – Fetal and Neonatal Edition" 2003, no. 88, pp. 29–35.

Świetliński J., *Opieka nad zdrowym noworodkiem*, [in:] *Neonatologia i opieka nad noworodkiem,* ed. Świetliński J., vol. 1, Wydawnictwo Lekarskie PZWL, Warsaw 2016, pp. 85–136.

Węsierska K., *Profilaktyka logopedyczna w ujęciu systemowym*, [in:] *Profilaktyka logopedyczna w praktyce edukacyjnej*, ed. Węsierska K., vol. 1, Wydawnictwo Uniwersytetu Śląskiego, Katowice 2012, pp. 25–47.

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

DOROTA PODGÓRSKA-JACHNIK

University of Łódź, Poland

# Selective mutism and shyness. Differential diagnosis and strategies supporting child development

**ABSTRACT**: Dorota Podgórska-Jachnik, *Selective mutism and shyness. Differential diagnosis and strategies supporting child development*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 125–149. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.07

The article deals with the problem of differential diagnosis of extreme reticence or selective speech in a child, categorised as **selective mutism** and **shyness.** Selective mutism is an increasingly recognized disorder among preschool and school children. It manifests itself functionally in the sphere of speech and communication, but in relation to the anxiety factor. As an anxiety disorder, it is categorised in the latest medical classifications ICD-11 and DSM-5, and therefore, primarily psychological or psychiatric therapeutic intervention could be expected. The specificity of the pathomechanism of selective mutism, however, requires interdisciplinary activities, with a room for a speech therapist, a special pedagogue (e.g. at a public school as a supporting teacher), any other pedagogue working with the child (educator, teacher of integrated classes, subject teacher), other specialists (therapist pedagogue, physiotherapist), as well as the parents. The speech therapist may play a special role in the diagnosis of mutism in the conditions of inclusive education, as he will probably be the first specialist who will receive a child who is not speaking or very taciturn at a public school. In the article, the diagnosis of selective mutism is associated with the differential diagnosis of shyness, which may not be treated as a disorder, but only a certain personality trait, but with incompetent pedagogical support in everyday educational practice it can lead to more serious difficulties, including logophobia and mutism. The diagnosis of mutism requires specialised therapeutic

measures, but with the awareness of the differences in the situations of a shy child and a child with mutism, it is worth learning some supportive strategies that are useful in both cases.

**KEY WORDS:** selective mutism, shyness, diagnosis, development support, education support

## Introduction

In education practice, mainly at preschools and primary schools, one can see the problem of non-speaking or extremely taciturn children ever more frequently. The scale of this problem is, on the one hand, an obvious consequence of the concept of inclusive education in the system, thanks to which many disabled children and those with special education needs, caused by other factors, undertake education in public schools. Most disabled children and many with other development disorders experience diverse kinds of communication difficulties, noticed and solved by special educators, however, they may constitute a significant barrier in the education process for teachers not specifically prepared, and constitute a significant challenge in terms of efficient paedagogical and therapeutic support. The issue is not just limited to the question of how to communicate with a child who does not speak (depending on the cause and mechanism, these may be quite different compensation strategies), but in general – how to recognise the core of the child's difficulties, including, how to differentiate between the different possible disorders so as to pick the right form of support, and – very importantly – how not to cause them to deepen through own errors. One of the reasons of being silent – despite the retention of the capacity to communicate by speech – is selective mutism. Teachers, particularly preschool and early education teachers, meeting such cases frequently exhibit helplessness[1], as they see a communication

[1] This knowledge stems from the author's experience as teacher-consultant for special education needs at the voivodeship teacher development centre in Zgierz,

barrier on the one hand, on the other noticing the education potential in these children that is difficult to develop. A frequent reaction is also failure to believe in the long-term persistence and consequence of the child in their silence, and explaining this behaviour by shyness. And mutism is related to shyness somewhat, however, should not be mistaken for it, the more so that shyness is not a disorder. In both cases, however, the pupil might need certain forms of aid. This is why the differentiation between these two categories and possible support strategies form the subject of this article.

## The reticent and the non-speaking child

In teacher observations, both mutism and shyness will shine through e.g. in reticence, sometimes bordering on not speaking, and sometimes – as in case of mutism – the teacher may not even see a speaking child (the child may perhaps be speaking to one teacher, but not to others). Children – as well as adults – differ in terms of speaking activity, sometimes intensely. Moreover, reticence must not always be assessed as being negative, even though our culture most commonly expects participation in social situations through discussions and expression. For adults, the "talkativeness" of preschoolers is usually an expected indicator of correct cognitive development, the more so that they first bind this activity to so-called external speech, which, while in fact fulfilling a different developmental role, is for the beholder a form of externalisation of what the child thinks, how they perceive the world and own activity. A similar role is played by the experience of endless questions of preschoolers, typical for the age. An indicator of correct development is also using speech in social interactions. Hence, a child's reticence may disconcert their parents, who see more negative effects of this situation than positive ones. The latter are basically limited to the

Poland, where she, among others, conducted method workshops on work with children with selective mutism for five years.

fact that a child speaking little seems to be good, polite, non-competitive, not causing trouble (Chmyłko-Terlikowska, 2018). Negative effects may include: lack of joy from contact with children and adults, limited emotional experiences, limited experiences in playing together with peers – risk of disturbances in socialisation, limited development of social skills, limited activity, in particular social activity, lack of friends, loneliness, lower independence, barriers against participation in education situations at preschool and at school, and in the end, risk of reduction of education opportunities.

Research by Mary A. Evans showed that records of a series of 15 classes with seven reticent children and seven not exhibiting these limitations indicated that reticent children not only spoke more less frequently, but also used less complicated speech than their peers, used limited code (most commonly referring to the "here and now"), their statements were shorter and less diverse topically. Differing from their peers, they did not treat questions as invitations to broaden the subject. The author concluded based on observations that both disconcert as well as subtle linguistic setbacks may contribute to worse discourse competences, as exhibited by reticent children (Evans, 1987). The research is quite dated, hence, it is unknown, to what extent they consider the causes of reticence of the individual children, including their tendencies of mutism.

At times, due to limitations in verbal expression, but also prompting signals of expectation of greater activity by the environment, a child may show signs of frustration or even nervous disorders (Warchał and Warchał, 2012), e.g. in the form of body tension, rigidity, physical blockages, signs of motor anxiety, lack of natural freedom, etc., negative emotions, such as anxiety, shame, sense of threat, sadness, limited non-verbal communication, limited facial expression and avoidance of eye contact, limited emotional expression (excess control and restraint in laughter or crying reactions), with even certain physiological symptoms related to the somatisation of difficulties and anxieties (e.g. as digestive disorders – stomach pains, failure to defecate – constipation, unwillingness to relieve oneself at an unknown place). This does not mean, however, that

this applies to any reticent child – these are not characteristic of such children. These are rather issues that must be considered as potential ones. Among factors coexisting with low speaking activity (including silence) as well as other behaviour described as reticent[2], passive or solitary-passive, the following can be named

- anxiety, social anxiety, negative social experiences (including past trauma) (Chen et al., 2006);
- low self-esteem, low confidence, low sovereignty, dependence on others (Chen et al., 2006);
- perfectionism (Hewitt et al., 2011, Ołdakowska-Żyłka and Grąbczewska-Różycka, 2017, Ołdakowska-Żyłka, 2017);
- particular emotional needs developed under the influence of anxiety, and learned modes of their satisfaction (achievement of the feeling of safety or attracting attention of the environment through silence); inattentive or overly attentive (overbearing) environment (conf. Miernik-Jaeschke, Namysłowska, 2016).

Even a short analysis of these factors indicates deep social conditions for the tendency to reticence, even if this is ultimately conditions on the interaction of external factors and the child's internal dispositions. Many cases of mutism also show the fundamental role of insufficiencies or grave irregularities in the social environment of the child in the etiology (WHO, 2008, acc. to: Grąbczewska-Różycka, 2017), even though genetic preconditions tend to be ever more commonly indicated (Grąbczewska-Różycka, 2017).

## Selective mutism – disorder definition and classification

The prevalence of selective mutism is not unequivocally determined, however, estimates point to a gradual increase of its prevalence (Johnson and Witgens, 2018). The sources from the years 1996–2001 quoted by Urbaniak (2008) show that epidemiological

[2] The adjective "reticent" means speaking little, unwilling to talk, be quiet, not eager to talk about things/ others, shy but also terse, withdrawn or discrete.

factors of mutism lie between 0.2% to 0.1%. Later studies show differentiation of prevalence: the population of children and adults shows a factor of ca. 0.02%, but the population of children being treated psychiatrically – 0.2% (Namysłowska, 2012). Selective mutism is more frequent in younger children – ca. 0.7% (one child per 140 aged up to eight years) than in older ones – ca. 0.18% (one child in 550), even if Johnson and Witgens (2018) estimate that this still indicates high probability of emergence of at least one pupil with mutism in every primarily school and in the majority of secondary (above-primary) schools.

On the functional level, mutism may be treated as extreme reticence (even though people with this disorder can talk quite a lot in an environment they accept, most commonly home). Selective mutism is a disorder entailing blockage of verbal communication, with the adjective "selective" completing the term indicates that it only shines through in certain situations (Bystrzanowska, 2018; Johnson and Wintgens, 2018; Urbaniak, 2018 et al.) – most commonly at preschool or school, but it may also show only in certain (pre)school situations or only with respect to certain persons (even though one may rather say that [a child] would only exhibit the will to communicate verbally with certain people).

In terms of the ICD-10 classification of diseases, selective mutism is included in social functioning disorders, beginning most commonly in childhood or during youth. This indicates agreement on the lesser role of constitutive factors, including organic damage, and a more important role of acquired experiences. The diagnostic criteria of selective mutism (F 94.0) cover per the ICD-10 (2008):

- speech expression and comprehension by the child reduced to within twice the standard deviation;
- documentable inability to speak in certain situations, in which it is expected of the child, despite speaking in other situations.

The disorder is not explained by the lack of knowledge of spoken language required in social situations, in which the inability to speak emerges, with the persistence time of silence exceeding four weeks (ICD-10, 2008). According to ICD-11 as well as DSM – this is

at least a month, whereby it must be noted that the assessment of the child's behaviour should not be limited to their first month at school. This is an adaptation period, and one must account for withdrawn behaviour in children, even high reticence, while not describing these as disorders outright. The persistence time of selective mutism as a disorder is counted in months, however, these may be years. ICD-11 (2020) additionally indicates the significance of its effects: the diagnosis of mutism should be made if it significantly impacts educational achievements or social communication.

Selective mutism is excluded in the ICD as a speech expression disorder – it is hence not developmental dysphasia or expressive aphasia – and speech comprehension disorders – it is not the result of innate hearing perception disorders. ICD-11 also stresses that the disorder may not be diagnosed in case of a speech impediment conditioned upon bilingualism, when a different language is spoken at school than at home (ICD-11, 2020).

It is worth noting that treating selective mutism as a social functioning disorder is not the only possible approach to this problem.

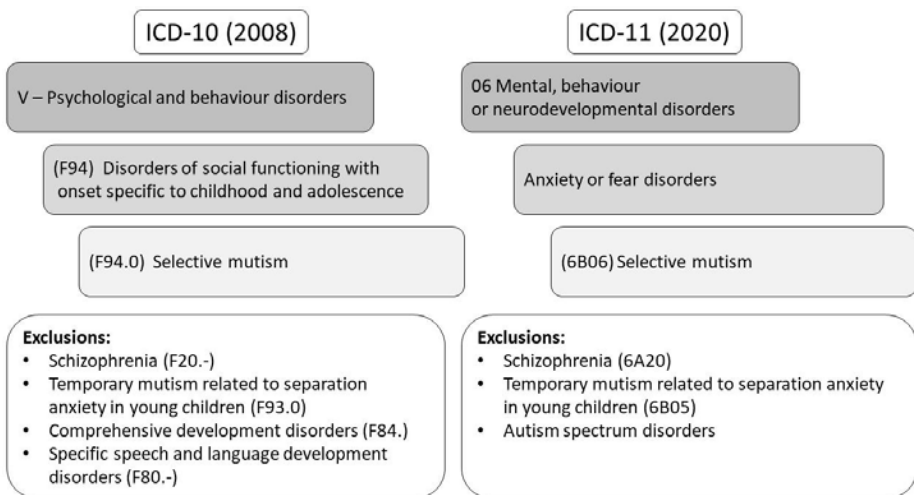



**Fig. 1.** Changes in the placement of selective mutism among other disorders in ICD-10 and ICD-11 (source: own work, based on ICD-10, 2008 and ICD-11, 2020)

In fact, despite mutism not being treated as a speech disorder, it is a disorder in communication; and the most recent etiology-based views clearly place it among anxiety-related disorders (ICD-11). This is a significant change compared to ICD-10 (fig. 1).

The latest DSM-5 classification similarly includes selective mutism among anxiety disorders. It is worth noting that changes in ICD-11 and DSM-5 are related to the trend towards classification simplification, but also stem from the inclusion of new knowledge about the underlying disorders, primarily in terms of etiology and mechanisms. Hence, the latest placement of mutism is based primarily on anxiety as the key causal and solidifying factor for the social reaction of silence.

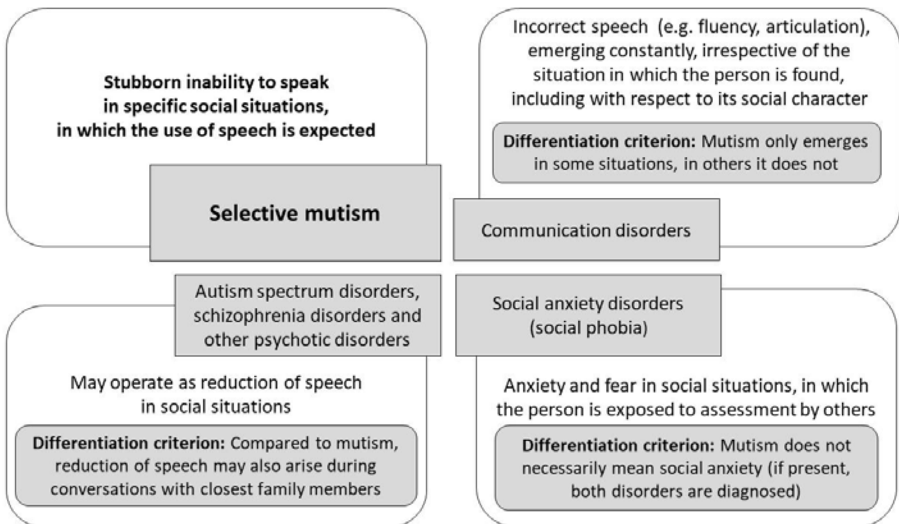



**Fig. 2.** Differential diagnosis of selective mutism per DSM-5 criteria (source: own work, based on First, 2016, p. 213)

On the basis of DSM-5 diagnostic criteria, the basics of the differential diagnosis, covering other disorders with symptoms most similar to selective mutism, were developed. Selective mutism per

DSM-5 is differentiated from communication disorders (disorders in terms of speech and its usage), the jointly listed autism spectrum disorders, schizophrenia and other psychotic disorders, as well as social anxiety disorders, also called social phobia (fig. 2). The differentiation between these disorders is very subtle, and the diagnosis is difficult. Moreover, diagnoses must not necessarily always be disjointed, as e.g. social anxiety disorders may accompany selective mutism, and because anxiety itself is the main factor in the etiology of mutism, this means that beside social anxiety, it may also be caused by other types of anxieties.

## Mutism and shyness

Shyness is considered to be not only a main factor in communication difficulty, but as a certain biological, temperamental predisposition for mutism. Beside shyness, these can also be: bashfulness, social withdrawal, worries or negativism (Steinhausen and Juzi, 1996; Stein, Rapin and Yapko, 2001). Steinhausen and Juzi (1996, acc. to: Kearney, Vecchio, 2006) link mutism in their work to general shyness, in particular also with social anxiety, even though it might also be accompanied by opposing behaviour (Paez and Hirsch, 1998, acc. to: Kearney, Vecchio, 2006). In general, these conditions are quite complicated, as beside temperamental components – predispositions towards mutism – certain social behaviour patterns may also be found in the child's family, and related to the already mentioned anxiety disorders (social withdrawal of the parents or other close family members, their intense worrying, phobias and social phobias, anxiety behaviour, difficulties related to separation anxiety), reinforcing the child's biological predispositions. A third component are evocative situations related to changes in the environment that are significant and emotionally important to the child, acting as stressors (fig. 3). For this reason, mutism is frequently observed in reaction to changes in the environment, a relocation, a new school or preschool, but also arguments in the family or divorce,

emergence of siblings, illness or death in the family, etc. (Urbaniak, 2008). It is believed that for all these conditions, the core of mutism is a neurotic reaction to social factors – the presence of other people and interaction pressure.

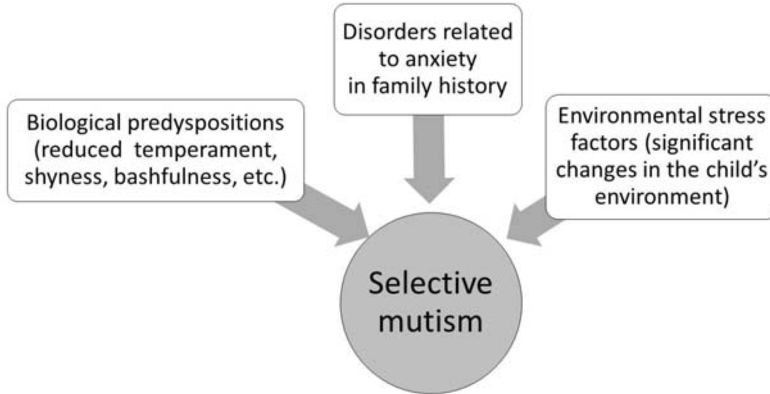



**Fig. 3.** Conditions for selective mutism and its relations to shyness (source: own work, based on Stein, Rapin and Yapko, 2001, p. 927; Urbaniak, 2008, p. 457)

To achieve an even fuller image considering diverse interpretations of the psychological causes of autism, fig. 4 presents etiological factors. The analysis by Janowska indicates that the main psychological causes of mutism may be interpreted within the context of a few theories, as should be considered in different therapeutic concepts for this disorder. In systemic theory, primarily the (overly) high dependence of the child on the parents is worth noting, as being due to their excess control. In behavioural theory, attention is drawn to limiting influence by situations new and atypical to the child in terms of the sympathetic nervous system, responsible for the body's mobilisation. Speech blocks are a certain form of self-conrol in the face of actual or anticipated anxiety. In the integrated development theory, there emerges a more complex solidification of the pattern of unconscious avoidance behaviour of parents as

related to language deficits. Shyness would in this case be a combination of biological and psychological factors. The third group of audiological and neurobiological causes is worth noting. Even though, as was already indicated on the basis of medical classification, the elimination of hearing damage is a criterion, however, certain disorders of auditory processing co-existent with language deficits may also play a certain role in the etiology of mutism (Janowska, 2018).

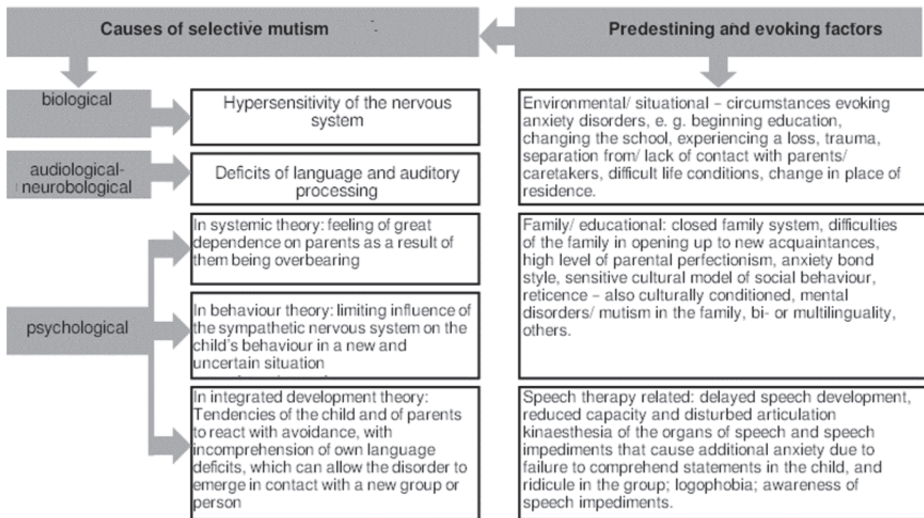



**Fig. 4.** Etiological factors of selective mutism (own work based on Janowska, 2018, pp. 49-50)

Interesting and extensive is also the classification of predestining and evocative factors as suggested by the author, covering a long list of environmental, educational and speech-related issues (Janowska, 2018). This opens up a path to thinking of areas of therapeutic support for a child with selective mutism using education therapy, sociotherapy, psychotherapy and, quite importantly, speech therapy. Considering the instrumental character of speech-related

competences, one might even indicate speech therapy to be key, in particular as it may and should also cover psychotherapeutic and educational activity.

Special therapy is treated as the required standard in the aid provided to the child with diagnosed selective mutism (without this help, the problems may only solidify), however, it is not necessary to subject every reticent and shy child to therapy. Despite the prevalence of similar symptoms, shyness is not a disorder. For this reason, it is not the subject of a clinical differential diagnosis, even though it should be differentiated from mutism. Despite it not being a disorder, however, it still is a behaviour issue in the child's upbringing, in particular in terms of its activity at a preschool or school. At times, a child's shyness – or even just seeming shyness – is more of a problem for parents, expecting the descendant to be incredible, than for the child themselves. Such a situation is also worth looking at, as excessive expectations of parents, out of line with the child's capacities, can be the cause of future problems with the child unable to cope with parental demands. It can also indicate preexisting problems along the line parents-child, tied to the lack of the acceptance of the latter. In most situations, however, it is not necessary to initiate therapy of a child exhibits shyness – perhaps with the exception of extreme shyness related to strong anxiety reactions disorganising their functioning. Shyness, however, may cause multiple psychological burdens related to discomfort and blocks in interpersonal relations. Beside the feeling of embarrassment, shame and fear – an emotional component similar to the one present in the etiology of mutism – the shy person also sees that their problems are visible to others. This reinforces the dislike for social exposure, hence, the vicious cycle of anxiety. Even if therapy is not required, shy children can be helped to develop their communication and social skills, to improve their self-esteem, and hence, they can be aided to develop satisfying social relations. The differentiation between mutism and shyness will be necessary in terms of the diagnosis of different education needs and the possibility of support for the child within a preschool or school facility.

Monika Andrzejewska collected apt and useful criteria to differentiate mutism and shyness for the educational practice. A list of these criteria is presented in the following diagram (fig. 5).

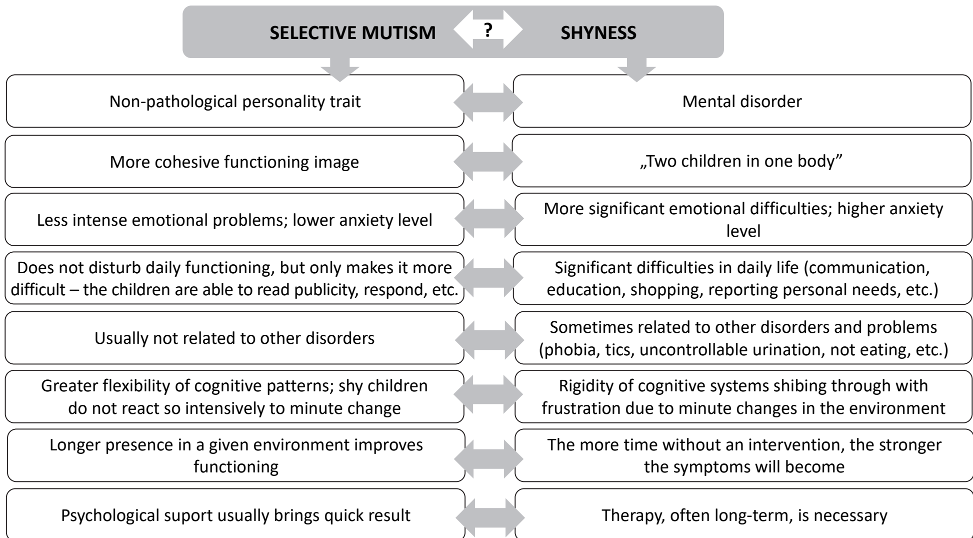



**Fig. 5.** Differences between selective mutism and shyness (source: own work based on Andrzejewska, 2013, p. 63)

## Educational and therapy procedure in selective mutism

Despite silence being the main symptom, therapies utilised in mutism are aimed at a different area than speech: Work with anxiety, sometimes with trauma, with the child's unfulfilled emotional needs. Relaxation techniques are applied, self-regulation is taught for emotionally burdening situations, as well as desensitisation of the child in social situations. Independence, self-esteem, self-confidence are developed and improved (Bystrzanowska, 2018; Chmyłko-Terlikowska 2018; Ołdakowska-Żyłka and Grąbczewska-Różycka, 2017; Urbaniak, 2008). The therapeutic process should include

the parents as well (Johnson, Wintgens, 2018): This applies to both education coaching and the relationship with the child.[1]

As part of the first meta-analsis of research results concerning the effects of evidence-based treatments, conducted in 2002, the usability of diverse forms of behaviour therapy – including neo-behaviour therapy, the social role of teaching as well as cognitive-behaviour therapy – was noted – however, with efficacy of mixed methods and other approaches not being excluded – grounds to assess them were missing (Stone et al., 2002). The 2016 meta-analysis found efficiency of psychosocial interventions related to gradual exposure to situations requiring verbal communication (Hua and Major, 2016). Reports are available of good results obtained through non-specific auxiliary therapies, e.g. kynotherapy/speech kynotherapy (Grochowska, 2016).

The strategy of work with a child with selective mutism, suggested by Maggie Johnson and Alison Wintgens – the authors of a uniquely thorough and practically very useful monograph called *Selective M*utism, with the well-deserved title: Resource Manual (The Polish translation was published in 2018) – fits in with the cognitive-behaviour-based exposure therapy. Assuming that the patient confrontation with the source of their anxiety should take the form of gradual flooding, this should occur through systematic desensitisation under graded exposure. A second simultaneous therapeutic process line is the shaping of the target behaviour pattern with gradual stimulus fading. The authors stress that „the method is very useful for working with mutism, because it is the stimulus, and not the behaviour of the individual, that is subject to gradual changes. They are encouraged to speak if the situation turns uncomfortable, and when they speak, a new person approaches and joins

[1] Bystrzanowska (2018) indicates an anxiety style bond with parents in children with mutism, and in the family – an anxiety-based and sensitive cultural model. However, the author believes that this does not give rise to looking for pathologies in the family. Parents frequently seek help, expect support to help their child. Educational and therapy support for parents stems both from their needs and from the logic of support for the child through support for family relations.

in" (Johnson, Wintgens, 2018, pp. 222–223). The authors have developed a range of special techniques and tactics useful for mutism therapy, suitable for the child's needs and forms of contact tolerated by them. This technique, called sliding in, remains in line with the presented exposure-based therapy; it allows gentle progress by small steps, from acceptable forms of social interaction (with a trusted person), to gradually ever broader relations and new situations, but also e.g. such tactics (informal strategies used in everyday work with the child) as using colleagues and parents as intermediates, the usage of questions, the five-second technique (waiting for a verbal or non-verbal reaction, without taking over speaking for the child)[2] or the triangle technique (initiating conversation e.g. with a peer, a newly-met child, in the presence of a partner or trusted caretaker). The entire book holds a plethora of hints that allow both for solutions to difficult emergency situations, but primarily for a long-term (mutism therapy regrettably requires time and patience) and comprehensively planned and implemented strategy to help the child, covering both therapeutic as well as education effort, with the help of a (here: speech) therapist, teachers and, naturally, parents. The therapy – in line with the presented assumptions – encompasses a plan to increase the difficulty level, covering social situations structured by closeness, number of witnesses, group size, place of interaction, but also the type of engagement in group work and the related form of communication (Johnson, Wintgens, 2018). There is no consent as to the use of alternative communication methods with children with selective mutism: most therapists believe that it should not be introduced, as this discourages the child from communicating verbally. Johnson and Wintgens do not take such a rigorous approach, as they believe that this should be dependent on the di-

[2] A short guide to this technique, developed on the basis of the approach of Johnson (as well as guides on other techniques) may be found at mutyzm.org.pl (in Polish): *Poradnik dla rodziców dziecka z mutyzmem wybiórczym (zasada 5 sekund),* http://www.mutyzm.org.pl/wp-content/uploads/wiedza/Poradnik-dla-rodzic%C3%B3w-dziecka-z-mutyzmem-wybi%C3%B3rczym-materia%C5%82y-szkoleniowe-MJ.pdf [access: 1.10.2020].

agnosed needs of the child. There are situations when stripping them of such a communication option means taking away their sole form of expression, hence, it could be likened to preventing the child from speaking. With certainty drawings, graphics, icons, certain components of non-verbal communication may form transitional communication aids, but it should be only temporary and limited in time. The majority of children rather do not need this. However, it is possible to use non-verbal support in the form of gestures or facial expressions.

One could also perhaps explain the presence of a speech therapist for therapy, since it was stated that mutism should not be treated as a speech disorder, but as an anxiety disorder. This is substantiated by any clear functional relationship between verbal communication and the emotional sphere in case of this disorder, and if its character would suggest the need of an interdisciplinary intervention, then the character of the disorder itself gives rise to the need for a discrete intervention, without the child being overborne by multiple therapists. In general, there are no contraindications for the head therapist to be a psychologist or therapeutic educator – they would naturally need to be materially prepared in terms of the specifics of therapy of a child with mutism – however, the speech therapy aspects indicated in the mutism etiology (Janowska, 2018; see also table four in this text), as well as auxiliary speech therapy techniques useful for the core therapy suggest a speech therapist for this role. The speech therapist works with the voice and articulation, develops verbal communication, simplifying the transition from non-verbal communication, working out the easiest techniques to initiate sound and speech emissions and effective fluent speaking techniques, they "acquaint" and "desensitise" the child to be able to receive their own voice (work with recordings, the camera, microphone, etc.), they support learning and reading, etc. (Johnson, Wintgens, 2018).

They thus improve the child's self-esteem, expanding their communication competences. Naturally, all components of therapy should work in concert, including teacher-parent cooperation.

Teachers implement the currently developed communication methods in school practice, without exerting pressure and not accelerating the course of therapy (hence the need for close cooperation), only using e.g. the auxiliary tactics described above. The parents also have a grand role to play in the reduction of anxieties, in improvement of self-esteem, the development of good relations and the creation of a safe space to practice the new communication skills, best intertwined with daily activities. Sadly, the research by Janowska (2018) shows that not all parents of children with selective mutism get any sort of indications from therapists. Those who have acquired them, listed the following recommendations:

- discussion of the child's problems when parents play with the child,
- no pressure on the child (concerning verbal communication),
- encouragement of parents to broaden knowledge on selective mutism,
- encouraging parents to act to improve the child's self-esteem,
- reading therapeutic stories,
- inviting peers to visit the child at home,
- keep a motivation table,
- contract further consultations, e.g. psychiatric ones,
- provide the child with a feeling of security,
- praise the child,
- reinforce the child in their right to make errors and mistakes in action (Janowska, 2018, p. 42).

## Supporting the shy child

As was already described, shyness is not a disorder, but a certain personality and behaviour trait, and, as such, is not valuated, even though some (e.g. Kozak, 2007) treat it as a form of interpersonal relation disorder. Shyness can be perceived positively, however in most cases it suggests persevering reductions of opportunities in diverse aspects of activity, and, as a result – reduction of life

opportunities, not only with respect to the school or professional career, but also in terms of opportunities to enter into intimate relations with others (Zimbardo, 2000). This is why shy children may require support, encouragement, motivation, but primarily acceptance of who they are. Literature contains little hints on working with shy children (Gładyszewska-Cylulko, 2007; Sosin, 2014; Zabłocka, 2008) or youths (Hamer, 2000), even though their behaviour sometimes remains akin to behaviour of children or youths with mutism. Even though the majority does not require therapy, and, moreover, many adults – even those well-known – openly confess that they "used to be shy children", certainly need support, and some hints may be used in this regard – some process tactics used in mutism therapy.

The fundamental, similar strategies of action both in shyness as well as mutism (even though mutism must include therapy), are:

- the child's development in various spheres, the development of interests and skills,
- development of the awareness of one's strengths,
- reduction of anxiety and development of self-confidence,
- not enforcing verbal communication of the child is clearly not ready for it – especially in a situation of social exposure and/or in new situations.

In one of few Polish publications on work with shy children (*nota bene* published on a website devoted to mutism, but under the banner of the Polish Mutism, Shyness and Anxiety Therapy Centre, further confirming the unity of these behaviour categories observed by practising therapists), Anna Resler confirms from the point of view of the practical therapist that shyness in children is a frequent cause of visits at psychological practices. With grand professional culture, the author replies: "*During initial visits, the psychologist handles "shyness shyly", meaning, as if they did not know it, slowly attempts to comprehend its significance for the child's functioning, speaks less, listens more, tries to see what it strips the child of, and what it provides the child with. Even if it is easy to respond to the question about losses (for parents), it is harder to think about the gains*" (Resler, 2013). I believe that this response is the

core of the diagnostic approach to all developmental difficulties of the child (I consciously refrain from using the term "disorders"), as the first duty of the diagnostic specialist is not only to "cover" the criteria check list of symptoms, but to look holistically at the child's situation, and search for an answer about the function of the disconcerting behaviour. Resler continues: "It is the task of the specialist to differentiate the issue, with which a client comes in, be it shyness or anxiety, shyness, depression, limited social skills or the experience of violence, or perhaps something else. The objective is to aid the child and its family irrespective of the name of the difficulties. At times, to name it and repeat it with the child present may in fact exacerbate the problem" (Resler, 2013). The author suggests the following educational strategies that should be implemented by the parents, best in cooperation with the child's teachers:

- self-esteem improvement – through common play, sport, praise, indication of strong suits; gradation of difficulties is significant in order to achieve cohesion between the child's efforts and the assessment of effects;
- awakening of interests and skills – leading to the evocation of cognitive curiosity, the feeling of competences, as a result – reduction of the feeling of anxiety;
- becoming aware of the prevalence of shyness among people and the possibility of overcoming it – organisation of support groups, sharing own experiences;
- free time management;
- modelling social behaviour – the parents can be an example of openness in social relations, initiative in getting to know new people, making day to day conversations with other random people (if the parents also find it difficult, it is easier to develop changes together);
- the parent as a model of expression and indication of emotions, confessing to such feelings as anxiety or anger, realistic expectations with respect to self, coping with errors and mistakes – these can also be the components of the common remodelling of the family communication style;

- discussing the problem without judging the child, consulting them, gentle encouragement to overcome shyness – the child should not receive any message that they are worse or not accepted due to the shyness (conf. Resler, 2013).

As shyness frequently accompanies mutism as well (Stone, 2002), and the behaviour functional profile is similar, worth considering are options of such educational direction of parents with selective mutism. Moreover, all these recommendations are useful in the education of any child, hence, no mistake can be made if parents are encouraged to such reflections and activities.

The above described materials for educational and therapeutic work with shy children can be useful in school work, especially amended by therapeutic literature, e.g. the book for younger children authored by Beth Bracken and Jennifer Bell *Too shy for show and tell* or the youth novel by Sarah Morant (2018) *Timide*. The issue of shyness sometimes finds its way to various forums and blogs that also might be used when working with shy people. Such an interesting place on the Polish internet is e.g. the forum niesmialosc.net (it is rather a place for adult users, although many entries may be useful for work with younger people), or the blog by Madame Polyglot. The latter's author, Sandra, describing herself as a teacher of German, Italian and English and trainer of teachers – writes: "*I'm certainly not having it easy going through life :) But I feel completely free in situations that would only terrify me twenty or even ten years ago.* (…) *This blog is mainly about language learning and I believe that in this regard, shyness also plays an important role*" (https://madamepolyglot.pl/niesmialosc/). These are just examples of sources of knowledge about what one can do with their shyness, to be used in therapeutic and educational work.

Completely different is the website entirely devoted to shyness and support work for shy people maintained by the United States-based psychotherapist Renée Gilbert, entitled "*Shake your shyness*". Beside psychological texts on shyness, the website contains interesting presentations on famous people, celebrities, describing their own experiences with shyness, life suggestions, hints for adults,

teachers, and many more materials as well as a multitude of useful links to other websites, articles, literature. To abridge information about this interesting website to the topic of the present paper, I shall only quote selected advice by Gilbert, worth using in the classroom, which are a good amendment of the tactics and hints of Johnson and Witgens (2018). The psychotherapist provides e.g. the following advice to teachers of shy children:

- Normalise shyness and present it in a positive light: compare shy children with other shy children that grew up to be famous adults: (*"I think you're going to be a great movie star, like Tom Hanks. He used to be really shy!"*); speak about great leaders, inventors, artists, politicians who confess to having been shy at some point in their lives (this is served by the Shy Celebrities area from the portal).
- Make regular contact with the child. Gilbert believe that shy children often fall into areas of inattention, and the farther they fall, the more difficult it is for them to comprehend attention if they are its objects. It is hence important to make regular yet natural contacts with shy children – every day, during every lesson – with a short comment, question or smile. The key is making contact in such a way so that it proceeds naturally: remain in contact and not distinguish the child (turn to the other children in a similar fashion).
- Provide shy children with tasks to perform so that they could gain motivation to work, contribute to the group and have a reason to interact – with peers. However, adapt the social interaction level of tasks to the tolerance level of the child, bringing the tasks in order according to increasing difficulty.
- Comment on their successes and show/present their work. This, however, requires a lot of tact, as the majority of shy children require attention yet are scared. Praise must be conveyed with care, e.g. as a *hit and run*: convey the praise and quickly move to another topic. It means that the pupils should not be provided with sufficient time to turn and notice the specific student. Avoid longer eye contact if this is not com-

fortable for the child (this does not mean, however, that such contact should not be sought at all) (Gilbert, 2011).

These are just some examples. Gilbert notes that teachers should also see a different problem: The necessity to notice bullying, which shy children are more susceptible than others. They are bullied more easily as the risk is greater that they will not allow themselves to complain to adults. Bullying in class is a difficult subject – the solution can be aided through rare books for children on the subject, e.g. *Dręczyciel w klasie* (*Bully in Class*, 2016), *Powiedz komuś* (*Tell Someone*, 2004) or *Dobre i złe sekrety* (*Good and Bad Secrets*, 2019) by Elżbieta Zubrzycka, as well as ROBUSD educational materials devoted to the problem of school violence within the context of special education needs (Pyżalski, Roland, 2010).

## Summary

Selective mutism is a disorder that is ever more frequently being diagnosed in children. It is characterised by shining through in speech and communication, but due to its causes and mechanism, it is treated as an anxiety disorder. On the observation level, a child with mutism is considered to be reticent or non-speaking, and the place where this most frequently manifests itself is the preschool or school. This may significantly reduce the child's education opportunities, with co-existing negative emotional components (anxiety) being a serious problem requiring therapeutic support but also suitable educational handling. On the clinical level, selective mutism is differentiated from other disorders: communication disorders, autism spectrum disorders, schizophrenia and other psychotic disorders, as well as social anxiety disorders (social phobia). On the level of educational practice, mutism must be differentiated from shyness, which cannot be treated as a disorder, but which also blocks social activity and activity related to learning. A shy child frequently requires support, and certainly – special attention by the teacher, in certain situations – therapy. The article indicated some opportu-

nities to help children with mutism and shy children. Therapy of children with mutism requires special knowledge on the procedure in case of this disorder, in case of shyness – most commonly empathic understanding of the behaviour and needs of the child by the educator is sufficient. Support work may utilise some techniques, strategies and tactics proven to be effective in work with children with mutism. On the educational support level, activity in both cases may be similar. Support for children with mutism requires most often, however, therapeutic intervention – one cannot hope for mutism to "go away by itself", as may be the case frequently, and as is the case often with shyness. With extremely intense shyness – this does not always come to pass without negative psychological effects. The basis for the proper choice of the personalised action strategy should be a thorough differential diagnosis.

## References


Andrzejewska M. (2013), *Jak pomóc dziecku lub uczniowi z mutyzmem selektywnym?* „TRENDY. Internetowe Czasopismo Edukacyjne" no. 4; pp. 62–65; [online], http://www.bc.ore.edu.pl/Content/579/T042013%2C+M.+Andrzejewska.pdf [access: 23.09.2020]

Bracken B., Bell J. (brw), *Tomek mały jest nieśmiały*. Wydawnictwo NATULI, Szczecin.

Bystrzanowska M. (2018), *Mutyzm wybiórczy. Poradnik dla rodziców, nauczycieli i specjalistów*. Oficyna Wydawnicza „Impus", Kraków.

Chen X., Chen H., Dan L., Li W., Zhengyan W. (2015), *Early Childhood Reticent and Solitary-Passive Behaviors and Adjustment Outcomes in Chinese Children*. „Journal of Abnormal Child Psychology" no. 43(8), pp. 1467–1473; DOI: 10.1007/s10802-015-0028-5.

Chen X., DeSouza A.T., Chen H. & Wang L. (2006), *Reticent behavior and experiences in peer interactions in Chinese and Canadian children*. "Developmental Psychology", 42(4), pp. 656–665; https://doi.org/10.1037/0012-1649.42.4.656.

Chmyłko-Terlikowska D. (2018), *Mutyzm wybiórczy u dzieci*, „Forum Logopedy" no. 24 (march), [online] https://forumlogopedy.pl/artykul/mutyzm-wybior czy-u-dzieci [access: 23.09.2020]

Evans M.A. (1987), *Discourse characteristics of reticent children*. "Applied Psycholinguistics", Volume 8, Issue 2, June, pp. 171–184.

Gilbert R. (2011), *Shyness in the Classroom. A Page For Educational Professionals.* https://www.shakeyourshyness.com/teachingshychildren.htm [access: 3.10.2020].

Gładyszewska-Cylulko J. (2007), *Wspomaganie rozwoju dzieci nieśmiałych poprzez wizualizację i inne techniki arteterapii*. Oficyna Wydawnicza "Impuls", Kraków.

Gładyszewska-Cylulko J. (2013), *Psychologiczne aspekty języka i mowy,* [in:] B. Winczura (ed.), *Dzieci o specjalnych potrzebach komunikacyjnych: diagnoza – edukacja – terapia*, Oficyna Wydawnicza "Impus", Kraków, pp. 17–34.

Grąbczewska-Różycka K. (2017), *Kryteria diagnostyczne mutyzmu wybiórczego pod lupą.* MutyzmPortal [online] http://mutyzmportal.pl/artykul/bledne-kololeku-w-mutyzmie-wybiorczym.htm [access: 23.09.2020].

Grochowska J. (2016), *Kynoterapia jako forma wspomagania rozwoju i komunikacji dziecka.* Niepublikowana praca magisterska. Zakład Pedagogiki Specjalnej i Logopedii, Uniwersytet Kazimierza Wielkiego w Bydgoszczy, Bydgoszcz.

Hamer H. (2000), *Oswoić nieśmiałość: scenariusze 22 lekcji wychowawczych w gimnazjum: 17 tematów*. Wydawnictwo Veda, Warszawa.

Hewitt P.L., Blasberg J.S., Flett G.L., Besser A., Sherry S.B., Caelian C., Papsdorf M., Cassels T.G., Birch S. (2011), *Perfectionistic Self-Presentation in Children and Adolescents: Development and Validation of the Perfectionistic Self-Presentation Scale – Junior Form*. "Psychological Assessment".

Hua A., Major N. (2016), *Selective mutism*. "Current opinion in pediatrics". 28(1), pp. 114–120.

*ICD-10.* International Statistical Classification of Diseases and Related Health Problems. Rev. X, Vol. 1, WHO 2008, Centrum Systemów Informacyjnych Ministerstwa Zdrowia, Warszawa 2018.

*ICD-11 for Mortality and Morbidity Statistics,* Verison: 9/2020 [online], https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/167946871.

Janowska P. (2018), *Wsparcie edukacyjne i specjalistyczne dla dzieci/uczniów z mutyzmem wybiórczym z perspektywy ich rodziców (na podstawie badań własnych).* „Edukacja" no. 4(147), pp. 33–45

Johnson M., Wintgens A. (2018), *Mutyzm wybiórczy. Kompendium wiedzy.* Transl. by A. Pałynyczko-Ćwiklińska, Wydawnictwo Harmonia Universalis, Gdańsk.

Kearney C.A., Vecchio J. (2006), *Functional analysis and treatment of selective mutism in children.* "The Journal of Speech and Language Pathology – Applied Behavior Analysis", 1(2), pp. 141–148.

Kozak S. (2007), *Patologie wśród dzieci i młodzieży: Leczenie i profilaktyka*. Wydawnictwo Difin, Warszawa.

Michael B., First M.D. (2016), *DSM-5. Diagnostyka różnicowa*. Ed. for the Polish edition: P. Gałecki, Wydawnictwo Edra Urban & Partner, Wrocław.

Miernik-Jaeschke M., Namysłowska I. (2016), *Zaburzenia lękowe u dzieci i młodzieży,* „Medycyna Praktyczna", 23th November, [online] https://www.mp.pl/pacjent/pediatria/choroby/psychiatria/81304,zaburzenia-lekowe-u-dzieci-i-mlodziezy [access: 23.09.2020].

Namysłowska I. (ed.) (2012), *Psychiatria dzieci i młodzieży*. Wydawnictwo Lekarskie PZWL, Warszawa.

Ołdakowska-Żyłka B. (2017), *Błędne koło lęku w mutyzmie wybiórczym*, MutyzmPortal [online] http://mutyzmportal.pl/artykul/bledne-kolo-leku-w-mutyzmie-wybiorczym.htm [access: 23.09.2020].

Ołdakowska-Żyłka B., Grąbczewska-Różycka K. (2017), *Mutyzm wybiórczy. Strategie pomocy dziecku i rodzinie*. Wydawnictwo Difin, Warszawa.

Podgórska-Jachnik D. (2019), *Wspomaganie uczniów z zaburzeniami mowy, języka i komunikacji w edukacji włączającej*. „Edukacja" no. 4(147), pp. 8–21.

*Poradnik dla rodziców dziecka z mutyzmem wybiórczym (zasada 5 sekund),* http://www.mutyzm.org.pl/wp-content/uploads/wiedza/Poradnik-dla-rodzic%C3%B3w-dziecka-z-mutyzmem-wybi%C3%B3rczym-materia%C5%82y-szkoleniowe-MJ.pdf [access: 1.10.2020].

Pyżalski J., Roland E. (ed.), Bullying a specjalne potrzeby edukacyjne – podręcznik metodyczny. WSP w Łodzi, Centrum Badan Behawioralnych Uniwersytetu w Stavanger, https://repozytorium.amu.edu.pl/bitstream/10593/5514/4/Bullying_a_specjalne_potrzeby%20edukacyjne.pdf [access: 4.10.2020].

Resler A. (2013), *Nieśmiałość dziecka*. Centrum Terapii Mutyzmu, Nieśmiałości i Lęku, https://mutyzm.pl/Artyku%C5%82y/Nie%C5%9Bmia%C5%82o%C5%9B%C4%87_dziecka [access: 1.10.2020].

Sosin I. (2014), *ADHD i nieśmiałość: ćwiczenia i karty pracy do zajęć korekcyjno-kompensacyjnych.* Wydawnictwo Dr Josef Raabe Spółka Wydawnicza, Warszawa.

Steinhausen H.C., Juzi C. (1996), *Elective mutism: An analysis of 100 case*s. "Journal of the American Academy of Child & Adolescent Psychiatry", no. 35, pp. 265–288.

Stone B., Kratochwill Th., Sladezcek I., Serlin R. (2002), *Treatment of selective mutism: A best-evidence synthesis*. „School Psychology Quarterly", 17, pp. 168–190.

Stowarzyszenie „Polskie Towarzystwo Mutyzmu Wybiórczego" (2018), *Terapia dziecka z mutyzmem wybiórczym*, [online] http://www.mutyzm.org.pl/terapia/ [access: 23.09.2020].

Urbaniak J. (2008), *Dziecko z mutyzmem wybiórczym,* [in:] B. Cytowska, B. Winczura, A. Stawarski (red.), *Dziecko chore, niepełnosprawne, z utrudnieniami w rozwoju*, Oficyna Wydawnicza „Impuls", Kraków, pp. 455–470.

Warchał A., Warchał M. (2012), *Współwystępowanie mutyzmu wybiorczego w zaburzeniach nerwicowych,* [in:] Skibska J., Larysz D. (ed.), *Neurologopedia w teorii i praktyce. Wybrane zagadnienia diagnozy i terapii dziecka*, Akademia Techniczno-Humanistyczna w Bielsku-Białej, Bielsko-Biała, pp. 97–106.

Zabłocka M. (2008), *Przezwyciężanie nieśmiałości u dzieci.* Wydawnictwo Scholar, Warszawa.

Zimbardo Ph. (2000), *Nieśmiałość? Co to jest? Jak sobie z nią radzić?* Warszawa, PWN.

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

JUSTYNA KOTOWICZ
KEN Pedagogical University of Krakow, Poland

# Reading skills of D/deaf students – native signers

**ABSTRACT**: Justyna Kotowicz, *Reading skills of D/deaf students – native signers*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 151–167. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.08

Reading skills of D/deaf students fall behind their hearing peers. The difference in reading skills between D/deaf and hearing children has not decreased for over past three decades. Low level of reading skills in D/deaf students has been associated with their language delay, which is mainly observed in D/deaf children using spoken language that is not fully accessible to "D/deaf individuals" instead of "ppl with hearing impairment". D/deaf children immersed in sign language since their birth usually do not encounter language problems and they have a potential to become highly-skilled readers. In the present studies we have investigated reading skills of D/deaf students who are native signers of Polish Sign Language. The results have indicated that D/deaf students showed lower level of reading skills than their hearing peers. The present studies call in question Polish education system dedicated to D/deaf students who are native signers. The obtained results suggest that reading classes are probably not adapted to the needs and abilities of highly competent signers.

**KEY WORDS:** D/deaf students, reading, Polish Sign Language

## Introduction

The existing studies indicate that D/deaf students[1] show lower level of reading skills than their hearing peers.[2] These results have been constant for many decades[3] and the improvement in this educational area has been one of the greatest challenges faced by "deaf education" instead of "deaf educators". Learning to read is a particularly demanding task for D/deaf students due to the fact that they do not have the same access to spoken language by hearing and speaking as their hearing peers.[4] D/deaf children (DC) many a time learn spoken and written language simultaneously and often they learn to read without good language skills and with limited ability of mapping between the language and the written words.[5] Meta-analysis of the currently available studies[6] indicates that language competences are of significant importance for reading abilities of D/deaf students,

---

[1] The paper uses D/deaf capitalization allowing for usage of both upper and lower case. The term "Deaf" (upper case) refers to linguo-cultural minority (cultural paradigm), whereas lower case letter refers to medical hearing loss perceived as deficiency (medical paradigm). It appears that the every? D/deaf persons should decide which term describes them and not the authors of scientific texts and papers. Thus, this paper uses capitalization which enables D/deaf persons to choose the preferred version and which shows the subject-approach to D/deaf persons.

[2] S.D. Antia, P.B. Jones, S. Reed, K.H. Kreimeyer, *Academic status and progress of deaf and hard-of-hearing students in general education classrooms*, "Journal of Deaf Studies and Deaf Education", 2009, 14(3), pp. 293–311; C.B. Traxler, C.B, *The Stanford Achievement Test, 9th Edition: National Norming and Performance Standards for Deaf and Hard-of-Hearing Students*, "Journal of Deaf Studies and Deaf Education", 2000, no. 5(4), pp. 337–348.

[3] S. Qi, R.E. Mitchell, *Large-scale academic achievement testing of deaf and hard-of-hearing students: Past, present, and future*, "Journal of Deaf Studies and Deaf Education", 2012, no. 17(1), pp. 1–18.

[4] J. Kotowicz, *Proces czytania głuchych*, „Rocznik Komisji Nauk Pedagogicznych", Oddział Kraków, 2013, no. LXVI, pp. 173–184.

[5] S. Goldin-Meadow, R.I. Mayberry, *How Do Profoundly Deaf Children Learn to Read?* "Learning Disabilities Research and Practice", 2001, no. 16(4), pp. 222–229.

[6] R.I. Mayberry, A.A. del Giudice, A. Lieberman, *Reading achievement in relation to phonological coding and awareness: a meta-analysis,* "Journal of Deaf Studies and Deaf Education", 2011, no. 16(2), pp. 164–188.

irrespective of whether they refer to oral or sign language. The obtained results may appear surprising as sign language is different from oral language and writing. However, it should be noted that sign language allows for linguistic, emotional, social and cognitive development of D/deaf people.[7,8] Sign language competences may constitute basis for reading skills of DC, which is confirmed by studies[9] according to which the higher level of sign language competences shown by D/deaf students the better results they exhibit for reading.

It needs to be stressed that foreign scholars have performed a detailed analysis of various levels of sign language (phonological, semantic and syntactic) that may be of significance for reading skills. It has been indicated that in DC using Swedish Sign Language (*Svenskt teckenspråk*) reading ability correlates with phonologic competencies in a sign language.[10] Moreover, Dutch studies have showed the relation between sign language vocabulary range and the level of reading skills in DC. American scholars have also observed that the knowledge of antonyms in American Sign Language, ASL, is a predictor of reading skills in D/deaf students.[11]

It appears crucial that the studies on correlation between sign language competences and reading skills do not concern only children but have significance in the in the lifespan of D/deaf individuals. The scholars noted that D/deaf adults show relation between the level of reading comprehension and the results of the *American*

---

[7] P. Rutkowski, P. Mostowski, *Polski język migowy narzędziem przeciwdziałania wykluczeniu*, „Trendy. Internetowe Czasopismo Edukacyjne", 2017, no. 1, pp. 18–22.

[8] J. Kotowicz, *Nabywanie języka migowego – dyskusja stanowisk*, "General and Professional Education", 2015, no. 1, pp. 26–36.

[9] M. Strong, P.M. Prinz, *A Study of the Relationship Between American Sign Language and English Literacy*. "Journal of Deaf Studies and Deaf Education", 1997, no. 2(1), pp. 37–46.

[10] E. Holmer, M. Heimann, M. Rudner, *Evidence of an association between sign language phonological awareness and word reading in deaf and hard-of-hearing children*. "Research in Developmental Disabilities", 2016, no. 8, pp. 145–159.

[11] R. Novogrodsky, C. Caldwell-Harris, S. Fish, R.J. Hoffmeister, *The Development of Antonym Knowledge in American Sign Language (ASL) and Its Relationship to Reading Comprehension in English*. "Language Learning", 2014, no. 64(4), pp. 749–770.

*Sign Language Sentence Reproduction Test*, ASL-SRT, which evaluates, among the others, grammar, phonological and lexical competences.[12] The same studies revealed that D/deaf adults of high sign language competences exhibited higher bilingual competences, including higher level of reading comprehension.[13] It has also been observed that D/deaf persons of higher level of reading skills exhibited higher sign language syntactic skills and narrative comprehension.[14]

In the light of the presented studies it appears significant to stress that only a small number of DC has access to sign language since their birth. Approximately 10% of DC are born to families where parents are also D/deaf and most often are signers.[15] The development of sign language in DC whose parents are deaf is similar to the development of spoken language that may be observed in hearing children (HC). DC who have D/deaf parents most often become native signers and do not show linguistic deficits that are often seen in DC brought up in hearing families.[16] DC who have D/deaf parents learn the world through a sign language, can develop their cognitive skills[17], and what is more, D/deaf persons who have D/deaf parents achieve better results in reading skills than the ones who have hearing parents.[18] DC brought up by hearing parents often have problems communicating with hearing members of the family.[19] Hearing par-

---

[12] B.L. Freel, M.D. Clark, M.L. Anderson, G.L. Gilbert, M.M. Musyoka, P.C. Hauser, *Deaf Individuals' Bilingual Abilities: American Sign Language Proficiency, Reading Skills, and Family Characteristics*. "Psychology", 2011, no. 02(01), pp. 18–23.

[13] Ibidem, pp. 18–23.

[14] C. Chamberlain, R.I. Mayberry, *American Sign Language syntactic and narrative comprehension in skilled and less skilled readers: Bilingual and bimodal evidence for the linguistic basis of reading*. "Applied Psycholinguistics", 2008, no. 29(3), pp. 367–388.

[15] R.E. Mitchell, M.A. Karchmer, *Chasing the Mythical Ten Percent: Parental Hearing Status of Deaf and Hard of Hearing Students in the United States*. "Sign Language Studies", 2014, no. 4(2), pp. 138–163.

[16] T. Humphries, P. Kushalnagar, G. Mathur, D.J. Napoli, C. Padden, C. Rathmann, *Ensuring language acquisition for deaf children: What linguists can do*. "Language", 2014, no. 90(2), pp. 31–35.

[17] Ibidem, pp. 31–52

[18] M. Strong, P.M. Prinz, 1997, op. cit., pp. 37–46.

[19] A. Czyż, K. Plutecka, *Zarys audiofonologii edukacyjnej*. Wydawnictwo Naukowe Uniwersytetu Pedagogicznego, Kraków 2018.

ents usually use a spoken language that may be not fully understood and incorrectly produced by DC. Additionally, limited communication may negatively affect cognitive development of DC, who do not have full access to linguistic information about the surrounding reality. As a result, DC brought up by hearing parents often have cognitive deficits and educational problems that to a lesser extent affect DC in D/deaf families.[20] It is worth stressing that the group of D/deaf students brought up by hearing parents constitute the vast majority of DC population.

DC who were provided with an early access to sign language show the potential to become good readers and go on to achieve at least the same level as their hearing peers. American study[21] has indicated that D/deaf adults with an early access to a sign language obtained similar reading comprehension results as hearing persons. It needs to be highlight that in this scientific project the level of reading comprehension in English was compared in four groups that included respectively: 1. D/deaf persons using sign language since their early years 2. D/deaf persons who have later access to language, whose parents were hearing and did not use sign language 3. bilingual hearing persons who had second language (English) classes at school 4. monolingual hearing persons (English speakers). The obtained results point to a series of similarities between D/deaf people who had early contact with a sign language and hearing bilinguals. In these both groups the subjects achieved higher levels of reading skills in English, similarly to monolingual persons. However, lower scores were found in D/deaf persons whose hearing parents did not know a sign language and who had delayed access to communication based on language.

All the above studies were undertaken by foreign scholars and concerned D/deaf persons from abroad. Despite the fact that this subject appears to be of crucial importance for D/deaf students and their

---

[20] S. Goldin-Meadow, R.I. Mayberry, 2001, op. cit., pp. 222–229.

[21] R.I. Mayberry, E. Lock, *Age constraints on first versus second language acquisition: Evidence for linguistic plasticity and epigenesis*. "Brain and Language", 2003, no. 87(3), pp. 369–384.

educational success, so far in Poland the level of reading skills of D/deaf students, native signers of Polish Sign Language (PJM), has not been assessed. In order to fill this gap the conduction of this study has been undertaken, whose nature is innovative due to PJM perceived as facilitator of reading comprehension in D/deaf students.

## Main research

The study compares the level of reading skills of two groups of children: DC, native signers of Polish Sign Language (polski język migowy, PJM) and HC. Also, it has been verified whether these children differ with regard to cognitive development. Cognitive characteristics have been selected that are crucial for the reading process[22]: level of non-verbal intelligence (logical reasoning) and working memory.

### Research question and research hypothesis

The study asked the following research question: Are the reading comprehension scores of D/deaf students, who are native signers, not different from the scores of hearing peers?

Considering the current studies concerning D/deaf persons using a sign language since early years[23] we have made the hypothesis that D/deaf students, native signers of PJM, achieve the same level of reading comprehension as their hearing peers.

## Participants

The study included the following groups: DC, native signers of PJM ($N = 20$), and HC ($N = 20$). Both groups of children were

---

[22] P. De Jonge, P.F. De Jong, *Working memory, intelligence and reading ability in children*, "Personality and Individual Differences", 1996, no. 21(6), pp. 1007–1020.

[23] Ibidem, pp. 369–384.

matched for sex (every group was as follows: boys = 4, girls = 16) and age.

**D/deaf children**. No child had co-existing disorders, disabilities or deficits other than hearing loss. All children attended special education schools for deaf and hard-of-hearing children. The age of DC was 6;1 to 12;11 (*M* = 9;11, *SD* = 1;11). The majority of children started their education at the age of 7 (*N* = 18) and only two children at the age of 6. The inclusion criteria were having at least one D/deaf parent and using PJM as the first language. The majority of DC had both D/deaf parents (*N* = 18). All children since birth were surrounded by manual communication and were recognized as native signers of PJM. The children had a hearing loss of: severe degree (*N* = 7, hearing loss of 75–90 dB) or profound degree (*N* = 18, hearing loss over 90 dB). As for aetiology of deafness in majority of cases it was genetic (*N* = 18), caused by an accident (*N* = 1) or unknown (*N* = 1). Hearing loss in all children occurred before 3 years of age (prelingual hearing loss).

**Hearing children**. No child had any disabilities or deficits reported by their parents/teachers. The age range of HC was 6;6 to 12;7 (*M* = 9;11, *SD* = 1;11). Two of the studied HC started their education at 6 whereas the majority (*N* = 18) started schooling at the age of 7. All children attended open access schools.

Both groups differed in social-economic status measured by the academic degree of their mothers ($\chi^2(1) = 20{,}417$, $p < .001$). The majority of DC's mothers had secondary education degrees (*N* = 19), whilst the majority of HC's mothers graduated from universities (*N* = 15).

## Tasks

### "Reading" test (Grzywak-Kaczyńska)

The "Reading" test written by M. Grzywak-Kaczyńska is designed to measure the level of reading comprehension. This is a quiet reading test which does not assess the techniques of reading. The test

was originally designated for HC attending 1–3 grades of a primary school. Due to multiple literature sources[24] indicating lower level of reading skills of DC than HC and to pilot surveys confirming this assumption it has been decided to use the "Reading" test to evaluate reading skills of DC attending 1–6 grades of a primary school. It consists of 3 practice items and 20 test items that were of similar testing structure. Each item contains one sentence or a short text and an attached drawing. Having read the sentence or the text a child is supposed to draw something on an attached picture or complete it appropriately. Every task includes a direct request to a child: "Draw/complete..." (e.g. *Draw a leaf onto the apple* or *Draw a cross in the place where the bird sat after flying out of the cage*). A child obtained 1 point for each correct answer. The maximum number of points for the "Reading" test was 20. At the beginning of the test a child was presented with an instruction containing clear explanations of all necessary activities. The instruction was presented to DC in PJM and to HC in Polish. While doing three practice items a researcher could assist and direct a child to a correct solution but they did not do it in test items. Completion of the "Reading" test took the children approximately 10–15 minutes depending on the pace of work. Drawing no. 1 exemplifies the task of the "Reading" test (Drawing no. 1).

Cat has just one whisker.
Draw him the second one

**Drawing 1.** The "Reading"test: task no. 5

The "Reading" test was adapted to the needs and abilities of DC. Modifications were introduced having consulted the specialists in the following fields: developmental psychology (M. Kielar-

[24] J. Kotowicz, 2013, op. cit., pp. 173–184.

Turska), deaf education (J. Kotowicz and M. Schromova) and Polish studies as a foreign language (M. Stasiczek-Górna). Modifications to the test were introduced gradually and their results were verified in three pilot studies (first study: $N$ = 4 DC, second pilot study: $N$ = 20 DC, third pilot study: $N$ = 20 HC). The introduced changes concerned, among the others, vocabulary (uncommon names such as: *Mania, Jasia and Fela* were changed for more modern ones: *Magda, Asia and Justyna*), syntax (pronouns were replaced with nouns, e.g. *with her to the shore* for *with mother to the shore*), cultural elements (DC might not be familiar with the game called *blindman's bluff* and thus, it was replaced by *hide and seek*) and drawings (not very clear drawing of a cat merging with a mouse was replaced with a more distinctive one).

### Working memory the Corsi Block test

The test was presented on the computer, Milisecond Software. The Corsi Block test is a tool to measure non-verbal spatial working memory, in particular the ability to repeat a sequence in a reverse order. At the beginning of the test a child watched the instruction on a computer that had been recorded before. DC were shown the instruction in PJM while HC watched it in Polish. Corsi Blocks consisted of two parts. The first one tested the ability of repeating forward sequences. Nine scattered squares appeared on a computer screen and then the squares appeared one by one. A child's task was to remember this sequence and repeat the appearance of squares in that order. This part of the task was not analysed as it does not concern working memory but short-term memory. The second part of the task was very similar: having watched the squares appearing on the screen a child was asked to repeat their appearance but this time in reverse order (starting with the last up to the first one) This part allows for assessment of working memory, i.e. backward memory. At first the children were asked to memorize two elements, then the number of squares was increased. Each sequence length was pre-

sented two times. In other words, the children had to remember two elements sequence two times, and then three elements sequence two times etc. The maximum number of squares appearing on the screen was nine. The children did not have to complete the whole test. If a child made a mistake in both attempts of a given sequence length the test was stopped. However, if even one sequence was remembered correctly the test was continued. With each sequence remembered correctly the child got one point for every element, e.g. if a child remembered 2 sequences of 2 elements, then 1 sequence of 3 elements and 1 sequence of 4 elements the child got the following number of points: 11 (2 + 2 + 3 + 4 = 11).

### Raven's Progressive Matrices – Standard Version – Classic Form

The Raven's Progressive Matrices – Standard Version – Classic Form (TMS-K) is a tool to measure general intelligence. The TMS-K Polish version is designated for children aged 5;11–15;11 and for adults over 16 years of age. The presented material is non-verbal: a child's task is to complete the pattern (matrix). The child is asked to select one fragment out of 6 (or 8) options that best matches the pattern. The TMS-K consists of 5 series (marked A, B, C, D and E, respectively) and each of them contains 12 tasks to solve. For every correct answer the child gets one point. Raw score is calculated for sten scores, appropriate for particular age groups. During the session the test was presented in a paper form. The instruction was presented in the child's first language (DC – PJM, HC – Polish).

### Procedure

First the consents were obtained from the headmasters of schools where the studies were to be conducted. Then, a written consent was obtained from the parents of children who participated in the study. All the children provided their oral/sign consent to partici-

pation in the project. All the study subjects were informed about the possibility to withdraw from the meeting at any time without giving a reason. After completing all tests the children received certificates of acknowledgement for participation in the study and a small gift, such as stationary supplies for school (e.g. pens, rubbers, etc.) If a child resigned from the study they also received the certificate and a small reward (one HC). The children performed tasks in a quiet room at school.

## Data analysis

Statistical software: SPSS 24 (*Statistical Package for the Social Sciences*) was used to analyse the collected data. Univariate Analysis of Covariance (ANCOVA) comparing intergroup relation allowed for the analysis of intergroup differences (between DC and HC groups) at the level of a response variable, simultaneously controlling the effects of another variable (referred to as a covariate) on the response variable.[25] For intergroup comparisons of the level of response variable also Student's t-test was used (with no covariate control).

## Results

For the "Reading" test the children could obtain from 0 to 20 points. The average score in DC was 12 points ($min = 5$, $max = 20$, $M = 12$, $SD = 5$). The average score in HC was 19 points ($min = 13$, $max = 20$, $M = 19$, $SD = 2$). The results are presented in Chart no. 1 (Chart no. 1).

In the Raven's Progressive Matrices test the children could obtain results in sten scores of 1–10. The average DC's result in sten scores was 7 ($min = 5$, $max = 10$, $M = 7$, $SD = 1.7$), and HC on average obtained 8 points ($min = 5$, $max = 10$, $M = 8$, $SD = 1.4$).

---

[25] A. Field, *Discovering statistics using SPSS*, Sage, London 2013.

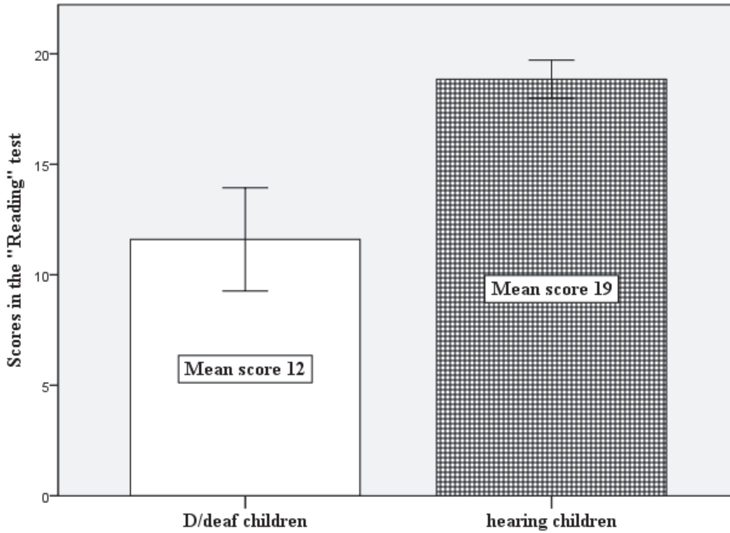



**Chart 1.** Mean scores in the "Reading" test for D/deaf children scores (left bar) and hearing children (right bar)

In the Corsi Block working memory test the children could obtain from 0 to 88 points. The average DC's score was 15 (*min* = 0, *max* = 47, *M* = 15, *SD* = 15), and HC on average obtained 21 points (*min* = 0, *max* = 54, *M* = 21, *SD* = 14).

Before the main analysis (comparisons of the level of reading comprehension scores between DC and HC) it was checked whether DC and HC study groups differ for intelligence and working memory. In order to evaluate these parameters two analyses were performed.

Firstly, using Student's t-test it was indicated that both groups do not differ in terms of non-verbal intelligence ($F(38) = -1.523$, $p = .136$). For this analysis it was not necessary to include age as covariate because the obtained raw scores were calculated into sten scores for relevant age groups.

Secondly, in order to compare the level of non-verbal working memory univariate covariance analysis, ANCOVA, with age as covariant, was performed. ANCOVA indicated that the differences be-

tween DC and HC for non-verbal working memory ($F(1.37) = 2{,}150$, $p = .151$, $\eta 2 = .055$) are statistically insignificant. Age turned out to be a statistically significant covariate ($F(1.37) = 11{,}432$, $p = .002$, $\eta 2 = .236$).

The main study analysis was verified for statistically significant intergroup differences between DC and HC in reading skills, simultaneously controlling age as a covariate. ANCOVA indicated that the difference of reading skills between DC and HC is statistically significant ($F(1.37) = 56{,}427$, $p < .001$, $\eta 2 = .604$), and the age was a significant covariate ($F(1.37) = 20{,}611$, $p < .001$, $\eta 2 = .358$). HC had significantly higher scores than their deaf peers.

## Limitations of the present studies

The limitation of this study is the fact that both groups differed for socioeconomic status determined by the academic degree of the mother. HC's mothers had higher degrees than DC's mothers, which could be of significance for reading skills of the children.

## Conclusions

The obtained data indicate that D/deaf students, native signers, have statistically significantly lower results in reading comprehension than their hearing peers. Both groups of children (DC and HC) did not differ in respect of intelligence nor capacity of non-verbal working memory. Both groups were matched for age and sex. Thus, the hypothesis of no differences in reading skills between HC and DC, whose first language of communication is PJM, has not been confirmed.

Therefore, a very important question arises: "How can the results obtained in the study be explained?" Of particular importance is the fact that deficits with regard to reading skills of D/deaf students appeared in DC group that since birth has had access to a sign language and did not have lower scores in the selected areas of cog-

nitive development (level of intelligence and working memory) than the hearing peers.

Firstly, it should be noted that for DC, native signers of PJM, Polish written language is their second language. Therefore, D/deaf students' ability to read and write should be considered with regard to bilingualism, i.e. the first language being PJM and written Polish as the second one. Thus, it should be noted that this project compares the level of reading comprehension in Polish language that for DC was the second language and for HC was the first and dominant manner of communication. When learning to read in Polish HC refer to the spoken Polish language. Yet, DC for whom PJM is the first manner of communication cannot rely on this rich background of Polish language that monolingual HC have.

It should be also stressed that the specific nature of DC signed-written bilingualism, significantly differs from HC bilingualism encompassing two spoken languages. In case of HC spoken bilingualism first they acquire speaking and listening competences in order to later learn to read and write.[26] However, signed-written bilingual DC learn the second language mainly through writing, since the spoken language is not entirely available. Thus, it should be stressed that D/deaf students face a very demanding task when they almost simultaneously learn a foreign language (spoken) and its written form.[27]

Secondly, the obtained results may be treated as a factor suggesting that Polish educational system may not be properly prepared for the needs of DC using PJM. It appears that Polish deaf education may not ensure comprehensive development of DC's abilities and it appears that it does not provide optimal conditions for DC to achieve the same level of reading skills as their hearing peers. DC, who are native signers of PJM, begin to study in a school

---

[26] P. Tomaszewski, *Mówić czy migać? Prawo dziecka głuchego do wychowania dwujęzycznego*, [in:] D. Gorajewska (eds.), *Społeczeństwo równych szans. Tendencje i kierunki zmian* (pp. 113–124), Stowarzyszenie Przyjaciół Integracji, Warszawa 2005.

[27] R.I. Hoffmeister, C.L. Caldwell-Harris, *Acquiring English as a second language via print: The task for deaf children*. "Cognition", 2014, no. 132(2), pp. 229–242.

setting and they function normally in terms of language (sign language) and cognitive skills. Accordingly, they may be treated as D/deaf students who may become competent readers. The present studies appear to suggest that this potential is not fully used in Polish educational system. This may result from improper preparation of learning and teaching process for the needs and abilities of a D/deaf student for whom the first language is PJM. It seems to be associated with the lack of bilingual education that would develop both language competences, i.e. in a sign language and in writing.[28]

However, it should be stressed that more and more often the topic of special needs of D/deaf students using PJM is addressed. This is exemplified by related educational initiatives e.g. run by Magdalena Dunaj project entitled: "W stronę edukacji dwujęzycznej dzieci głuchych" (Towards bilingual education of deaf children).[29] It seems also important to highlight that Pracownia Lingwistyki Migowej (Sign Language Linguistics Department) has prepared educational materials in PJM.[30] Yet, there is still not sufficient methodology that would aid the development of reading skills of DC by referring to their competences in PJM. Thus, it seems crucial to become familiar with foreign ideas. e.g. computer-based trainings[31] or learning programmes[32], which could be inspiration for development of proper conditions to enhance reading skills of D/deaf students using PJM.

---

[28] J. Kotowicz, *Dwujęzyczność migowo-pisana dzieci głuchych. Komunikacja i procesy poznawcze*. Wydawnictwo Uniwersytet Pedagogiczny im. KEN, Kraków 2018; M. Dunaj, *W stronę edukacji dwujęzycznej dzieci głuchych w Polsce. Co wiemy? Czego nie wiemy? Co należy robić?*, Polski Związek Głuchych Oddział Łódzki, Łódź 2016.

[29] M. Dunaj, 2016, op. cit.

[30] P. Rutkowski, P. Mostowski. *The use of Polish Sign Language (PJM) in bilingual textbooks for deaf students in Polish schools*. "Language Learning Journal", 2020, no. 0(3), pp. 1–14.

[31] E. Holmer, M. Heimann, M. Rudner, *Computerized sign language-based literacy training for deaf and hard-of-hearing children*. Journal of Deaf Studies and Deaf, 2017, no. 22(4), pp. 404–421.

[32] G. Tang, *Sign Bilingualism in Deaf Education: From Deaf Schools to Regular School Settings*, [in:] *Bilingual and Multilingual Education, Encyclopedia of Language and Education*, eds. O. García, A. Lin, S. May, Springer, Dordrecht 2016, pp. 191–203.

## References


Antia S.D., Jones P.B., Reed S., Kreimeyer K.H., *Academic status and progress of deaf and hard-of-hearing students in general education classrooms*, "Journal of Deaf Studies and Deaf Education", 2009, no. 14(3), pp. 293–311.

Chamberlain C., Mayberry R.I., *American Sign Language syntactic and narrative comprehension in skilled and less skilled readers: Bilingual and bimodal evidence for the linguistic basis of reading*. "Applied Psycholinguistics", 2008, no. 29(3), pp. 367–388.

Czyż A., Plutecka K., *Zarys audiofonologii edukacyjnej*. Wydawnictwo Naukowe Uniwersytetu Pedagogicznego, Kraków 2018.

De Jonge P., De Jong P.F., *Working memory, intelligence and reading ability in children*, "Personality and Individual Differences", 1996, no. 21(6), pp. 1007–1020.

Dunaj M., *W stronę edukacji dwujęzycznej dzieci głuchych w Polsce. Co wiemy? Czego nie wiemy? Co należy robić?*, Polski Związek Głuchych Oddział Łódzki, Łódź 2016.

Field A., *Discovering statistics using SPSS*, Sage, London 2013.

Freel B.L., Clark M.D., Anderson M.L., Gilbert G.L., Musyoka M.M., Hauser P.C., *Deaf Individuals' Bilingual Abilities: American Sign Language Proficiency, Reading Skills, and Family Characteristics*. "Psychology", 2011, no. 02(01), pp. 18–23.

Goldin-Meadow S., Mayberry R.I., *How Do Profoundly Deaf Children Learn to Read?*, "Learning Disabilities Research and Practice", 2001, no. 16(4), pp. 222–229.

Hoffmeister R.J., Caldwell-Harris C.L., *Acquiring English as a second language via print: The task for deaf children*. "Cognition", 2014, no. 132(2), pp. 229–242.

Holmer E., Heimann M., Rudner M., Computerized sign language-based literacy training for deaf and hard-of-hearing children. Journal of Deaf Studies and Deaf, 2017, no. 22(4), pp. 404–421.

Holmer E., Heimann M., Rudner M., *Evidence of an association between sign language phonological awareness and word reading in deaf and hard-of-hearing children*. "Research in Developmental Disabilities", 2016, no. 8, pp. 145–159.

Humphries T., Kushalnagar P., Mathur G., Napoli D.J., Padden C., Rathmann C., *Ensuring language acquisition for deaf children: What linguists can do*, "Language", 2014, no. 90(2), pp. 31–52.

Kotowicz J., *Dwujęzyczność migowo-pisana dzieci głuchych. Komunikacja i procesy poznawcze*. Wydawnictwo Uniwersytet Pedagogiczny im. KEN, Kraków 2018.

Kotowicz J., *Nabywanie języka migowego – dyskusja stanowisk*, "General and Professional Education", 2015, no. 1, pp. 26–36.

Kotowicz J., *Proces czytania głuchych*, „Rocznik Komisji Nauk Pedagogicznych", PAN Oddział Kraków, 2013, no. LXVI, pp. 173–184.

Mayberry R.I., del Giudice A.A., Lieberman A., *Reading achievement in relation to phonological coding and awareness: a meta-analysis,* „Journal of Deaf Studies and Deaf Education", 2011, no. 16(2), pp. 164–88.

Mayberry R.I., Lock E., *Age constraints on first versus second language acquisition: Evidence for linguistic plasticity and epigenesis*. "Brain and Language", 2003, no. 87(3), pp. 369–384.
Mitchell R.E., Karchmer M.A., *Chasing the Mythical Ten Percent: Parental Hearing Status of Deaf and Hard of Hearing Students in the United States*, "Sign Language Studies", 2004, no. 4(2), pp. 138–163.
Novogrodsky R., Caldwell-Harris C., Fish S., Hoffmeister R.J., The Development of Antonym Knowledge in American Sign Language (ASL) and Its Relationship to Reading Comprehension in English. *Language Learning*, 2014, no. 64(4), pp. 749–770.
Qi S., Mitchell R.E., *Large-scale academic achievement testing of deaf and hard-of-hearing students: Past, present, and future*, "Journal of Deaf Studies and Deaf Education", 2012, 17(1), pp. 1–18.
Rutkowski P., Mostowski P., *Polski język migowy narzędziem przeciwdziałania wykluczeniu*, „Trendy. Internetowe Czasopismo Edukacyjne", 2017, no. 1, pp. 18–22.
Rutkowski P., Mostowski P., *The use of Polish Sign Language (PJM) in bilingual textbooks for deaf students in Polish schools*. "Language Learning Journal", 2020, no. 0(3), pp. 1–14.
Strong M., Prinz P.M., *A Study of the Relationship Between American Sign Language and English Literacy*, "Journal of Deaf Studies and Deaf Education", 1997, no. 2(1), pp. 37–46.
Tang G. *Sign Bilingualism in Deaf Education: From Deaf Schools to Regular School Settings*, [in:] Bilingual and Multilingual Education, Encyclopedia of Language and Education, eds. O. García, A. Lin, S. May, Springer, Dordrecht 2016, pp. 191–203.
Tomaszewski P., Mówić czy migać? Prawo dziecka głuchego do wychowania dwujęzycznego, [in:] D. Gorajewska (eds.), *Społeczeństwo równych szans. Tendencje i kierunki zmian* (pp. 113–124), Stowarzyszenie Przyjaciół Integracji, Warszawa 2005.
Traxler C.B., *The Stanford Achievement Test, 9th Edition: National Norming and Performance Standards for Deaf and Hard-of-Hearing Students*. "Journal of Deaf Studies and Deaf Education", 2000, no. 5(4), pp. 337–348.

## Used abbreviations

no. *number, N*
*mean, M*
*standard deviation, SD*

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

MARTA ZAWICHROWSKA
Kazimierz Wielki University in Bydgoszcz, Poland

# Development of language skills and conditions for psychosocial development of children and youth in multilingual families

**ABSTRACT**: Marta Zawichrowska, *Development of language skills and condi-tions for psychosocial development of chil-dren and youth in multilingual families*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 169–186. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.09

This paper serves as a contribution to the debate on the author's studies concerning the correlation between the development of linguistic competence and the conditions for the psychosocial development of children and youth in multilingual families. The following deliberations present the point of view of a neurological speech therapist and concerns language difficulties, which are prevalent in multilingual people. This paper was based on the author's own studies and patient observations. The objective was to show that the linguistic and psychosocial development of people in bi- and multilingual families is different and carries additional risks. The following considerations lead to the final conclusion that being a citizen of the world and immersion in many cultures can be a beautiful adventure for a young person; in which they should be supported by family, teacher and multilingual speech therapist.

**KEY WORDS:** language competence, emigrants, psychosocial development, language, multilingualism, children, youth

## Introduction

In the modern world, multilingual people are often shown, especially on radio, television and in the popular press. However, the issue is usually presented in a stereotypical and one-sided way, solely focusing on positive aspects. This is covered by J. Cieszyńska, who mentions that *on the basis of several well-known bilingual people, myths about the miraculous influence of bilingualism on life, professional career and cognitive development emerge*.[1] This paper is an attempt to outline a slightly broader perspective on the psychosocial and linguistic functioning of multilingual people, which poses a challenge that – in the age of globalisation – concerns more and more schools worldwide. The author is particularly interested in the psycholinguistic and speech therapy perspective on their psychosocial development: the analysis of the circumstances concerning the acquisition language skills by bilingual/multilingual children as well as other aspects of their development.

## Bi- and multilingualism and language competence

Bilingualism, or even multilingualism, is an increasingly common situation for school students in Poland and abroad, which seems to be primarily the result of processes connected with globalisation. Due to the intensified and ever-intensifying migration processes, it is also one of the categories that every teacher in a kindergarten, school or educational institution should be aware of, as these institutions have the obligation to support the development of children and youth. What is more, Polish educational law enumerates 12 categories of students who might require special psychological and pedagogical assistance, including students with

---

[1] J. Cieszyńska, *Lingwistyczne i psychologiczne problemy osób dwujęzycznych*, [in:] *Dysleksja w kontekście nauczania języków obcych*, Marta Bogdanowicz, Mariola Smoleń (eds), Gdańsk 2004, p. 20.

- language competence deficits and disorders;
- adaptation difficulties stemming from cultural differences or changes in the educational environment, including those related to prior education abroad.[2]

Multilingual children may be a part of both of these groups and in both cases there may be a need for specialist intervention – mainly speech therapy, although this is not the full extent of support that may be required.

The key issue covered by this paper stems directly from the postulate of the Polish philologist, Władysław Miodunka: *Research on bilingualism should not focus solely on linguistic phenomena, such as code switching, blending and language interference, but also on bilingual people, such as children and their parents, on the process of becoming bilingual, on maintaining the command of the language used more often, as well as on using each of the languages known to the speaker as a tool for self-fulfilment.*[3]

Referring to the quote by J. Cieszyńska, outlining the issue of bilingualism in an objective manner requires bringing examples of people for whom bilingualism was the cause of personality, school or adaptation problems; where it caused issues with determining their belonging and cultural identity.

According to the prominent Polish linguist, Polish and Slavic scholar Roman Laskowski, bilingualism can contribute to the proper development of a child only if *both languages are considered equal, if there are no defensive reactions against one of them, which is perceived by the child as 'inferior'* (…) *when parents are able to evoke respect to their own cultural heritage and language in their child.*[4]

---

[2] Regulation of the Minister of National Education of 9 August 2017 on the principles of organising and providing psychological and pedagogical assistance in public kindergartens, schools and institutions (Dz. U. [Journal of Laws] of 2017, item 159).

[3] W. Miodunka, *Jak dwujęzyczność dzieci polonijnych może wpływać na ich szacunek do rodziców? Na marginesie badań prof. Jagody Cieszyńskiej*, [in:] J. Cieszyńska, Z. Orłowska-Popek, M. Korendo, *Nowe podejście w diagnozie i terapii logopedycznej – metoda krakowska*, Krakow, 2010, p. 15.

[4] R. Laskowski, *Język w zagrożeniu. Przyswajanie języka polskiego w warunkach polsko-szwedzkiego bilingwizmu*, Kraków 2009, p. 42.

The fact is that command of several languages most often enriches life, while making it easier to navigate; however, this phenomenon should not be conflated with bilingualism of emigrants, since learning a second language in one's home country is a conscious choice, takes place at a completely different time, circumstances and stems from different motivations. In the context of emigration, this is forced by the situation at hand and the need to find one's bearing in a foreign linguistic and cultural environment.

While working as a speech therapist, the author encounters multilingual families every day. In many cases, these families are Italian, French and Russian and – most notably – Polish, living in Western countries. Nearly all of them face the issues of bilingualism, both from the point of view of emigrant parents and their children. This paper is an attempt at outlining such situations connected with bilingualism, in which parents do not have full impact on their children's language acquisition process. Such a situation has *an enormous impact on the formation of relationships between parents and children, the formation of parental attitudes, as well as on the upbringing process in itself. The official (legal) stay abroad gives the second generation the opportunity to identify themselves as part of the community of their country of residence and enables them to take on the right attitudes. However, the level of parents' command of their new homeland's language disrupts the process of learning social roles by the young generation*.[5]

A bilingual person is a person who is able to *use two languages simultaneously*.[6] Małgorzata Rocławska-Daniluk, a scholar who deals with the problem of bilingualism, treats it as *an individual feature of a given language user, which concerns a specific human ability to use two languages*.[7] From the point of view of children of Polish emigrants, which are the main focus of this paper, bilingualism usually occurs in two forms. The first is classic bilingualism, where one of the par-

---

[5] J. Cieszyńska, *Lingwistyczne i psychologiczne problemy osób dwujęzycznych*, [in:] *Dysleksja w kontekście nauczania języków obcych*, Marta Bogdanowicz, Mariola Smoleń (eds.), Gdańsk, 2004, p. 32.

[6] E. Sobol, *Nowy Słownik Języka Polskiego*, Warsaw 2002.

[7] M. Rocławska-Daniluk, *Dwujęzyczność i wychowanie dwujęzyczne z perspektywy lingwistyki i logopedii,* Gdańsk 2011, p. 32.

ents is an immigrant and the other is a native speaker of the language of their new country of residence. Due to the author's professional experience, the author is better acquainted with the second type of bilingualism namely the first-generation bilingualism, in which a child is born or arrives in the host country during the prelingual period[8], and their parents – Poles – have learned the language of the host country to varying extent.

The concept of bilingualism is also closely related to the concept of biculturalism, usually conflated with simultaneous and equal existence (drawing upon, immersion) in two different cultures. A bilingual person becomes (often unconsciously) bicultural due to the fact that the language is a carrier of cultural heritage. Janusz Anusiewicz, a contemporary linguist, who deals with the cultural theory of language, treats language as a kind of cultural archive of societies. *The scholar understands culture axiologically, as a set of values created and transmitted by a given language community. A simplified assumption can be made for study purposes – bilingual means bicultural.*[9]

It is worth noting the difference between the biculturalism of the ethnics[10] and the biculturalism of the second generation, which contains new elements, typically not available to the first generation. However, the biculturalism of the children of emigrants is deprived of all the values which cannot be acquired in isolation from their homeland. According to another humanities scholar and one of the most eminent contemporary philosophers, Hans-Georg Gadamer: *language carries norms and behaviours, evaluations and values – not only moral, but also aesthetic and cognitive. In other words, language is used to convey the culture of a nation – at least its major part, if not the totality of it.*[11]

---

[8] The pre-lingual period (also known as the melody period) occurs until 12 months of a child's life. It denotes the time before the child manages to learn language and before the first sentences appear, [in:] Minczakiewicz E., *Logopedia. Mowa-rozwój-zaburzenia-terapia,* Kraków 1997, p. 65.

[9] J. Anusiewicz, *Kulturowa teoria języka. Zarys problematyki*, [in:] *Język a kultura*, vol. 1, Wrocław, 1991, p. 56.

[10] The word "ethnic" stands for *relating to a particular race of people*, [in:] https://sjp.pwn.pl/sjp/etniczny;2557139.html, retrieved on 15.09.2020.

[11] J. Cieszyńska, *Lingwistyczne i psychologiczne problemy osób dwujęzycznych*, p. 21.

The above mentioned Anusiewicz, who notes the essence of language as a kind of information warehouse in connection with the cultural heritage, presents this issue in a similar manner, whereas W. Rozencwajg understands the notion of bilingualism as: *command of two languages and regular switching from one language to the other, depending on the communication situation*.[12] The scholar highlights the nature of the development of bilingualism, which develops in line with the conditions and circumstances of acquisition of a second language. If this occurs based on switching from one language to the other, *in this case a common set of two languages is formed, until a common language* (…) *with two different ways of expression eventually emerges*.[13]

American linguist Benjamin L. Whorf presents yet another perspective on the issue of bilingualism. He believes that the same insights and understanding of the surrounding reality can only be the basis of a common worldview if the language abilities of the observers are similar. This view raises the question of building a common world by emigrants and their children while their communication takes place in the language of the host country. Quoting Cieszyńska: *A child can learn two, even three or four foreign languages, but in order to do so effectively and without negative consequences, they need to be fully able to communicate with their parents in their ethnic language.*[14] This is where we are touching upon an extremely important psychological issue, namely the disruption of the parent's image and authority, and even a negative attitude towards the father or mother, caused by an incomplete understanding of the cultural communication of children by adults. This primarily concerns language, but also aspects such the way of dressing, spending free time, music the child listens to, as well as their contact with culture.

---

[12] W. Rozencwajg, *Podstawowe zagadnienia teorii kontaktów językowych*, [in:] M. Głowiński, *Język i społeczeństwo*, Warsaw 1980, p. 56.

[13] W. Rozencwajg, *Podstawowe zagadnienia teorii kontaktów językowych*, [in:] M. Głowiński, *Język i społeczeństwo*, Warsaw 1980, p. 76.

[14] J. Cieszyńska, *Dwujęzyczność, rozumienie siebie jako innego*, [in:] J. Cieszyńska, Z. Orłowska-Popek, M. Korendo, *Nowe podejście w diagnozie i terapii logopedycznej – metoda krakowska*, Kraków 2010, p. 53.

The communication relations between the emigrant and the native speaker are also very interesting. Members of a language community, for example of a subculture, professional or sports group, often understand each other without having to express themselves fully, while a person from outside the community, on the other hand, requires a slightly broader and more accurate explanation to be able to understand the message sender's real intention. Here, it is worth bringing up the quote of the German philosopher Martin Heidegger: *It is necessary to constantly keep in one's mind that the existence of the human being changes since they started describing their world in some other language, and that their first language has forever marked their place in the world.*[15] This phenomenon was also covered by J. Cieszyńska: *When siblings of emigrants talk to each other in the language of the host country, the parent does not always fully understand the content of the conversation, which excludes them from the conversation.*[16] Gadamer mentions similar limitations. According to the scholar, a parent who does not understand the language spoken by their children makes an attempt to translate individual words and phrases, doing so *from the point of view of a foreign language, shedding a new light on it.*[17]

It should be stressed that adults have very little chance to learn the language of the host country as well as their children do. *Phonetic and phonological errors, poor vocabulary and syntactic deficiencies cause linguistic communication to be impaired and disrupted, if parents wanted to use a foreign language for everyday communication.*[18]

This kind of communication would also be damaging psychologically, as children would be uncomfortable to hear their parents' mistakes. Parents, on the other hand, would experience a kind of cognitive dissonance and embarrassment, if their children corrected their language mistakes.

---

[15] M. Heidegger, *W drodze do języka*, Kraków 2000, p. 32.

[16] J. Cieszyńska, *Dwujęzyczność, rozumienie siebie jako innego*, p. 23.

[17] H.-G. Gadamer, *Prawda i metoda*, Kraków 1993, p. 54.

[18] J. Cieszyńska, *Lingwistyczne i psychologiczne problemy osób dwujęzycznych*, p. 21.

It needs to be pointed out that emigrants very rarely mastered the languages of their new homelands at a level stretching above basic.[19] In many cases, their first contact with a new language occurs only after arrival in the host country. According to Cieszyńska: *This is the way of mastering the language observed in the first generation of emigrants, who use the language mainly in the workplace. Thus, they know the vocabulary connected with a given field, they master effective communication in standard situations, applicable in their work. They learn specific articulation (careless, characterised by consonant group reduction or vowel elision), which negatively impacts their ability to construct written texts, according to the spelling rules.*[20]

It is also worth noting the vocabulary that emigrants commit to their memories the fastest, which includes emotional expressions, vulgarisms, as well as pejorative descriptors, which are used by many people regardless education level. By using such phrases, in a certain way the emigrants declare that they belong to a new country and linguistic community not only for themselves, but also their children. In most cases, this sense of belonging is fictitious at best, since – quoting Anna Wierzbicka – *languages differ, not only as linguistic systems, but also as cultural worlds, mediating ethnic identity.*[21]

## Issues related to multilingualism

The presented analyses lead to the conclusion that parents with their first mother tongue and their children with their first foreign language (which – from the functional standpoint – is their first language) live in two cultural worlds, which are foreign to each

---

[19] For more information on the subject of language acquisition by emigrants, read Krystyna Włodarczak's paper "Proces adaptacji współczesnych emigrantów polskich do życia w Australii", published in *CMR Working Papers*, no. 3/61, Australia, 2005.

[20] J. Cieszyńska, *Lingwistyczne i psychologiczne problemy osób dwujęzycznych*, p. 21.

[21] A. Wierzbicka, *Podwójne życie człowieka dwujęzycznego*, [in:] W. Miodunka, *Język polski w świecie*, Kraków 1990, p. 56.

other. According to Cieszyńska: *the mother tongue is the first tool of communication, that is not learned, but acquired in the environment, starting with the mother. We learn a foreign language already knowing our mother tongue, usually outside our homes, and the learning process involves understanding, speaking, reading and writing*.[22]

In other words, one could say that their *need for security clashes with their need for freedom;*[23] however, in this case one limits the other. *The problem of bilingualism is the search for a compromise between identity (security/freedom) and integration (freedom/security). In this split, the tragedy of a bilingual/bicultural person can be seen, always facing a choice between some "freedoms" and various "securities"*.[24] This split clearly shows the tragedy of a bilingual and bicultural person, who will always face choices concerning "freedom" and "security".

In the case of many immigrants, the biggest problem does not concern learning a foreign language alone, but the ability to assess the communication situation and correctly read non-verbal signals that a native speaker would make, resulting in a sense of acceptance by a given social group. Having certain social skills is inextricably linked to linguistic and cultural circumstances. One of such factors is the face, which is the main source of information about the human being and their emotions. The gaze constitutes another important factor – looking somebody in the eye is not only polite, but also promotes the formation of bonds between partners in a conversation.

The interaction between the first language (L1) and the second language (L2) is also extremely important, and it is something the author often encounters during conversations with parents and children in the speech therapy clinic. The interview data show that the language of the parents' home country (L1) is usually spoken at home and during trips to the grandparents' country, while L2 is used in other social situations in the country of residence – for example at work, at school or during social gatherings.

---

[22] J. Cieszyńska, *Lingwistyczne i psychologiczne problemy osób dwujęzycznych*, p. 22.

[23] L. Kołakowski, *O rozumie i innych rzeczach*, [in:] *Tygodnik Powszechny*, no. 41, 2003, p. 45.

[24] J. Cieszyńska, *Lingwistyczne i psychologiczne problemy osób dwujęzycznych*, p. 22.

Switching languages like that requires a bilingual person not only to master the vocabulary and rules of both languages, but also to learn the way of expressing emotions and feelings, seeing how the same experiences are often expressed differently in both languages. Before going to kindergarten or crèche, a child is confronted with various social situations, listening to Polish, as well as the language of their new host country in these situations. This interpenetration of the two languages results in significant disruption to understanding, resulting in slowing down the rate of acquisition of the first language. Learning a second language takes a long time, causing significant delays in their education. Submersion, or subtractive bilingualism[25] is a common issue seen in bilingual children, as mentioned by M. Rocławska-Daniluk: *In emigration conditions, submersion occurs when a child only becomes acquainted with a second language at school, surrounded by children who speak it. In the cases of subtractive bilingualism, children may experience lower self-esteem* (…) *as well as various school problems.*[26]

The author's personal observation can be confirmed by the words of a contemporary humanities scholar and linguist Ewa Lipińska, who claims that *from the age of three, children are capable of separating two language systems and developing the two linguistic communication methods in parallel*.[27]

## Conditions for psychosocial development of children in multilingual families, educational and speech therapy support

Despite the issues outlined in the previous part of the paper, it is important to create favourable conditions for children to develop

[25] Absorption of the mother tongue (L1) by the second language (L2), also referred to as subtractive bilingualism.

[26] M. Rocławska-Daniluk, *Dwujęzyczność i wychowanie dwujęzyczne z perspektywy lingwistyki i logopedii,* Gdańsk 2011, p. 56.

[27] E. Lipińska, *Język ojczysty, język obcy, język drugi. Wstęp do badań dwujęzyczności*, Kraków 2003, p. 82.

their language skills, and the best way to do so is to start pre-school education in the language of the country of residence, resulting in *the emergence of language domains*.[28] Thanks to this, from an early age, the child learns new subject areas, discovers behaviours characteristic of children and adult speakers of the second language, in addition to those characteristic of their Polish parents. By doing so, they not only learn the language of their new home country, but also get immersed in its culture one step at a time. A child deprived of early contact with a second language faces social issues to a certain extent, as they do not partake in imaginative games, does not play the roles of their favourite fairy tale characters, because these activities require a linguistic description. They may also be considered shy and introvert, resulting in them being marginalised and misunderstood by peers, which makes it difficult to develop one's personality and self-esteem.

Another reason why a child's first contact with a new language should take place as early as possible is the emergence of aggression against parents. The transition from one language system to another often causes frustration and aggression, which the parents become the subject of. This process occurs as a defensive reaction, which can occur in a variety of ways. There are children who want to draw their parents' attention by isolation from their immediate circles, loneliness, sadness and crying, as well as reluctance to talk about what happened in the kindergarten. Others, on the other hand, will erupt in anger, screaming, destroying toys, and in doing so they will want their parents' understanding. In some cases such aggressive behaviour is perpetuated and spark a long-term conflict between children and parents. Cieszyńska believes that *the fact that many times the children of emigrants take on the role of translators in public places and in official capacities, since they have a proper command of the language of the new country, violates the natural order*.[29]

A situation where parents feel helpless in formal situations is a threat to the child and causes a dysfunctional division of roles

---

[28] J. Cieszyńska, *Lingwistyczne i psychologiczne problemy osób dwujęzycznych*, p. 21.

[29] J. Cieszyńska, *Lingwistyczne i psychologiczne problemy osób dwujęzycznych*, p. 21.

within the family. This often results in the lack of respect for the parent, or even contempt. According to Miodunka: *If a child notices that their linguistic competences exceeds that of their parents, they slowly start losing their authority. An extreme case of a growing value crisis may lead to the child being ashamed of their parents.*[30]

Children also feel a lack of security, stability and support, which can affect their whole adult life. *Failure to meet these needs in the children of emigrants may result in unsuccessful family relationships, difficulties in making friends and cooperation problems in future life.*[31]

The quote by Michael Walzer[32] can conclude the above deliberations: *The point is not to teach children what it means to be different in a certain manner, but to teach children, who are different, how to be different the right way*.[33]

A child who until the start of education only speaks in the parents' mother tongue should be prepared to face a new communication situation, which they might find difficult. An important role in this process is played by a bilingual speech therapist, who should introduce the child to new realities by conducting appropriate therapy and organising well-thought-out games to acquaint them with the new situation. The activities of a speech therapist should focus on introducing vocabulary of a given country's language, including words related to the names of family members, everyday activities, games, travel, hygiene and faith. It is also worthwhile to focus on grammar, not only to ensure understanding, but also to make sure that the child will be able to build them on their own. As Władysław Miodunka claims: *Polish communities need to teach Polish as a second language, which means acquisition in natural conditions (at home, during family visits) and teaching (guided by a parent, speech ther-*

---

[30] W. Miodunka, *Jak dwujęzyczność dzieci polonijnych może wpływać na ich szacunek do rodziców? Na marginesie badań prof. Jagody Cieszyńskiej*, p. 58.

[31] W. Miodunka, *Jak dwujęzyczność dzieci polonijnych może wpływać na ich szacunek do rodziców? Na marginesie badań prof. Jagody Cieszyńskiej*, p. 58.

[32] Michael Walzer (3 March 1935) – American philosopher and intellectual.

[33] M. Walzer, *O tolerancji*, Warsaw 1999, p. 83.

*apist or teacher).*[34] However, parents are very often sceptical about this way of organising Polish language teaching and they find it depreciating. Overcoming these emotional obstacles and helping the child is, however, worth their while. Speech therapy not only helps with acquiring proper language skills, but will also introduce the child to their new circumstances, providing them with an opportunity to learn about the world, which other children can easily acquire in their own language. A Polish child needs additional support and attention because, as the **Arab and Iran scholar, as well religion and Islam expert** Agata Nalborczyk points out*: in the first years, instead of learning new things, the child has to relearn the names of objects and concepts they already know, meaning that the process of knowledge acquisition begins much later*.[35] This, in turn, leaves a mark on the child's future adult life.[36]

When a child, after going through the stages presented previously by the author, and overcoming the difficulties connected with learning a second language, masters it to a degree that enables free conversation in any situation, the Polish language gradually loses its importance. As such, it is used less and less frequently, if only to communicate with parents at home – it becomes unattractive, commonplace, monotonous and repetitive, as it is associated with specific situations. With time, it becomes a kind of a limited code, which instead of evolving slowly dies out.

This sparks new conflicts and leads to the first-generation emigrants getting distancing from their offspring. Feeling more and more free to communicate in their new language, children would like to talk about their problems in the very language in which they communicate with their peers and learn at school; however, adults

---

[34] W. Miodunka, *Moc języka i jej znaczenie w kontaktach językowych i kulturowych. Język jako wartość podstawowa kultury*, [in:] *Nauczanie języka polskiego jako obcego*, Kraków 2003, p. 158.

[35] A.S. Nalborczyk, *Zachowania językowe imigrantów arabskich w Austrii*, Warsaw 2003, p. 41.

[36] This creates delays in the learning process, which the author's cousins (mentioned earlier in this paper) also struggle with.

cannot always fully understand the issue raised by their children and sometimes they are also unable to solve them. Over time, children understand that they can only rely on themselves and they stop asking their parents, as the language becomes a carrier of different meanings, representative of different worlds of thought, and children, who find themselves in this situation, often feel misunderstood. For parents, the mother tongue remains their main language. L2 becoming the main functional language for the second generation of emigrants results in loosening family bonds and makes communication between the family members significantly difficult. This is because, as Gadamer says: *language is not only a system of meaning, but a plane of semantic activity that arises between one person and another, as well as between the person and the world*.[37]

The reluctance of children to speak their parents' mother tongue is also a significant obstacle to taking a cultural root, impeding the transfer of cultural aspects such as patriotism, hierarchy of values, ethics and faith.

The author would also like to address the psychosocial impact of emigration. Adults often do not realise that in addition to learning a new language (or the need to use a foreign language they have learned in the past) they will also encounter the need to build a new cultural identity for themselves and their children, which needs to represent the conditions and circumstances of their new country – its traditions, customs and worldview. In many people, this causes a certain duality; however, parents should take full responsibility for this situation of double identity that they have put their children in. Their task is to introduce children to the new world in the least-painful way possible and to strive to integrate their family into the community of their choice. Adults should not reprimand their children for not feeling the connection to their country of origin – instead, they should do everything in their power to make sure that their children draw full benefit from the multicultural source in which they live. First generation emigrants, on the other hand, should not forget about their native culture, but should share it and

[37] H.-G. Gadamer, *Rozum, słowo, dzieje*, Warsaw 1979, p. 136.

pass on the models they have learned from their homeland to the residents of the community in which they live. Thanks to the promotion and dissemination of the minority culture, native inhabitants of the country of emigration become more open and very often reject their prejudices.

This is also related to the common phenomenon of the clash of cultures in multilingual families: the homeland of parents with the culture of the country of emigration. However, as J. Cieszyńska states, the language community with parents, contact with grandparents and family in the country of origin is particularly important for children brought up in foreign countries. *This is a condition for the formation of an identity, which I refer to as "glued together." The lack of ethnic language causes a split, which in some cases can make it impossible to find one's way in life and creates a sense of emptiness, making it difficult or impossible to take on life's roles and achieve full intellectual and emotional development.*[38] The scholar also notes that *it is very difficult to function well in two systems at the same time, and this certainly cannot be achieved by an uncompromising youth.*[39]

This often results in an indifferent attitude towards the parents' country of origin, a lack of understanding of its customs and traditions, and also affects the reluctance to learn the language of their ancestors. It can be said that the second-generation language is limited by a rigid framework and its development has stopped at a childhood stage. This is something that is mentioned by Roman Laskowski, Polish linguist and Slavic Studies scholar: *Children (of emigrants) use the language of the country of settlement as a developed code, while the Polish language, originally their mother tongue, gradually becomes their restricted code.*[40] This is evidenced by clumsy style, as

---

[38] J. Cieszyńska, *Rozwój mowy polskich dzieci na obczyźnie – zjawiska normatywne czy zaburzenia rozwojowe?*, [in:] M. Michalik, A. Siudak, Z. Orłowska-Popek, *Nowa Logopedia. T. 3. Diagnoza różnicowa zaburzeń komunikacji językowej*, Kraków 2012, p. 36.

[39] J. Cieszyńska, *Lingwistyczne i psychologiczne problemy osób dwujęzycznych*, p. 21.

[40] W. Miodunka, *Jak dwujęzyczność dzieci polonijnych może wpływać na ich szacunek do rodziców? Na marginesie badań prof. Jagody Cieszyńskiej*, [in:] *Nowe podejście w diagnozie i terapii logopedycznej: metoda krakowska*, J. Cieszyńska, Z. Orłowska-Popek, M. Korendo (eds.), Kraków 2010, p. 12.

well as a large number of diminutives, characteristic for the language of small children – *autko, herbatka, cukiereczek*, which can be often seen in the vocabulary of the author's patients. Due to the fact that in most Polish families abroad, the mother tongue is used only in everyday communication with parents, it is very easy for children to guess their parents' intentions, which makes further exploration unnecessary. Very rarely is the Polish language of young people living outside Poland characterised by rich vocabulary and abstract phrases, which results from the experience of living in two cultures, which are represented by two different languages. According to Cieszyńska: *The world of everyday home life, led in Polish, is distinct from the everyday school and professional life, led in Austrian. This is compounded with the discrepancies between the Polish experiences of the real world of the parents, as well as the experiences of children in the new reality. This clash is linguistic in its essence.*[41]

Such a lack of mutual understanding is the reason for the difficulties in building up emotional relationships between first generation emigrants and their children. This is due, on the one hand, to the limitation in sharing emotions and feelings mentally, and on the other hand, to an incomplete understanding of the intentions of the speaker by the recipient, which results in the difficulty to learn alternating roles, as a result of which they are often switched. An example of this phenomenon is a conversation between parents and their children at home, when someone who does not speak Polish appears. In such cases, the child takes over, becoming more talkative and boldly expressing their views, thus assuming the role of a parent. From the point of view of Polish culture, such behaviour could be considered rude, but in reality it is forced by the situation at hand.

## Conclusion

Children and adolescents living abroad are deprived of the possibility of natural acquisition of norms accepted in a given society in

[41] J. Cieszyńska, *Lingwistyczne i psychologiczne problemy osób dwujęzycznych*, p. 22.

early childhood, and they could not learn this in a natural way, in the Polish family home. Thus, they find it difficult to teach their children the language, culture and desired patterns of behaviour, including linguistic habits. This process occurs automatically, unconsciously and without our knowledge or willingness, as people acquire cultural knowledge with every moment of their lives.

The richness of knowledge and life in two cultures is not only a great adventure, but also gives rise to a number of dangers – making it difficult to fit the right linguistic and cultural patterns to a given situation in order to be able to properly function in the world. A teacher working with multilingual migrant children – including Polish children returning to Poland, which becomes a more and more prevalent situation in Polish schools – should be aware of at least the basic problems and conditions concerning the development of students' language skills in the case of multilingualism.

## References


Anusiewicz J., "Kulturowa teoria języka. Zarys problematyki", [in:] *Język a kultura*, vol. 1, Wrocław 1991.

Cieszyńska J., "Dwujęzyczność, rozumienie siebie jako innego", [in:] J. Cieszyńska, Z. Orłowska-Popek, M. Korendo, *Nowe podejście w diagnozie i terapii logopedycznej – metoda krakowska*, Kraków 2010.

Cieszyńska J., "Lingwistyczne i psychologiczne problemy osób dwujęzycznych", [in:] *Dysleksja w kontekście nauczania języków obcych*, Marta Bogdanowicz, Mariola Smoleń (eds.), Gdańsk 2004.

Cieszyńska J., "Rozwój mowy polskich dzieci na obczyźnie – zjawiska normatywne czy zaburzenia rozwojowe?", [in:] M. Michalik, A. Siudak, Z. Orłowska-Popek, *Nowa Logopedia.* T. 3. *Diagnoza różnicowa zaburzeń komunikacji językowej*, Kraków 2012.

Gadamer H.-G., *Prawda i metoda*, Kraków 1993.

Gadamer H.-G., *Rozum, słowo, dzieje*, Warsaw, 1979.

Heidegger M., *W drodze do języka*, Kraków 2000.

Kołakowski L., "O rozumie i innych rzeczach", [in:] *Tygodnik Powszechny*, no. 41, 2003.

Laskowski R., *Język w zagrożeniu. Przyswajanie języka polskiego w warunkach polsko--szwedzkiego bilingwizmu*, Kraków 2009.

Lipińska E., *Język ojczysty, język obcy, język drugi. Wstęp do badań dwujęzyczności*, Kraków 2003.

Miodunka W., "Jak dwujęzyczność dzieci polonijnych może wpływać na ich szacunek do rodziców? Na marginesie badań prof. Jagody Cieszyńskiej", [in:] J. Cieszyńska, Z. Orłowska-Popek, M. Korendo, *Nowe podejście w diagnozie i terapii logopedycznej – metoda krakowska*, Kraków 2010.

Miodunka W., "Moc języka i jej znaczenie w kontaktach językowych i kulturowych. Język jako wartość podstawowa kultury", [in:] *Nauczanie języka polskiego jako obcego*, Kraków 2003.

Nalborczyk A.S., *Zachowania językowe imigrantów arabskich w Austrii*, Warsaw 2003.

Regulation of the Minister of National Education of 9 August 2017 on the principles of organising and providing psychological and pedagogical assistance in public kindergartens, schools and institutions (Dz. U. [Journal of Laws] of 2017, item 159).

Rocławska-Daniluk M., *Dwujęzyczność i wychowanie dwujęzyczne z perspektywy lingwistyki i logopedii,* Gdańsk 2011.

Rozencwajg W., "Podstawowe zagadnienia teorii kontaktów językowych", [in:] M. Głowiński, *Język i społeczeństwo*, Warsaw 1980.

*Słownik Języka Polskiego, PWN*, retrieved from: https://sjp.pwn.pl/sjp/etniczny;2557139.html

Sobol E., *Nowy Słownik Języka Polskiego*, Warsaw 2002.

Walzer M., *O tolerancji*, Warsaw 1999.

Wierzbicka A., "Podwójne życie człowieka dwujęzycznego", [in:] W. Miodunka, *Język polski w świecie*, Kraków 1990.

Włodarczak K., "Proces adaptacji współczesnych emigrantów polskich do życia w Australii", *CMR Working Papers*, No. 3/61, Australia 2005.

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

AGATA TRĘBACZ

University of Adam Mickiewicz, Poznań, Poland

# Articulation disorders of the sigmatism type and the level of self-esteem of students completing the stage of early school education. Own research conducted in the Greater Poland region

**ABSTRACT**: Agata Trębacz, *Articulation disorders of the sigmatism type and the level of self-esteem of students completing the stage of early school education. Own research conducted in the Greater Poland region*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 187–222. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.10

One of the sources of a student's self-esteem at a younger school age are social comparisons within their peer group. Articulation disorders may limit the effectiveness of communication and increase the likelihood of a sense of shame, stigmatisation, peer rejection or limitation of social contacts, which may lead to the formation of a negative self-image and lower self-esteem. The research procedure was conducted in two groups of students in 10 primary schools in the Greater Poland region with the use of a reliable and valid research tool. The discussed research results constitute a part of a larger project concerning the significance of articulation disorders of the sigmatism type for interpersonal and intrapersonal attitudes and attitudes towards the world of students completing the stage of early education. In the present text, an analysis of the empirical material from the subscale: self-esteem is presented. The analysis did not reveal statistically significant differences. However, the fact that the level of self-esteem, regardless of the presence or absence of a speech impediment, in nearly 70% of all respondents remains at an average or low level is alarming.

**KEY WORDS:** articulation disorders, sigmatism, self-esteem, early school education, speech impediments

## Introduction

Disorders of the sound realisation of phonemes, which in speech therapy and teaching practice used to be called articulation disorders or speech impediments, constitute one of the possible areas of difficulties faced by students in their intramural and extramural everyday life. Although in the last decade a significant increase in interest in scientific discussions concerning the issues of speech diagnosis and therapy has been observed, the source literature reveals a shortage of contemporary research and publications dealing with the significance of speech disorders, understood in a wide and narrow scope, for the functioning of children of school and preschool age, with particular attention to the quality of peer relations, school-related skills and achievements, social activity and cognitive competence. The publications by Barbara Sawa, Ewa M. Minczakiewicz, Grażyna Demel and Ewa M. Skorek[1], which all the same significantly contributed to the development of Polish speech therapy and teaching solutions in this area, come from the second half of the 20th and the turn of the 20th century. Currently, the perception of speech therapy in an inter- and even transdisciplinary dimension, including many other borderline sciences, e.g. medicine, neurobiology, physiotherapy, education and psychology is spread. Holistic thinking about human development and functioning, dynamic changes

---

[1] See B. Sawa, *Uwarunkowania i konsekwencje psychologiczne zaburzeń mowy u dzieci,* Warszawa 1991; Z. Tarkowski, E.M. Skorek, *Environmental Difficulties in Schoolchildren with Speech Disorders,* Cracow 2008; E.M. Skorek, *Stosunki koleżeńskie dzieci z zaburzeniami mowy i ich szkolne uwarunkowania,* Lubusz Scientific Society 2000; E.M. Skorek, *Dzieci z zaburzeniami mowy wśród rówieśników w klasie szkolnej,* Cracow 2000; E.M. Skorek, *Dzieci z zaburzeniami mowy w szkole. Aspekt wychowawczy,* Cracow 2008; H. Spionek, *Zaburzenia rozwoju uczniów a niepowodzenia szkolne,* Warsaw 1975; E.M. Minczakiewicz, *Zaburzenia mowy a przystosowanie społeczne jednostki*, "Rocznik Komisji Nauk Pedagogicznych PAN", no. 30, Warsaw 1983; E.M. Minczakiewicz, *Społeczno-emocjonalny aspekt zaburzeń mowy dzieci i młodzieży,* "Rocznik Komisji Nauk Pedagogicznych PAN", no. 38, Warsaw 1987; F. Popiół, *O wadach wymowy u dzieci,* [in:] *Nowa Szkoła*, 5, Warsaw 1959, G. Demel, *Z badań nad związkiem między zaburzeniami mowy a powodzeniem szkolnym*, "Życie Szkoły", 10, Warsaw 1960.

in social life, progress in creating new theories on the basis of related scientific disciplines and building a new methodological quality become, in a way, cognitive incentives to verify and deepen the analyses undertaken by the precursors in the study of the phenomenon, including current trends, changes and social needs.

As A. Sameroff writes, everything in the universe influences something or is influenced by something, and this in turn implies the view that the development of a child is a consequence of their dynamic and mutual interactions with the experience they acquire in the social environment.[2] The transactional model of A. Sameroff combines four detailed development models for a better understanding of the rules of development of each social being: *personal change model*, *contextual model*, *regulation model* and *representation model*. The first of them assumes that human development is of specific nature and takes place in a continuous, dynamic system with critical moments that may lead to the mobilisation of development or its inhibition as a result of the occurring abnormalities. The regulation model refers to shaping self-regulation as a result of experiencing the activity and involvement of other people from the environment, and the representation model explains human activity in a specific place and time. The contextual model refers to the ecological concept of Urie Bronfenbrenner, emphasising the mutual influence of the child and the environment on their functioning. In addition, it indicates the significant importance of the family as the primary source of social experience and shows a qualitative change in social contacts at later stages, when the cooperation of the school, educational and peer group environments models the process of socialization of the child.[3] In the context of the discussed issues, the concept of A. Sameroff may constitute a background for explaining the significance of articulation disorders for the level of self-esteem and for identifying the relationships between the level of self-

---

[2] A. Sameroff, *A Unified Theory of Development: A Dialectic Integration of Nature and Nurture*, "Child Development", vol. 81(1), 2010, p. 16.

[3] A. Sameroff, *A Unified Theory of Development: A Dialectic Integration of Nature and Nurture*, "Child Development", vol. 81(1), 2010, pp. 12–16.

esteem and the quality of the intramural and extramural functioning of a child.

A similar point of view on the course of development was presented by Richard M. Lerner in the contextual approach. The author of the conception explains that the concept of development should be considered in the context of dynamic, systematic and orderly changes in society, and above all in each person individually. However, manifested individual changes are not indifferent to other participants of social life, because even the smallest change in human functioning leads to changes in other subsystems that remain inseparable and covariant towards each other. Although in this approach it is recognised that a human being actively participates in shaping the path of their own development on the social, emotional and cognitive level, the context in which a given development takes place is also an important element.[4] This view of development shows that a speech impediment may cause a change in the level of students' self-esteem, and thus determine the quality of their life in the educational and upbringing environment.

An important model of explanation may also be the model of the development of the sense of learned helplessness of John Kirby and Noel Henry Williams, in which failure, understood in this case as abnormalities in the development of the phonetic and phonological system, is perceived by other people from the environment (e.g. peers, teachers, parents or siblings) and leads to doubts in the area of one's own "I", consequently resulting in the consolidation of negative judgements about oneself.[5]

Earlier reports by the researchers of the issue indicate a significant significance of speech disorders for the psychosocial functioning of a child, especially in relation to peer interactions, teacher-student relationship, social position, emotional acceptance, motivation, intrapersonal attitudes, as well as school readiness of six-year-old chil-

---

[4] R.M. Lerner, D.V. Hultsch, *Human Development. A life-span perspective,* McGraw-Hill 1983, pp. 5–6.

[5] J.R. Kirby, N.H. Williams, *Learning Problems. A Cognitive Approach.* Toronto 1991.

dren[6] However, nowadays the image of speech impediments is very complex, because it includes disorders related to perceptual and realisation-related abnormalities. Moreover, the mentioned abnormalities may have a different aetiology, present a different degree of severity, and may concern one, two or more language subsystems, e.g. syntactic, phonological or lexical one. This seems to be important from the point of the present considerations and the research planned in this area, suggesting that the study group in which the researcher conducts the observation should be homogeneous in terms of the type and severity of the occurring speech impediment, in order to allow for the formulation of objective conclusions.

In recent years, the size of the population of children with speech disorders has been estimated at several to several dozen percent, and according to E.M. Minczakiewicz, it should be considered controversial. The study of the aforementioned author, conducted in 1979–1989 in groups of preschool students, showed that speech disorders were revealed by nearly 40% of the students. In turn, in 1985, a team of researchers led by H. Spionek found out that the severity of the occurrence of speech disorders among primary school students is approximately 19.2%.[7]

---

[6] Zob. M. Kielar-Turska, *Sprawności językowe i komunikacyjne a inne funkcje psychiczne,* [in:] *Logopedia – wybrane aspekty historii, teorii i praktyki*, ed. S. Milewski, K. Kaczorowska-Bray, Harmonia Universalis, Gdańsk 2012, pp. 70–85; E.M. Skorek, *Dzieci z zaburzeniami mowy w szkole. Aspekt wychowawczy,* Oficyna Wydawnicza Impuls, Cracow 2008; M. Zając, *Zaburzenia rozwoju mowy a samoocena dziecka,* [in:] *Terapia logopedyczna,* ed. D. Baczała, J.J. Błeszyński, Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń 2014, pp. 237–256; A. Jopkiewicz, *Konsekwencje społeczne, psychologiczne i pedagogiczne nieprawidłowego rozwoju mowy u dzieci*, "Acta Scientifica Academiae Ostroviensis" no. 8, 2001, Ostrowiec Świętokrzyski, pp. 113–123; G. Lindsay, J. Dockrell, *The behaviour and self-esteem of children with specific speech and language difficulties,* "British Journal of Educational Psychology" vol. 70, Great Britain 2000, pp. 583–601; G. Lindsay, J. Dockrell, C.J. Mackie, *Self-esteem of children with specific speech and language difficulties,* "Child Language Teaching and Therapy", 2002, pp. 125–143; A. Frydrychowicz, E. Koźniewska, A. Matuszewski, E. Zwierzyńska, *Skala gotowości szkolnej,* Methodological Centre of Psychological-Pedagogical Counselling, Warsaw 2006.

[7] E.M. Minczakiewicz, *Dyslalia na tle innych wad i zaburzeń mowy u dzieci w wieku przedszkolnym i szkolnym,* "Konteksty Pedagogiczne" 1(8), 2017, pp. 154–155.

According to the latest data, the most common form of speech impediments among students preparing to start their education in the first grade of primary school includes distortions in the field of sound realisation of phonemes. In the 2014/2015 school year, a group of postgraduate speech therapy students and students of special education under the supervision of E. Minczakiewicz conducted research on the school situation of students with speech impediments (including speech sound disorders). The diagnostic survey method was used. The screening tests covered 1,200 students in grades 0–6 from 18 randomly selected primary schools in southern Poland. Two primary objectives of the procedure were defined: 1) recognising and determining the size and type of speech impairments and impediments revealed by students, as well as 2) identifying the social position of students with speech impediments in their grade and the level of their social adaptation. From the aforementioned group of people, a group of 184 children with a diagnosis of speech impairments and impediments was selected, which constituted 15.33% of the general study population. *Pictorial questionnaire for testing the pronunciation of reading and not reading children* by T. Bartkowska (1968) was used to assess the articulation and it was observed that the most frequent disorders in this group of students were incorrect sound realizations of phonemes (61.5%).[8]

The data collected in Table 1 reveal one more regularity observed in practice, that the rate of speech impediments in groups of students decreases with age (from 25% at the level of the preschool grades to 5.43% at the level of the sixth grades of primary school). However, among students completing the stage of early school education, it remains at the level of almost 11%.

The initial analysis of other research results obtained by the same author (the research is ongoing), conducted in the school year 2014/2015 on a sample of 1,248 preschool grade students (≥ 7 years old), both in preschool and school formd, suggests that the speech

[8] E.M. Minczkiewicz, *Dyslalia na tle innych wad i zaburzeń mowy u dzieci w wieku przedszkolnym i szkolnym,* "Konteksty Pedagogiczne" 1(8), 2017, pp. 158–160.

**Table 1.** Scope of speech impediments in primary school students compared to other students in the form

| Grade | Number of students in the form | | Scope of disorders in students with speech impediments | | Speech impediments in students and the gender of the respondents | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Girls | | Boys | |
| | *n* | % | *n* | % | *n* | % | *n* | % |
| 0 | 272 | 100 | 68 | 25.00 | 27 | 39.70 | 41 | 60.30 |
| 1st grade | 308 | 100 | 57 | 18.50 | 16 | 28.10 | 41 | 71.09 |
| 2nd grade | 123 | 100 | 23 | 18.70 | 12 | 52.20 | 11 | 47.80 |
| 3rd grade | 146 | 100 | 16 | 10.96 | 8 | 50.00 | 8 | 50.00 |
| 4th grade | 128 | 100 | 8 | 6.25 | 1 | 12.50 | 7 | 87.50 |
| 5th grade | 131 | 100 | 7 | 5.34 | 3 | 42.80 | 4 | 57.20 |
| 6th grade | 92 | 100 | 5 | 5.43 | 1 | 20.00 | 4 | 80.00 |
| Total | 1200 | 100 | 184 | 15.33 | 68 | 37.00 | 116 | 63.00 |

Source: E. M. Minczakiewicz, *Dyslalia na tle innych wad i zaburzeń mowy u dzieci w wieku przedszkolnym i szkolnym*, [in:] *Konteksty Pedagogiczne 1(8)/2017*, Warsaw, p. 160.

disorder rate in this group of students is approx. 24.6%.[9] This result corresponds to the assumptions of the employees of the Department of Logopaedics and Applied Linguistics at the Maria Curie-Skłodowska University in Lublin that the severity of speech impediments on a national scale in the group of students at the threshold of primary school can be estimated at approx. 25%.[10*]

---

[9] E.M. Minczkiewicz, *Dyslalia na tle innych wad i zaburzeń mowy u dzieci w wieku przedszkolnym i szkolnym,* „Konteksty Pedagogiczne" 1(8), 2017, p. 155. The present research procedure was of indicative and prognostic nature. To assess articulation, *Pictorial questionnaire for testing the pronunciation* by G. Demel (1978) was used. Although the research is still ongoing, the preliminary analysis of the collected research results revealed that the most common speech impediment in this group of students includes articulation disorders – which are present in nearly 63%.

[10] Department of Health and Social Policy of the Marshal Office of Lesser Poland Voivodeship, Regional Health Program of Lesser Poland Voivodeship. J. Tomik, B. Solowska, *Wczesne wykrywanie wad rozwojowych u dzieci w wieku szkolnym w zakresie zaburzeń słuchu i wad wymowy*, Cracow 2018, p. 10.

* These are only estimates, not confirmed by empirical research.

Similarly, in the 2016/2017 school year, employees and doctoral students of the Department of Polish Dialectology and Logopaedics of the University of Łódź conducted speech screening tests among grade 1–3 students of one of the primary schools in Łódź. The aim of the procedure was to determine articulation problems and to assess the structure and performance of the orofacial apparatus of these students. The articulation was assessed on the basis of selected pictures from *Speech therapy test for children and youth*, developed by Iwona Michalak-Widera (2009).[11] Out of 150 children subjected to the test, 71 revealed symptoms of articulation disorders, which accounted for 47% of the respondents. As it results from the data collected in Table 2, among the paradigmatic disorders, the most frequent abnormalities were non-normative realizations of dentalised phones of the rustling series (59% of students, including 25% at the 3rd grade level).[12]

**Table 2.** Types of speech impediments in the tested grade 1–3 students of primary schools

| Types of phoneme groups realised in a non-normative way | *š, ž, č, ǯ* | | *s, z, c, ʒ* | | *l* | | *k* | | *g* | | *t, d, n* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grade | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % |
| 1st grade | 9 | 13 | 5 | 7 | 0 | 0 | 3 | 4 | 3 | 4 | 0 | 0 |
| 2nd grade | 15 | 21 | 16 | 14 | 0 | 0 | 2 | 3 | 2 | 3 | 2 | 3 |
| 3rd grade | 18 | 25 | 8 | 11 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total: | 42 | 59 | 29 | 41 | 1 | 1 | 5 | 7 | 5 | 7 | 2 | 3 |

Source: E. Gacka, M. Kaźmierczak, *Przesiewowe badania mowy jako przykład działań z zakresu profilaktyki logopedycznej*, "Logopaedica Lodziensa" no. 1, ed. I. Jaros, Łódź 2017, p. 38.

---

[11] The pictures of objects and phenomena, whose names usually contain incorrectly realised phonemes, or *sz, rz/ż, cz, dż, s, z, c, dz, ś, ź, ć, dź, r, l, j* were used selectively.

[12] E. Gacka, M. Kaźmierczak, *Przesiewowe badania mowy jako przykład działań z zakresu profilaktyki logopedycznej*, [in:] *Logopaedica Lodziensa nr 1*, ed. I. Jaros, Łódź 2017, pp. 35–41.

Other analyses of the results of the studies concerning this issue also confirm that the incorrectly realised groups of phonemes in groups of children of 3;3–6;11 and 7;0–13;1 with peripheral dyslalia are most often dentalised phones of the rustling series (> 95% of the respondents) and the hissing series (> 75% of the respondents).[13,14]

Although the normative realization of dental phones should be fixed in the phonological system until the child turns 5 years of age, the above-mentioned analyses of the research results confirm the opinion known from the source literature that the described articulation disorder (sigmatism, lisp) is invariably the most common speech impairment in the preschool and early school period.[15]

---

[13] The study carried out by D. Pluta-Wojciechowska in a group of 69 patients with isolated phoneme realization disorders of peripheral aetiology in the Lesser Poland and Silesian Voivodeship in 2014–2018. Based on the age criterion, the author distinguished 3 smaller study groups in the research sample: 3;3–6;11 (n = 23), 7;0–13;1 (n = 23) and 15;0–40;0 (n = 23). Because of the fact that the issues discussed in the present article concern children of early school age, only the results obtained in the first two groups were mentioned. Incorrect realizations of the phones of the rustling series (š, ž, č, ǯ) were recognised in 44/46 people (> 95%), and 36/46 people (> 75%) presented incorrect realizations of the phones of the hissing series (s, z, c, ʒ). The report on the results of the study is discussed in detail in the monograph *Efektywność terapii dyslalii. Logopedyczno-lingwistyczna analiza wyników badań* by D. Pluta-Wojciechowska (Wydawnictwo Uniwersytetu Śląskiego, Katowice 2019).

[14] There is little data on the scale of severity of speech impediments among students at particular educational stages. Particularly, there is a lack of studies that would allow for the determination of the size of the phenomenon on a national scale. All the studies discussed in the text were of a regional nature.

[15] See J.T. Kania, *Szkice logopedyczne,* Wydawnictwo Szkolne i Pedagogiczne 1982; G. Jastrzębowska, *Podstawy teorii i diagnozy logopedycznej*, Studia i Monografie no. 263, Wydawnictwo Uniwersytetu Opolskiego, Opole 1998; E. Jeżewska-Krasnodębska, *Przyczyny zaburzeń artykulacji zlokalizowane w układzie obwodowym,* Oficyna Wydawnicza Impuls, Cracow 2015; E. Gacka, M. Kaźmierczak, *Przesiewowe badania mowy jako przykład działań z zakresu profilaktyki logopedycznej*, "Logopaedica Lodziensa" no. 1, ed. I. Jaros, Łódź 2017, ed. 35–34; E.M. Minczakiewicz, *Dyslalia na tle innych zaburzeń wad i zaburzeń mowy u dzieci w wieku przedszkolnym i szkolnym*, "Konteksty Pedagogiczne PAN 1(8), Bielsko-Biała 2017, pp. 149–169; D. Pluta-Wojciechowska, *Efektywność terapii dyslalii. Logopedyczno-lingwistyczna analiza wyników badań,* Wydawnictwo Uniwersytetu Śląskiego, Katowice 2019.

The above findings determined the selection of the research sample, which included children with disorders of the sound realization of dentalised phonemes.[16]

The school period, called the last stage of childhood in human development, is the most dynamic stage of *own Self* development as a result of improving cognitive functions and enriching social competences. In that period, the child faces numerous developmental challenges, the most important of which are building a sense of competence and shaping self-esteem.[17] During this period, the importance of comparing one's own skills with the skills of friends grows, which is manifested in the form of "tries", "bets", e.g. who will reach the pitch faster. Such confrontations allow for the development of knowledge about oneself, on the continuum of which there are both good experiences influencing a positive *self-image*, as well as negative ones that contribute to lower self-esteem.[18]

Self-esteem is a concept defined on the basis of various disciplines, including psychology, sociology, education or anthropology. In psychology, and especially in personality psychology, self-esteem is defined as "the function of the difference between the *ideal self* and the *real self*".[19] The concept of the *Self* refers to the cognitive aspects of the *Self* system and denotes the subjective knowledge that each person has about themselves, which changes over the life cycle under the influence of social experiences. The size of the disproportion between the two indicated dimensions of the *Self* determines the level of self-esteem. And so, if there is no significant difference between them, it is called a high level of self-esteem. However, the greater the discrepancy between the *real Self* and the *ideal Self*, the poorer self-image.[20]

---

[16] Dentalised phonemes: [s], [z], [c], [ʒ], [š], [ž], [č], [ǯ], [ś], [ź], [ć], [ʒ́]

[17] E. Erikson, *Dzieciństwo i społeczeństwo,* translated by Przemysław Hejmej, Dom Wydawniczy Rebis, Poznań 1997, pp. 269–272.

[18] T. Lewandowska-Kidoń, D. Wosik-Kowala, *Rozwijanie poczucia własnej wartości u dzieci w młodszym wieku szkolnym,* Cracow 2009, pp. 20–24.

[19] M. Szpitlak, R. Polczyk, *Samoocena. Geneza, struktura, funkcje i metody pomiaru,* Wydawnictwo Uniwersytetu Jagiellońskiego, Cracow 2015, p. 10.

[20] H.R. Schaffer, *Rozwój społeczny. Dzieciństwo i młodość,* Wydawnictwo Uniwersytetu Jagiellońskiego, Cracow 2006, pp. 169–184.

According to L. Niebrzydowski, self-esteem is an isolated foundation of the social being's knowledge about themselves.[21] Similarly, H. Kulas postulates that self-esteem is "a fragment of a larger organisation, an element of the human knowledge system about themselves".[22]

It should be added that depending on the authors and concepts, the terms *self-esteem* and *self-image* are considered to be have the same or different meaning.[23] In this study, the indicated terms will be treated as synonymous.

In the applied research tool, the definition of self-esteem as "conscious attitude towards the *Self* and emotions related to the object, which is own *Self* related (...) to cognitive judgements about oneself", was adopted as the basis for drawing conclusions about the level of self-esteem in early school age children".[24] The characteristics of the general self-esteem as well as the specific (detailed) self-esteem referring to particular spheres of human functioning, including the cognitive-intellectual, physical or socio-moral sphere were described. In such an approach, self-esteem is therefore a holistic assessment of own value and is expressed in the attitude of the social being towards their own *Self*. This attitude can have two dimensions: negative or positive. A negative attitude is a reflection of a low level of self-esteem, in which the individual rejects own *Self*

---

[21] L. Niebrzydowski, *O poznawaniu i ocenie samego siebie*, Wydawnictwo Nasza Księgarnia, Warsaw 1976, p. 52.

[22] H. Kulas, *Samoocena młodzieży*, Wydawnictwa Szkolne i Pedagogiczne, Warsaw 1986, p. 9.

[23] Zob. D. Tuttle, N. Tuttle, *The Development of Self-esteem*, [in:] *Self-esteem and Adjusting with Blindness*, red. D. Tuttle, N. Tuttle, Springfield 2004; J. Kata, *Poczucie własnej wartości u młodzieży. Wymiar teoretyczny i praktyczne implikacje,* "Nauczyciel i Szkoła" 2018/3, no. 67, pp. 95–104; J. Kozielecki, *Psychologiczna teoria samowiedzy*, Wydawnictwo Naukowe PWN, Warsaw 1986, A. Zbonikowski, *Poczucie własnej wartości dziecka z ograniczeniami w rozwoju,* "Pedagogika Rodziny 1/3/4", 2011, pp. 59–68.

[24] J. Góźdź, E. Wysocka, The Questionnaire on Intrapersonal and Interpersonal Attitudes and those Towards the World *(QIIATW). Podręcznik testu – wersji dla uczniów szkoły podstawowej klas I–III,* Warsaw 2011, p. 11.

and manifests chronic dissatisfaction with the undertaken activities. In the case of a positive attitude, the individual presents a high level of self-esteem and feels a valuable, socially important person.[25]

Based on the above considerations, it can be concluded that the level of self-esteem has an impact on the school functioning of students. In the early school period, the student learns about themselves based on the increasingly deeper self-reflection, based on social comparisons, based on relationships with teachers and parents, or based on feedback from the environment, including peers who set criteria for success and failure.[26] In the literature, there are several criteria for the division of self-esteem, including the degree of generality, durability, value, level or compliance and validity of the self-esteem with the actual capabilities of the individual. The last two criteria have been adopted as the basis for the considerations in the present paper. Considering the indicator of the level of self-esteem, high self-esteem, which is characterised by satisfaction with undertaken activities and oneself, and low self-esteem, characterised by low faith in the possessed capabilities and the belief to be worse than others, can be distinguished. In the case of the second criterion, or the compliance and validity of the self-esteem with the actual abilities of the individual, adequate and inadequate self-esteem is indicated. The self-esteem can be called adequate when a person properly assesses their own abilities. In turn, inadequate self-esteem is manifested in two dimensions and is the result of the inability of a person to objectively evaluate their own skills. The first dimension of inadequate self-esteem is lowered self-esteem, when a person incorrectly evaluates their own abilities, does not believe in themselves and rejects faith in success. At the opposite extreme is inflated self-esteem, characterised by a tendency to overestimate own abilities and overconfidence.[27]

---

[25] M. Rosenberg, *Society and adolescent self-image*, Princeton University Press, New York 1965, pp. 30–31.

[26] A. Jędrzejewska, *Samoocena dziecka – źródła i komunikaty weryfikujące,* “Zbliżenia Cywilizacyjne” no. 1(1) 2016, pp. 144–161.

[27] P. Borowiecki, *Samoocena osób z niepełnosprawnością w świetle wybranej literatury i badań własnych*, “Niepełnosprawność – zagadnienia, problemy, rozwiązania”

Thanks to the experience of joy resulting from own successes and achievements and a favourable attitude of the environment, students develop high, realistic self-esteem, which makes them resistant to school failures and difficulties, strengthens their determination in achieving set goals and supports the development of peer relationships.[28] A parent who wants to activate the development of adequate self-esteem in a child should believe in their individual abilities, be consolation in failures, strengthen their positive qualities, be an attentive listener, set real expectations and requirements, and apply the so-called constructive discipline that relates to the behaviour and not directly to the child as a human being. In addition, they should avoid unjustified negative comments and evaluations, consider the feelings of the child, and also be an example of high self-esteem in order to be a role model for the child.[29]

Bearing in mind that during the school period, the role of other significant people from outside the family environment of the child, including teachers, increases, it can be assumed that similar behaviours should be presented by the teacher in interactions with students to support them in the process of the development of adequate self-esteem. According to N. Branden, teachers with high self-esteem are able to perceive the potential of a student, while those with low self-esteem focus mostly on the weaknesses and imperfections of their pupils.[30] In the everyday work, a teacher should respect the subjectivity and individuality of students, fairly assess their achievements, minimise competitive behaviour, promote group initiatives and community activities, as well as be a vigilant

---

no. II/2015(15), [after:] D. Wosik-Kawala, *Korygowanie samooceny uczniów gimnazjum*, Lublin, Wydawnictwo UMCS, 2007.

[28] A. Jędrzejewska, *Samoocena dziecka – źródła i komunikaty weryfikujące,* "Zbliżenia Cywilizacyjne" no. 1(1) 2016, pp. 146–147.

[29] M. Ryś, *Kształtowanie się poczucia własnej wartości i relacji z innymi w różnych systemach rodzinnych,* "Kwartalnik naukowy" 2(6), 2011, p. 77.

[30] N. Branden, *6 filarów poczucia własnej wartości* (translated by H. Dąbrowska), Wydawnictwo Ravi, Łódź 1998, pp. 220–221.

observer of students' behaviour, to cooperate with specialists if necessary and at the right moment.[31]

An important background for the development of self-esteem is the quality of the relationship and the student's status in the peer group. The student gets to know themselves, their strengths and weaknesses, as a result of social comparisons with peers. Not always the individual self-image perceived through the eyes of a student is consistent with the ideas of other people, which is not without significance for their self-esteem. The more different these two positions are, to the disadvantage of the student, the lower self-esteem. A child who is appreciated and liked by peers has a greater chance of developing high, adequate self-esteem, as peer acceptance is the foundation that strengthens the development of self-image.[32]

The feeling of inadequacy in relation to the imposed social expectations, the feeling of lack of support from the family, peers and the educational environment, as well as failure in tasks resulting from the role of a student, shape a low level of self-esteem in the student, which may consequently lead to a reduction in their development potential, cause a feeling of uselessness and shame, arouse fear of changes and a tendency to give up, as well as limit interaction with the social environment.[33] As mentioned earlier, the sense of being accepted and appreciated in the peer group has a significant impact on the self-esteem of a student, therefore all manifestations of rejection and loss of social position in a group of friends

---

[31] R. Biernat, *Troska o poczucie własnej wartości dzieci w rzeczywistości szkolnej – wymiar teoretyczny i praktyczne implikacje*, "Społeczeństwo. Edukacja. Język" no. 4, 2016, p. 162.

[32] M. Supińska, *Dzieci izolowane i odrzucone*, "Życie Szkoły" no. 2, 2003, p. 89, [after:] R. Biernat, *Troska o poczucie własnej wartości dzieci w rzeczywistości szkolnej – wymiar teoretyczny i praktyczne implikacje*, "Społeczeństwo. Edukacja. Język" no. 4, 2016, p. 163.

[33] K. Appelt, *Wiek szkolny. Jak rozpoznać potencjał dziecka?,* [in:] *Psychologiczne portrety człowieka. Praktyczna psychologia rozwojowa*, ed. A. I. Brzezińska, Gdańskie Wydawnictwo Psychologiczne, Gdańsk 2019, pp. 274–295.

lower the self-esteem of children and may intensify the feeling of loneliness.[34] The source of lowered self-esteem in students may also include educational mistakes of parents, and M. Ryś notices them, among others, in critical and unfriendly comparisons of own child with peers, in constant pointing out mistakes, failure to respect individual views and opinions of the child, or in unjustified punishment and use of violence.[35]

Articulation disorder is a type of abnormality that, to a greater or lesser extent, can determine the quality of the functioning of a child. Between 7–8 years of age, the child develops general self-esteem, referring not only to specific assessments (e.g. sports achievements, school achievements), but to the person as a whole.[36] Abnormalities in sound realizations may indirectly affect self-esteem because of the increased probability of a sense of shame, peer rejection or limited social contacts as a result of accompanying deficits. The accumulation of negative experiences in contacts with others by a student with impaired articulation, does not remain indifferent to the knowledge they develop about themselves, because of the incomprehensibility of the transmitted messages. Communication is one of the key tools which serve the adaptation of a person to social life, therefore any deviations in this area may lead to withdrawal from the relationship, lack of a sense of competence, reduced pleasure and joy from contacts, avoiding social exposure, and finally to lowered self-esteem.

---

[34] See R. Biernat, *Troska o poczucie własnej wartości dzieci w rzeczywistości szkolnej – wymiar teoretyczny i praktyczne implikacje*, "Społeczeństwo. Edukacja. Język" no. 4, 2016, pp. 162–163; A. Jędrzejewska, *Samoocena dziecka – źródła i komunikaty weryfikujące*, "Zbliżenia Cywilizacyjne" no. 1(1) 2016, p. 147; M. Knopik, *Zaburzona komunikacja a relacje społeczne. Zagrożenia i strategie wsparcia*, [in:] *Uczeń ze specjalnymi potrzebami edukacyjnymi*, ed. E. Domagała-Zyśk, Lublin 2012, p. 36.

[35] M. Ryś, *Kształtowanie się poczucia własnej wartości i relacji z innymi w różnych systemach rodzinnych*, "Kwartalnik naukowy" 2(6), 2011, p. 79.

[36] H.R Schaffer., *Rozwój społeczny. Dzieciństwo i młodość*, Wydawnictwo Uniwersytetu Jagiellońskiego, Cracow 2006, pp. 169–184.

A person with a speech impairment may perceive their difficulties as stigmatising, embarrassing and feel an incompetent interlocutor, which in turn may reduce the motivation to be active and lower self-esteem in many areas.[37]

## Methodology and results of own research

The results of the research discussed in this part of the paper are a fragment of a wider study on the significance of disorders of the sound realization of dentalised phonemes for intrapersonal and interpersonal relationships, as well as attitudes towards the world of children completing the early school education stage in the Greater Poland region.[38] The study was conducted in the period from December 2018 to February 2019 in ten primary schools in the Greater Poland Voivodeship in two groups of 3rd grade students, or a group of students revealing sigmatism-type articulation disorders and a group of students without articulation disorders. A total of 69 students were the subject of the study. One of the observations was considered an outlier and it was finally decided not to include it in the analyses, even though the result of the boy did not affect the differences between the study groups in the Student's t-test and in the comparison of the Student's t-test results with the Mann–Whitney U test (Table 3.) Excluding the outlier allowed for two equal 34-people research samples. A box plot was used to graphically present the observations (Figure 1). The score of the boy on the self-esteem scale was 13/40 points. The form master explained that the boy began his education in 1st grade as a six-year-old, but the

---

[37] M. Knopik, *Zaburzona komunikacja a relacje społeczne. Zagrożenia i strategie wsparcia,* [in:] *Uczeń ze specjalnymi potrzebami edukacyjnymi,* ed. E. Domagała-Zyśk, Lublin 2012, pp. 30–36.

[38] The author's own research conducted as part of the master's thesis entitled "The significance of articulation disorders of the sigmatism type for intrapersonal and interpersonal attitudes and attitudes towards the world of children completing the stage of early school education in the Greater Poland region".

increasing difficulties in learning to read and write prompted the mother to decide that the boy would repeat 3rd grade in the year of the study.

**Table 3.** Results of the tests of significant difference and the Mann-Whitney test

| Test | Result | p-value |
|---|---|---|
| Student's t (69 people) | 0.143 | 0.887 |
| Student's t (68 people) | 0.583 | 0.562 |
| Mann-Whitney U | 562 | |

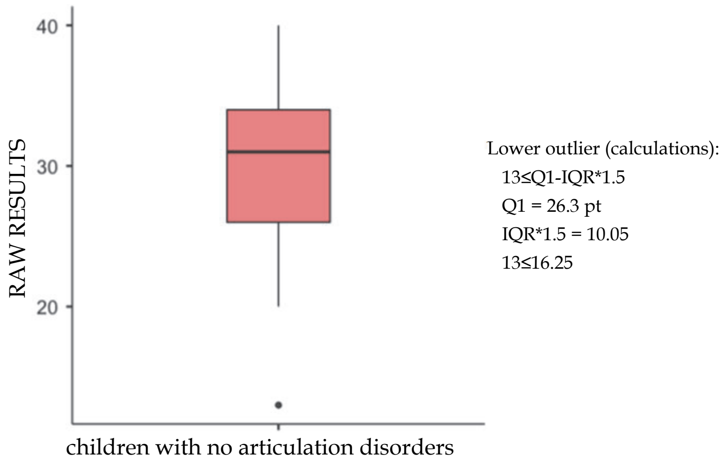



**Fig. 1.** Self-esteem An outlier in a group of children without articulation disorders of the sigmatism type

The collected empirical data are products of a diagnostic measurement that is part of the area of exploratory research. The indicated type of research allows for the identification of a phenomenon in a research sample which is of interest for the researcher, thanks to the answer to the problem question posed earlier, which gives direction to the entire research procedure. Exploratory research does

not verify theoretical statements with the intention of confirming or falsifying them, but allows for the collection of tips and ideas for building a theory. Therefore, in such studies hypotheses are not formulated, as their main goal is to describe the existing reality, without considering the relationship between dependent and independent variables.[39]

When designating the purpose of the study in relation to the research methodology, it was assumed that it was to determine the significance of disorders of the sound realization of dentalised phonemes for the level of self-esteem of students completing the stage of early school education. As part of the research aim defined in this way, the main problem and three detailed problems were formulated, and then answers were sought in the course of the analysis and interpretation of the collected data:

1. What is the level of self-esteem of 3rd grade students revealing disorders of the sound realization of dentalised phonemes and not revealing articulation disorders, and what are the differences between the study groups in this respect?
   - **1.1.** What is the level of self-esteem of 3rd grade students revealing articulation disorders of the sigmatism type?
   - **1.2.** What is the level of self-esteem of 3rd grade students not revealing articulation disorders?
   - **1.3.** Does the level of self-esteem differ in the study groups of students with articulation disorders of sigmatism type and without articulation disorders and in which way?

In order to recognise the level of self-esteem of the students, a research tool created by Joanna Góźdź and Ewa Wysocka, or The Questionnaire on Intrapersonal and Interpersonal Attitudes and those Towards the World (QIIATW) – in a version for 1–3 grade students of primary schools was used.[40] The theoretical basis of the questionnaire is the cognitive theory of personality, the fundamen-

[39] K. Konarzewski, *Jak uprawiać badania oświatowe. Metodologia praktyczna,* WSiP, Warsaw 2000, pp. 12–47.

[40] Publishing house: Ministry of National Education, Cracow 2011.

tal assumptions of which focus on the content of how a human being understands the world and themselves, and how they function in the surrounding world adequately to internalised beliefs about this world and themselves. Finally, after the verification of the pilot studies and the actual studies, the questionnaire contained a total of 59 statements relating to four scales:

1. **self-esteem**,
2. **Interpersonal relationships** – with two subscales:
   a. me towards others,
   b. others towards me,
3. belief in self-efficacy vs. learned helplessness – with two subscales:
   a. intramural situations,
   b. extramural situations,
4. **basic hope**.

The results of the reliability analyses for the self-esteem scale (Cronbach's alpha = 0.68 and Spearman-Brown coefficient = 0.62) allow the presented tool to be considered reliable and applicable for scientific purposes. Kendall's W coefficient of concordance was 0.530 ($p = 0.001$), which is the basis for adopting the opinion that the items making up the individual scales of the QIIATW (PS 1–3) relate to the area defined in theoretical assumptions to a large or very large extent.[41] However, the analysis showed the presence of statistically significant differences between the mean scores of girls and boys, therefore the normal sten scores of the questionnaire scales were calculated individually for the group of girls and boys. In addition, it was found that the results in the range between 7 and 10 sten are considered high, between 5 and 6 sten as average, and the results ≤ 4 as low.

The selection of students for the research samples was purposive, because it was important to create two separate groups that would

---

[41] J. Góźdź, E. Wysocka, *Kwestionariusz Nastawień Intrapersonalnych, Interpersonalnych i Nastawień wobec Świata (KNIIŚ). Podręcznik testu – wersja dla uczniów szkoły podstawowej klas I–III*, Ministry of National Education, Warsaw 2011, pp. 39–41.

meet certain conditions and thanks to which it would be possible to formulate answers to the posed problem questions. Due to the minority of respondents, parents were previously asked to provide their consent for the participation of their child in the study. Children with articulation disorders of the sigmatism type were selected by a school speech therapist working in a given educational institution. However, earlier, the author of the study met the speech therapist to clarify the criteria for qualifying students to the research samples (Table 4 and Table 5). Although in the latest reports it is

**Table 4.** Criteria for inclusion in the research sample

<table>
<tr><th>Children with disorders of the sound realization of dentalised phonemes</th><th>Children without disorders of the sound realization of phonemes</th></tr>
<tr><td colspan="2">3rd grade students of primary school</td></tr>
<tr><td colspan="2">Polish as the mother tongue</td></tr>
<tr><td colspan="2">area: Greater Poland Voivodeship</td></tr>
<tr><td colspan="2">students without global developmental disorders; within the intellectual norm</td></tr>
<tr><td>children revealing disorders of the sound realization of dentalised phonemes</td><td>children not revealing disorders of the sound realization of dentalised phonemes</td></tr>
</table>

postulated to depart from the traditional, auditory assessment of articulation disorders in favour of a causal and symptomatic multisensory diagnosis[42], only those children whose deviations from the articulation standard can be identified on the basis of auditory assessment were included in the designed research procedure. It was important because of the fact that the abnormalities in the sound substance can be noticed by any person not being a speech therapist, including children.The total number of respondents was 68 children completing the stage of early school education, including:

---

[42] See. D. Pluta-Wojciechowska, *Dyslalia obwodowa. Diagnoza i terapia logopedyczna wybranych zaburzeń,* Wydawnictwo Ergo-Sum, Bytom 2017; D. Pluta-Wojciechowska, *Efektywność terapii dyslalii. Logopedyczno-lingwistyczna analiza wyników badań,* Wydawnictwo Uniwersytetu Śląskiego, Katowice 2019.

a) 34 children with comorbid disorders of the sound realization of dentalised phonemes (10 girls and 24 boys),
b) 34 children not revealing disorders of the sound realization of phonemes (12 girls and 22 boys).

**Table 5.** Criteria for exclusion from the research sample

<table>
<tr><th>Children with disorders of the sound realization of dentalised phonemes</th><th>Children without disorders of the sound realization of phonemes</th></tr>
<tr><td colspan="2">no written consent from the parents/legal guardians for the participation of their child in the study</td></tr>
<tr><td colspan="2">no consent from the headmaster of the school to conduct the study in the facility</td></tr>
<tr><td>presence of disorders of the sound realization of phonemes other than dentalised phonemes (in the auditory assessment)</td><td>–</td></tr>
</table>

Depending on the number of students participating in the study in a given institution, the completion of the questionnaire was conducted in direct contact between the researcher and the examined person or in small groups. At this age, the reading skills of children still remain at varying levels, so the person conducting the study read the consecutive statements aloud and, if necessary, clarified any doubts on an ongoing basis. Children who were able to read fluently could continue to complete the test sheet at their own pace. The biggest problem was noticed in the understanding of the reverse diagnostic questions, so the author had to reformulate them relatively often so that they would become understandable to minor respondents.

After collecting all the necessary data, the research material was organised with division into individual scales and subscales, and an analysis was carried out by comparing the results obtained in two groups using the Student's t-test for independent samples. The *self-esteem* scale comprised 10 statements, including four reverse diagnostic tasks:

1. I believe that I deserve praise as much as my colleagues.
2. I do many things well enough.
3. I love myself.
4. I like my physical appearance.
5. In fact, I can handle everything as well as others.
6. I am ok.
7. <u>It happens that I am worried about what I am.</u>
8. <u>It happens that I am not satisfied with myself.</u>
9. <u>It happens that I feel hopeless.</u>
10. <u>It happens that I feel a little worse than others.</u>

The analysis of the test results was conducted in relation to the four-point graphical scale presented in the test sheet, bearing in mind that in the reverse diagnostic questions the scores should be reversed according to the rule: 4 = 1, 3 = 2, 2 = 3, 1 = 4.[43] To compare the results of children revealing disorders of the sound realization of dentalised phonemes (in other words: children with a speech impediment of the sigmatism type, children with an articulation disorder of the sigmatism type) with the results of children not revealing articulation disorders, only raw scores were used, because the normal sten scores for the group of girls and boys were calculated separately for each gender. However, the interpretation of the obtained sten ranges for each group was formulated on the basis of the key to the description of results, which is one of the appendices in the test manual, as well as in reference to the literature explaining the social and psychological symptoms of low, average or high self-esteem.

During the analysis of the results of the collected data on the self-esteem scale for the group of girls revealing disorders of the sound realization of dentalised phonemes and not revealing articulation disorders (Table 6 and Table 7), it was observed that the group of girls with a speech impediment seems to constitute a more

[43] J. Góźdź, E. Wysocka, *Kwestionariusz Nastawień Intrapersonalnych, Interpersonalnych i Nastawień wobec Świata (KNIIŚ). Podręcznik testu – wersji dla uczniów szkoły podstawowej klas I–III*, Ministry of National Education, Warsaw 2011, p. 44.

homogeneous group, as the differentiation of the mean raw scores is 12 pts., and the mean score is in the range of 24.52; 32.28 and corresponds to the range of sten scores of 3; 6 (low results – average results).

**Table 6.** Self-esteem Raw scores for groups of girls and boys

| Group name | Girls with a speech impediment of the sigmatism type | Girls with no speech impediments | Boys with a speech impediment of the sigmatism type | Boys with no speech impediments |
|---|---|---|---|---|
| **Number of respondents** | 10 | 12 | 24 | 22 |
| **Mean** | 28.9 | 29.5 | 30.08 | 30.91 |
| **Median** | 29.5 | 31 | 31 | 31 |
| **Standard deviation** | ± 3.38 | ± 5.45 | ± 4.99 | ± 4.79 |
| **Range of results** | 12 | 18 | 29 | 16 |
| **Minimum** | 23 | 20 | 19 | 24 |
| **Maximum** | 35 | 38 | 39 | 40 |
| **Mean raw score range** | 25.52; 32.28 | 24.05; 34.95 | 25.09; 35.07 | 26.12; 35.7 |

**Table 7.** Self-esteem Sten scores for groups of girls and boys*

| Group name | Girls with a speech impediment of the sigmatism type | Girls with no speech impediments | Boys with a speech impediment of the sigmatism type | Boys with no speech impediments |
|---|---|---|---|---|
| Number of respondents | 10 | 12 | 24 | 22 |
| Mean sten score | 4 | 5 | 5 | 5 |
| Median | 5 | 6 | 6 | 6 |
| Standard deviation | ± 1.69 | ± 2.45 | ± 2.09 | ± 2.12 |
| Range of results | 6 | 8 | 9 | 7 |
| Minimum | 2 | 1 | 1 | 3 |
| Maximum | 8 | 9 | 10 | 10 |
| Mean sten score range | 3; 6 | 2; 7 | 3; 7 | 4; 7 |

* Explanations: The mean sten score ranges are presented as integers, and the mean sten scores in each group were assumed in relation to the calculated mean value of the raw scores.

The lowest mean sten scores for the group of girls revealing articulation disorders of the sigmatism type were at the sten level 3, which means that the respondents obtained scores close to the upper limit of the low score range in terms of self-esteem. According to the key to the interpretation of the research results, the range of low scores in the area of self-esteem suggests that there may be a basis for the conclusions that children have problems with developing a positive self-image. This means that children can express negative judgements and emotions towards themselves, focus on their weaknesses, and show dissatisfaction with who and what they are. In a child with a negative self-image, upward social comparisons, or "others are better than me" dominate, and the difficulties in adapting to new situations and fear of changes may also be present. As reported in the literature, in some cases low self-esteem may result in the appearance of suicidal thoughts or under some circumstances lead to depression.[44] Children with low self-esteem are susceptible to hurt and unpleasantness, and more often cause behavioural issues.

The highest mean sten scores for this group reach the level of 6 stens, which means that the respondents achieve the level of the upper limit of the range of average results. However, the average result should be considered alarming as it proves the student's ambivalent attitude towards themselves. The child thinks about themselves in two categories – a positive and negative one, without showing a tendency to compare themselves with others. However, they are uncertain whether they are "good enough", lovable or valuable.

Therefore, the obtained results should constitute a source of pedagogical reflection and raise in teachers the inner conviction about the need to strengthen the student's faith in their own abilities, minimise the feeling of dissatisfaction and focus on developing such positive qualities that will become the foundation for building a new, better self-image.

---

[44] A. Góralewska-Słońska, *Poczucie własnej wartości jako potencjał jednostki,* "Problemy Profesjologii" no. 2, 2011, p. 101.

Moving on to the scores of girls without articulation disorders, the value of the standard deviation in this group is 5.45, which suggests that the scores are less focused around the mean than in the group of girls with a speech impediment. Moreover, the range of raw scores in this group is 18 pts., and the mean raw score is in the range of 24.05; 34.95, thus corresponding to the range of sten scores of 2, 7 (low scores – high scores).

The lowest mean sten scores were at the sten level 2, which means that the respondents obtained scores close to the upper limit of the low score range in terms of self-esteem. Interpretation for the level of 2 stens is similar to that for 3 stens – described above – as the key to the research tool only includes interpretation for three sten ranges, and not for each individual sten. Nevertheless, it should be emphasised that in this case the range of mean sten scores is slightly more dispersed 2; 7, which is a difference of one sten in the lower and upper limits of the range in comparison with girls with disorders of the sound realization of dentalised phonemes. A sten score of 7, which is the lower limit of the high score range, indicates a positive attitude of the student towards themselves and the individual belief that they are "good enough", respectable and lovable person. Based on such an analysis result, it can be assumed that the student shows self-acceptance and complacency, perceives and appreciates their strengths and has positive emotions towards themselves, without feeling inferior to others. High self-esteem is conducive to shaping assertive attitude, as well as accepting criticism and drawing conclusions for the future from failures.[45]

A similar tendency was not noted in the groups of boys revealing articulation disorders of the sigmatism type and not revealing such disorders, because the range of raw scores shows that the group of boys without speech impediments is more homogeneous. However, in both groups the scores differ from the mean to a similar extent, as the value of the standard deviation for the boys with

---

[45] M. Ryś, *Kształtowanie się poczucia własnej wartości i relacji z innymi w różnych systemach rodzinnych,* "Kwartalnik naukowy" 2(6), 2011, p. 78.

a speech impediment is 4.99 and for the boys without a speech impediment is 4.79. In the group of boys presenting articulation disorders of the sigmatism type, the mean raw score is in the range of 25.09; 25.07 and corresponds to the same range of sten scores of 3; 7 (low scores – high scores).

The lowest mean sten scores for this group of respondents were at the level of 3 stens, which indicates that the study boys obtained results close to the upper limit of the low scores on the self-esteem scale. A sten score of 3 suggests that the student has a negative attitude towards themselves and feels inferior to their peers. Moreover, the study by S. Coopersmith (1967) revealed that boys with decreased self-esteem set themselves significantly lower goals and achieved worse results than boys with positive self-image.[46]

Moving on to the highest mean raw scores, boys with a speech impediment of the sigmatism type achieved a sten score of 7, which allows for a conclusion that they create a positive self-image. They do not feel inferior to their peers, thanks to which they feel positive emotions when thinking about themselves. In the study of S. Coopersmith, boys with high self-esteem set themselves higher and more realistic goals, were more inclined to undertake effort and new challenges, as well as to cooperate in a group. Moreover, they showed greater emotional expression.[47]

In the case of boys not revealing articulation disorders, the range of mean raw scores is 26.12; 35.7, and the mean of the raw scores is 30.91 pts., which on the scale of sten scores indicates the level of 5 stens, i.e. the lower limit of the average scores. On this basis, it can be concluded that such a student has a relatively positive attitude towards themselves, although they do not always accept themselves and are often dissatisfied with themselves. All their

---

[46] A. Malecha, *Samoocena a funkcjonowanie dziecka w warunkach klasy szkolnej,* [in:] *Współczesne trendy w edukacji dziecka*, ed. M. Styczyński, M. Olejniczak, Konin 2015, p. 136, [after]: S. Coopersmith, *The antecedents of self-esteem*, San Francisco 1967.

[47] A. Malecha, *Samoocena a funkcjonowanie dziecka w warunkach klasy szkolnej,* [after:] *Współczesne trendy w edukacji dziecka*, ed. M. Styczyński, M. Olejniczak, Konin 2015, p. 136, [after]: S. Coopersmith, *The antecedents of self-esteem*, San Francisco 1967.

accompanying emotions become bilateral, or sometimes they are positive and sometimes negative. Importantly, they do not show a tendency to compare themselves with others according to the rule that: "Others are better than me." They require actions aimed at building self-confidence and strengthening the courage to overcome the encountered obstacles and difficulties. It is worth adding that the range of sten scores in this group of the study boys is the same as in the case of boys with disorders of the sound realization of dentalised phonemes, therefore the interpretation stage was intentionally omitted, as it is identical to the description provided in the two previous paragraphs.

**Table 8.** Self-esteem Raw results for groups of children with and without a speech impediment

| Group name | Girls with a speech impediment of the sigmatism type | Girls with no speech impediments |
|---|---|---|
| Number of respondents | 34 | 34 |
| Mean | 29.74 | 30.41 |
| Median | 30 | 31 |
| Standard deviation | ±4.55 | 5 |
| Range of results | 20 | 20 |
| Minimum | 19 | 20 |
| Maximum | 39 | 40 |
| Student's t-test | 0.583 | |
| Significance level | 0.562 | |
| Mean raw score range | (25.19; 34.29) | (25.41; 35.41) |

When analysing the results of the study relevant to the undertaken research issues (Table 8), or the comparison of the results obtained in the group of children with a speech impediment of the sigmatism type and the group of children without articulation disorders, attention should be paid to the result of the Student's t-test

for independent samples t = 0.58 (p = 0.564). The obtained result indicates that the revealed differences in the level of self-esteem in the study groups are not statistically significant. The lower limit of the raw results range, both in the group of girls and boys, corresponds to approx. 63% of the maximum result, and the upper limit to approx. 85% of the highest score possible to be obtained in the study. In both groups, the results deviate from the mean by similar values, and the difference between the scores of students with high and low self-esteem is R=20 pts., allowing for a large dispersion of the results obtained by the tested students. The distribution of raw results presented in the histograms (Figure 2) allows for the observation of the tendency that the majority of results, both in the group

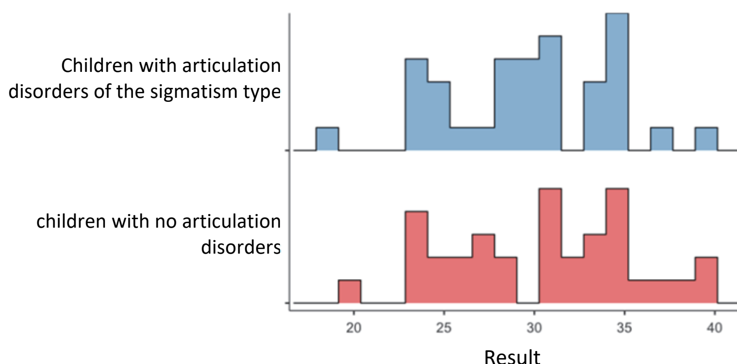



**Figure 2.** Histograms with distribution of raw scores in groups of children with a speech impediment of the sigmatism type and children with no speech impediment

of children with a speech impediment of the sigmatism type, and in the group of children without articulation disorders, are located in the range of 23;35 points. The highest result in the group of children with articulation disorders was 39 pts. and the lowest – 19 pts. A similar, but slightly higher result at the level of 40 pts. was observed in the group of students without articulation disorders. In turn, the lowest score in this group of the study children was 20 pts. The higher value

of the standard deviation in the two groups (SD = 4.55 in the group of children with a speech impediment and SD = 5 in the group of children without articulation disorders) indicates a greater dispersion of the results.[48]

In the specific nature of the purposive selection of the sample it is assumed that the formed research samples do not represent the population, and thus can be used only in individualising research. Therefore, there are no grounds for generalising the obtained research results and drawing general conclusions for the population[49]. The conclusion that the articulation disorder of the sigmatism type is irrelevant to the level of self-esteem of a child completing the stage of early school education is true only for the collected observations. Regardless of the presence or absence of disorders of the sound realization of dentalised phonemes, the results of both study groups on the self-esteem scale fluctuate around the average level.

**Table 9.** Data for the interpretation of violin boxes

| Group name | Children with a speech impediment of the sigmatism type | Children with no speech impediments |
|---|---|---|
| Percentile 25 (Q1) | 26.3 | 26.3 |
| Percentile 50 (median) | 30 | 31 |
| Percentile 75 (Q3) | 33 | 34 |
| Interquartile range (IQR) | 6.7 | 7.7 |

The violin box is the modern successor to the box plot invented by J. Tukey in 1970.[50] It constitutes a combination of a box plot and a density plot. Although it is not so popular, it allows for a clear

---

[48] B.M. King, E.W. Minium, *Statystyka dla psychologów i pedagogów,* tłum. Marzenna Zakrzewska, Wydawnictwo Naukowe PWN, Warszawa 2020, s. 125.

[49] K. Konarzewski, *Jak uprawiać badania oświatowe. Metodologia praktyczna,* WSiP, Warszawa 2000, s. 108.

[50] H. Wickham, L. Stryjewski, *40 years of boxplots,* 2011, p. 2.

presentation of data. In the above plots it can be observed that their shape and observation dispersion in individual samples are similar. The wider sections of the violin plot represent a higher probability of an observation of a particular value, and the narrower sections correspond to a lower probability. 25% of people in each of the study samples obtained results equal to or lower than the value of the first quartile, or 26.3 pts. In the group of children with articulation disorders, 25% of the respondents obtained a score of ≥ 33 pts., while 25% of the respondents in the group of children not revealing articulation disorders obtained a result of ≥ 34 pts.

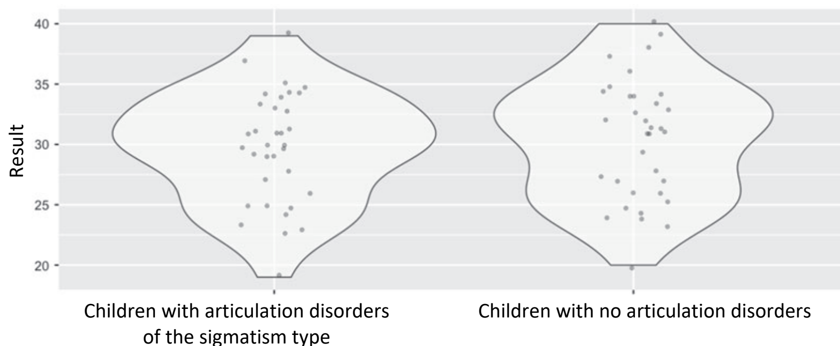



**Figure 3.** Distribution of raw results in the groups of children with articulation disorders of the sigmatism type and children without articulation disorders presented in violin boxes

50% of the study observations are present in the interquartile range (IQR), defined as the difference between the value of the first and third quartiles. The greater the width of the IQR, the greater the measure of differentiation of the study trait in the sample. And so, the interquartile range in the group of children without articulation disorders is greater than in the group of children with a speech impediment of the sigmatism type, which proves a slightly greater variation in the level of self-esteem in children who do not reveal articulation disorders.

To sum up, the discussed analysis of the results is not optimistic, as over 30% of the observations in the two studied research samples achieved a result at an average level. Another 23/68 respondents (slightly over 35% of all respondents) obtained low results, which suggests that they reveal a negative attitude towards themselves and a tendency to compare themselves with others who are "better" than themselves. Although 24 out of 68 study students (approx. 35%) show a high level of self-esteem, the obtained results are closer to the lower limit of the high score (7-8 stens). Only 4 people, which is less than 6% of the respondents, reached the level of 9 and 10 stens.

## Conclusion

The analysis of the collected research material concerning the level of self-esteem of students revealing and not revealing disorders of the sound realization of dentalised phonemes and at the same time completing the stage of early school education demonstrated that the tested students, regardless of the presence of absence of a speech impediment of the sigmatism type, present on average a mean level of self-esteem – ± 75% of the maximum score. Bearing in mind that the study was conducted in a group of students finishing the third grade of primary school, this result can be interpreted in two ways. On the one hand, it can be considered alarming in the context of the further psychosocial development and school functioning of students, which creates a wide field of influence for parents, teachers and other specialists who should undertake activities aimed at supporting the development of high, adequate self-esteem of the child. On the other hand, the explanation for such a result can be found in the regularities of the development of self-esteem, which in the younger school age, although becoming more and more focused, still undergoes modifications and fluctuations on the continuum from the lowered to high one

due to dynamic changes occurring in other areas of child development and the acquired experience.[51]

The obtained research results seem to contradict the previous findings of researchers concerning the importance of speech impediment for the psychosocial development of a child. According to the source literature in the field of general pedagogy, special education, speech therapy, developmental psychology or social psychology, disorders in the correct formulation of understandable messages have an impact on social competence of a child. Incorrect articulation causes difficulties in decoding messages, which in turn may become a cause of the gradual isolation of a child from their social environment. Articulation barriers in communication may contribute to lowering self-esteem and a number of limitations in the development of personality and satisfaction of the basic needs of a child.[52] Therefore, a low level and quality of linguistic competence imply a low level of communicative competence and, in extreme cases, may lead to an increase in fear of speaking.

E. Skorek emphasises that a child presenting communication disorders may not be an attractive interaction partner for their peers because of disorders in the communication and regulatory function of speech. A negative emotional attitude towards a child revealing speech disorders affects a sense of belonging to a group and a sense of security[53]

In the present research procedure, the significance of a speech impediment of the sigmatism type for the level of self-esteem of selected students completing the stage of early school education has not been established, but the importance of the problem of articulation disorders occurring in the speech of early school-age children

---

[51] H.R. Schaffer, *Rozwój społeczny. Dzieciństwo i młodość,* Wydawnictwo Uniwersytetu Jagiellońskiego, Cracow 2006, pp. 175–184.

[52] A. Jopkiewicz, *Konsekwencje społeczne, psychologiczne i pedagogiczne nieprawidłowego rozwoju mowy u dzieci,* [in:] *Acta Scientifica Academiae Ostroviensis no. 8*, 2001, pp. 116–117.

[53] E.M. Skorek, *Dzieci z zaburzeniami mowy wśród rówieśników w klasie szkolnej*, Cracow 2000, p. 10.

should be emphasised, as they may not only be significant for other dimensions of emotional and social development of students, but also constitute one of the first predictors of difficulties in learning to read and write.[54]

Another perspective of explanation is presented by M. Zając, who writes in the summary of the results of her study that the speech sound disorder is often treated as a simple, popular speech disorder, therefore "the self-esteem of a child, although lowered, is not much different in relation to their peers".[55]

The obtained research results cannot be compared in zero-one terms with the previous analyses of the researchers because of the differences in the characteristics of the research samples, namely the age and number of respondents, as well as the type and specificity of speech disorders. It should be considered that the obtained results could change and show other tendencies if the study were conducted using other research samples, including additional variables that would allow for a more complete picture of a child with an articulation disorder, e.g. socio-economic status of the family, place of residence, level of education or self-esteem of parents, which at the stage of middle childhood is not insignificant for the level of self-esteem of their child. The identification of the abovementioned aspects would enable the analysis of the research material with the use of a correlation model, and thus the adoption of a broader perspective of interpretation.

There is also no doubt that the need to conduct multi-range, specialised and systematic research on the consequences of speech

---

[54] Zob. B. Wołosiuk, *Zaburzenia mowy a trudności w nauce czytania i pisania,* "Rozprawy społeczne" vol. 12, no. 4, 2018, pp. 56–64; E. Zając, *Wpływ zaburzeń mowy u dzieci sześcio- i siedmioletnich na naukę czytania i pisania,* [in:] *Teoria i praktyka logopedyczna,* ed. E. Gacka, M. Kaźmierczak, Łódź 2018, pp. 213–221; E. Jeżewska-Krasnodębska, *Zaburzenia mowy u dzieci rozpoczynających naukę szkolną i ich wpływ na trudności w zakresie czytania i pisania,* [in]: *Zaburzenia komunikacji językowej w czytaniu i pisaniu*, ed. Alina Maciejewska, Siedlce 2007, pp. 45–55.

[55] M. Zając, *Zaburzenia rozwoju mowy a samoocena dziecka,* [in:] *Terapia logopedyczna,* ed. D. Baczała, J. Błeszyński, Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń 2014, p. 250.

disorders, including speech sound disorders, in numerous areas of the functioning of a child, for example in relation to peer relationships or school achievements, is becoming more visible. Regular compilation of statistics monitoring the severity of articulation disorders among children of different ages in all voivodeships would enable a real assessment of the importance of the problem and a more effective organisation of prevention, diagnosis and speech therapy at earlier stages of education.

## References


Appelt K., *Wiek szkolny. Jak rozpoznać potencjał dziecka?,* [in:] *Psychologiczne portrety człowieka. Praktyczna psychologia rozwojowa*, ed. A.I. Brzezińska, Gdańskie Wydawnictwo Psychologiczne, Gdańsk 2019, pp. 274–295.

Biernat R., *Troska o poczucie własnej wartości dzieci w rzeczywistości szkolnej – wymiar teoretyczny i praktyczne implikacje*, "Społeczeństwo. Edukacja. Język" no. 4, 2016, p. 162

Borowiecki P., *Samoocena osób z niepełnosprawnością w świetle wybranej literatury i badań własnych*, "Niepełnosprawność – zagadnienia, problemy, rozwiązania" no. II/2015(15).

Branden N., *6 filarów poczucia własnej wartości* (translated by H. Dąbrowska), Wydawnictwo Ravi, Łódź 1998, pp. 220–221.

Erikson E., *Dzieciństwo i społeczeństwo,* translated by Przemysław Hejmej, Dom Wydawniczy Rebis, Poznań 1997, pp. 269–272.

Gacka E., Kaźmierczak M., *Przesiewowe badania mowy jako przykład działań z zakresu profilaktyki logopedycznej*, [in:] *Logopaedica Lodziensa*, (no. 1), ed. I. Jaros, Łódź 2017, p. 38.

Góralewska-Słońska A., *Poczucie własnej wartości jako potencjał jednostki,* "Problemy Profesjologii" no. 2, 2011, p. 101.

Góźdź J., Wysocka E., *Kwestionariusz Nastawień Intrapersonalnych, Interpersonalnych i Nastawień wobec Świata (KNIIŚ). Podręcznik testu – wersja dla uczniów szkoły podstawowej klas I – III*, Ministry of National Education, Warsaw 2011, pp. 39–41.

Jędrzejewska A., *Samoocena dziecka – źródła i komunikaty weryfikujące,* "Zbliżenia Cywilizacyjne" no. 1(1) 2016, pp. 144–161.

Jopkiewicz A., *Konsekwencje społeczne, psychologiczne i pedagogiczne nieprawidłowego rozwoju mowy u dzieci,* [in:] *Acta Scientifica Academiae Ostroviensis* no. 8, 2001, p. 119.

Kamza A., *Rozwój dziecka. Wczesny wiek szkolny*, [in:] Niezbędnik dobrego nauczyciela. Rozwój w okresie dzieciństwa i dorastania T3, (ed.) A. Brzezińska, Warsaw 2014, p. 28

Kirby J.R., Williams N.H., *Learning Problems. A Cognitive Approach.* Toronto 1991.
Knopik M., *Zaburzona komunikacja a relacje społeczne. Zagrożenia i strategie wsparcia,* [in:] *Uczeń ze specjalnymi potrzebami edukacyjnymi,* ed. E. Domagała-Zyśk, Lublin 2012, pp. 30–36
Knychalska-Zbierańska M., *Sposób postrzegania osób z wadą wymowy przez społeczeństwo. Badania własne*, [in:] *Logopedia Silesiana 4*, Katowice 2015, p. 385.
Konarzewski K., *Jak uprawiać badania oświatowe. Metodologia praktyczna,* WSiP, Warsaw 2000, pp. 12–47.
Kulas H., *Samoocena młodzieży*, Wydawnictwa Szkolne i Pedagogiczne, Warsaw 1986, p. 9.
Lerner R.M., Hultsch D.V., *Human Development. A life-span perspective,* McGraw-Hill 1983, pp. 5–6.
Lewandowska-Kidoń T., Wosik-Kowala D., *Rozwijanie poczucia własnej wartości u dzieci w młodszym wieku szkolnym,* Cracow 2009, pp. 20–24.
Malecha A., *Samoocena a funkcjonowanie dziecka w warunkach klasy szkolnej,* [in:] *Współczesne trendy w edukacji dziecka*, ed. M. Styczyński, M. Olejniczak, Konin 2015, p. 136, [after]: S. Coopersmith, *The antecedents of self-esteem*, San Francisco 1967.
Minczakiewicz E.M., *Dyslalia na tle innych wad i zaburzeń mowy u dzieci w wieku przedszkolnym i szkolnym*, [in:] *Konteksty Pedagogiczne 1(8)/2017* Warsaw, p. 160.
Niebrzydowski L., *O poznawaniu i ocenie samego siebie*, Wydawnictwo Nasza Księgarnia, Warsaw 1976, p. 52.
Pluta-Wojciechowska D., *Dyslalia obwodowa. Diagnoza i terapia logopedyczna wybranych form zaburzeń*, Wydawnictwo Ergo-Sum, Bytom 2017, p. 273.
Pluta-Wojciechowska D., *Zaburzenia czynności prymarnych i artykulacji*, Wydawnictwo Ergo-Sum, Bytom 2015, p. 168.
Rosenberg M., *Society and adolescent self-image*, Princeton University Press, New York 1965, pp. 30–31.
Ryś M., *Kształtowanie się poczucia własnej wartości i relacji z innymi w różnych systemach rodzinnych,* "Kwartalnik naukowy" 2(6), 2011, p. 77.
Sameroff A., *A Unified Theory of Development: A Dialectic Integration of Nature and Nurture*, "Child Development", vol. 81(1), 2010, p. 16.
Schaffer R.H., *Psychologia dziecka*, Wydawnictwo PWN, Warsaw 2007, p. 336
Schaffer H.R., *Rozwój społeczny. Dzieciństwo i młodość,* Wydawnictwo Uniwersytetu Jagiellońskiego, Cracow 2006, pp. 169–184.
Stecko E., *Zaburzenia mowy u dzieci. Wczesne rozpoznawanie i postępowanie logopedyczne*, Wydawnictwo Uniwersytetu Warszawskiego, Warsaw 2002, p. 54.
Supińska M., *Dzieci izolowane i odrzucone*, "Życie Szkoły" no. 2, 2003, p. 89, [after:] R. Biernat, *Troska o poczucie własnej wartości dzieci w rzeczywistości szkolnej – wymiar teoretyczny i praktyczne implikacje,* "Społeczeństwo. Edukacja. Język" no. 4, 2016, p. 163.

Szpitlak M., Polczyk R., *Samoocena. Geneza, struktura, funkcje i metody pomiaru*, Wydawnictwo Uniwersytetu Jagiellońskiego, Cracow 2015, p. 10.

Tomik J., Solowska B., *Wczesne wykrywanie wad rozwojowych u dzieci w wieku szkolnym w zakresie zaburzeń słuchu i wad wymowy*, Cracow 2018, p. 10.

Wickham H., Stryjewski L., *40 years of boxplots,* 2011, p. 2.

Zając M., *Zaburzenia rozwoju mowy a samoocena dziecka,* [in:] *Terapia logopedyczna,* ed. D. Baczała, J. Błeszyński, Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń 2014, p. 250.

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

Justyna Wiśniewska
The Maria Grzegorzewska University in Warsaw, Poland

# Speech therapy students' attitudes to the use of ICTs in speech therapy practice

**Abstract**: Justyna Wiśniewska, *Speech therapy students' attitudes to the use of ICTs in speech therapy practice*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 223–241. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.11

The article presents research results on the possibility of using ICTs in a speech therapist's practice. The results of the study show that students have changed their view of the place of ICTs in speech therapy. The COVID-19 pandemic has changed their attitudes towards ICTs. For them, this crisis has become an opportunity for the development of their own skills to use ICTs in their future professional work.

**Key words:** speech therapy, attitudes, opinions, students, collective case study, information and communication technologies, distance learning, remote learning

## Introduction

The situation triggered by the COVID-19 pandemic has forced most educational institutions to adopt a new mode of operation, make greater use of information and communication technologies (ICTs), mainly for distance education. Until recently, this was just an option and now is the only way to deliver educational and therapy sessions.[1] Pursuant to the Regulation of the Minister of National

[1] J. Pyżalski, *Wstęp*, [in:] Edukacja w czasach pandemii. Z dystansem o tym, co robimy obecnie jako nauczyciele, Ed. J. Pyżalski, EduAkcja, Warsaw 2020, p. 2.

Education of 20 March 2020, educational institutions, including pedagogical and psychological counselling centres, have transitioned to a system of distance work.[2] Psychologists, educators, therapists, speech therapists came to face an extremely difficult challenge. They needed to quickly learn to use new information and communication technology tools in therapy, acquire new skills and improve their digital competence. The need to suddenly switch to remote therapy was a huge challenge for many.

The situation of speech therapists seemed to be particularly difficult due to the distinctive nature of speech therapy. The reeducation of speech disorders requires, among other things, the use of: manual support for vocal organs during speech, mechanical methods (the use of, e.g., a spatula or a vibrator to assist the child in producing clean sounds) and the supervision of the proper positioning of articulatory organs. It is difficult to deliver these tasks while interacting with a child through a web app. The challenges faced by practicing speech therapists, as well as speech therapy students, who also had to deliver speech therapy sessions remotely to complete their internships, prompted the author of this article to explore the issue and conduct this research project.

## ICTs in speech therapist's practice

The attempts to use ICTs in speech therapy have been made almost since computers first appeared in Poland.[3] Józef Surowaniec, the originator of Logopeda, the first computer system supporting speech therapy diagnostics and speech therapy practice, would write about computers as a tool that can raise the effectiveness of

---

[2] The Regulation of the Minister of National Education of 20 March 2020 on special solutions in the period when operation of educational institutions needs to be temporarily limited to prevent, counteract and combat COVID-19. (Journal of Laws 2020 no. 493).

[3] See, among others: B. Siemieniecki 1999; S. Juszczyk, W. Zając 1997; J. Łaszczyk 1998.

speech therapy as early as the 1990s.[4] He had great hopes for the computer. He believed that over time it would become a handy tool for scientific, educational and practical work of speech therapists.[5] After almost 30 years, can we say these hopes have come true?

The offices of today's speech therapists are usually equipped with a computer with appropriate software. It is today's standard practice to use a computer to keep records. Speech therapists develop plans, reports, opinions, project outlines, research results and information for parents and teachers in the form of digital files. Some successfully use commercial licensed multimedia computer applications to make their therapy sessions more attractive. The research conducted by Mateusz Szurek[6] shows that the majority of the surveyed speech therapists (84%, 32 individuals) consider the use of multimedia in speech therapy justifiable. The respondents pointed out that computer games are associated with pleasure and fun, engage children emotionally and help them keep their attention for longer. Nevertheless, those speech therapists use this form of work on average once every three meetings (84%, 32 individuals) and spend mostly 5–10 minutes (45%, 17 individuals) in 45–60 minutes of a therapy session on exercise with multimedia games. ICTs are thus used to add some variety to their therapy sessions and make them more attractive, and are a kind of encouragement or reward.

However, the previous body of research has shown that they not only increase the attractiveness of therapy sessions, but can also

---

[4] In 1988–1990, a research project was conducted under the Ministry's Research and Development Programme as regards software for a computer system that would support speech therapy diagnostics and practice, called Logoped (see J. Surowaniec, *Dekada informatyczna w rozwoju polskiej logopedii 1986–1996*, Logopedia No. 23/1996, p. 184)

[5] J. Surowaniec, *Zastosowania informatyki w logopedii*, [in:] *Opuscula Logopaedica: in honorem Leonis Kaczmarek*, Ed. S. Grabias, L. Kaczmarek, Wydawnictwo UMCS, Lublin 1993, p. 118

[6] Cf. M. Szurek, *Czy współczesny logopeda powinien wykorzystywać multimedia w terapii logopedycznej?,* [in:] *Zastosowanie nowych mediów w edukacji dzieci i młodzieży*, Ed. E. Brzyszcz, S. Koziej, Uniwersytet Jana Kochanowskiego, Kielce 2017, pp. 133–143.

be very effective.[7] This way of work stimulates a child's emotional and motivational apparatus, supports their commitment, curiosity and interest, and alleviates boredom and discouragement.[8] The results of a study carried out by Krystyna Żuchelkowska showed that educational computer apps have a significant effect on the development of correct pronunciation in preschool children.[9] She recognizes the following advantages of using computers in speech therapy practice: 1) a computer does not get angry, is not spiteful, does not comment on child's actions, 2) allows the same exercise to be performed many times, 3) a correctly performed exercise is rewarded with a pleasant sound effect or an interesting and sometimes funny animation, 4) a computer delivers difficult content with colourful graphics, animations and sound effects, 5) it encourages children to perform auditory, respiratory and articulatory exercises, which significantly contribute to nurturing correct pronunciation.[10]

Today's speech therapists can also take advantage of the possibilities offered by the Internet.[11] Speech therapy websites offer access to flashcards, among other things. Once printed, they can be used with a child during an office-based therapy session or given to the child for a homework assignment. An example of wider use of

---

[7] Cf., among others: Jatkowska 2018; Waligóra-Huk 2015; Żuchelkowska 2015.

[8] B. Siemieniecki, *Zastosowanie technologii informacyjnej w pedagogice specjalnej*, [in:] *Pedagogika medialna*, Vol. 2, Ed. B. Siemieniecki, Wydawnictwo Naukowe PWN, Warsaw 2007, p. 58

[9] The research concerned the effect of educational computer apps on the development of correct pronunciation in pre-school children. The survey group consisted of 100 6-year-old children attending preschool centres. The primary research method employed was an educational experiment conducted with the technique of two parallel groups, based on the canon of difference (cf. K. Żuchelkowska 2015, p. 332).

[10] K. Żuchelkowska, *Edukacyjne programy komputerowe w kształtowaniu prawidłowej wymowy u dzieci,* [in:] *Edukacja a nowe technologie w kulturze, informacji i komunikacji*, Ed. D. Siemieniecka, Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń 2015, pp. 330–331

[11] Some websites: https://www.printoteka.pl/pl/materials/category/1; https://www.logopestka.pl/; https://domologo.pl/

the possibilities of the Internet is the first e-learning platform for speech therapy practice in the Polish market, launched in 2009. Its developer Joanna Jatkowska came up with the idea of e-logolessons[12], posted on the platform to complement regular meetings with a speech therapist. The said pedagogical experiment showed that for children with simple or multiple dyslalia this form of work reduces the duration of therapy and the number of face-to-face meetings between the speech therapist and the child, increases parent's involvement and helps to deliver the commitment to do speech therapy exercises at home.[13]

New technologies can successfully support speech therapists and make therapy more effective and enjoyable, but this requires not only the preparation of appropriate tools, but also speech therapists having adequate digital skills. Such skills should be acquired by speech therapists during their studies.

## Computer training for speech therapy students

The relevant regulation by the Minister of National Education on the standard of training one needs to complete to pursue, among others, the career of a speech therapist envisages the obligation to provide at least one subject concerning ICTs in the study curriculum, a total of 30 hours.[14] As a rule, this is the first-year course and primarily aims to prepare students to develop their graduation projects and process and present the results of their empirical research.

---

[12] A b-learning model was used here, whereby, between traditional meetings with a speech therapist in the office, the child does exercises assigned to them by the speech therapist on the e-learning platform, under their parent's supervision. Since the therapist was able to record the child's voice while they were doing the exercises, they would review the recordings and provide them with relevant comments (cf. J. Jatkowska 2018, pp. 131–132).

[13] J. Jatkowska, *Rozwój językowy dziecka a b-learning,* [in:] *Annales Universitatis Paedagogicae Cracoviensis*. Studia de Cultura, Vol. 10, No. 4/2018, pp. 134–136

[14] The Regulation No. 3 of the Minister of National Education of 25 July 2019 on the standard of training for teaching practice (Journal of Laws 2019 no. 1450).

In practice, this means that students have little chance to learn how to support speech therapist's practice with information and communication technologies. Some universities, however, go beyond the minimum requirement defined by the regulation. This is the case with the Academy of Special Education, where speech therapy students have two general subjects of this kind in their study curriculum: Computer Science (classes in the first year, 30 hours) and Modern Technologies in Pedagogical Practice (3rd-year class, 15 hours). Despite the possibilities offered by the university, the author's many years of experience as a lecturer show that speech therapy students are not very positive about these classes. The early meetings with these groups are always difficult. Early on, the students do not recognize the need to acquire the skills offered to them, although teachers always prioritize the content useful for future professional practice in structuring their courses. During the Modern Technologies in Pedagogical Practice course, speech therapy students explore the possibilities of using ICTs in educational practice. They acquire the skills to use an interactive whiteboard, and design interactive exercises with the help of web applications (e.g. LearningApps[15], WordWall[16], WordArt[17], Genially[18], Quizziz[19]). They create their own interactive resources and develop skills needed to deliver therapy sessions with the use of those resources. Additionally, during this year's classes, due to the situation in Poland, the students had the opportunity to learn to conduct remote therapy with the use of applications such as Padlet[20] and Smart Learning Suite Online.[21]

Although these applications have not been designed for the work of a speech therapist, they are so universal (and also available to the public free of charge) that they can be successfully used to

---

[15] https://learningapps.org/
[16] https://wordwall.net/pl/
[17] https://wordart.com/
[18] https://www.genial.ly/
[19] https://quizizz.com/
[20] https://padlet.com/
[21] https://suite.smarttech-prod.com/login

prepare digital materials to be used in speech therapy sessions with children or support parents in performing exercises recommended by the speech therapist.

## Research methodology

The goal behind this study was to investigate speech therapy students' attitudes towards ICTs used in speech therapy. Three research problems have been formulated:

- What was the initial approach of speech therapy students towards the possibility of using ICTs in speech therapy?
- How has the students' view of how useful the ICTs are in speech therapy changed as a result the classes on Modern Technologies in Pedagogical Practice and first-hand experience delivering speech therapy sessions online?
- **What plans do the speech therapy students declare for the use of ICTs in their speech therapy practice?**

In order to address the defined research problems, a multiple-case study strategy has been adopted, which involves examining a number of cases to investigate a general phenomenon[22]. The data has been collected by means of two different methods. The first method used was an open auditorium questionnaire, for which an original questionnaire was developed. The second method was an in-depth, individual, structured interview, using a proprietary interview questionnaire, with the respondent being openly notified about the aim of the project. The research was conducted from April to June 2020 by means of ICT tools.

The project involved 11 participants, all female 3rd-year speech therapy students (a full-time programme) who had attended the classes in Modern Technologies in Pedagogical Practice in the academic year 2019/2020. According to the study plan for the third

---

[22] R.E. Stake, *Jakościowe studium przypadku*, Trans. M. Sałkowska, [in:] *Metody badań jakościowych*. T. 1, Ed. N.K. Denzin, Y.S. Lincoln, Wydawnictwo Naukowe PWN, Warsaw 2020.

year, the students had to complete a graduation internship and a mid-year internship, during which they conducted individual speech therapy sessions with children manifesting various speech disorders. As some of these internships were carried out at the time educational institutions were being closed down due to the epidemic, most of the students had to complete their speech therapy internships remotely.

## Analysis of author's research results

The data collected in the course of the conducted research project provided many valuable insights into how the role of ICTs in speech therapy is viewed by young people about to launch their speech therapy careers. These insights have been structured and analyzed with regard to the research problems. Further herein, they will be presented in the order of the research questions asked.

1. **The initial approach of speech therapy students towards the use of information and communication technologies in speech therapy practice.**

Before attending the classes in Modern Technologies in Pedagogical Practice, the students declared little familiarity with web applications that could be useful for their future professional work. When asked about their familiarity with such applications, 5 of them stated that they did not know them at all, the others mentioned Kahoot (3 mentions), Quizlet (2 mentions), Wordwall (1 mention). Their familiarity with web resources (social media profiles, blogs, websites), which they mentioned as the sources of materials useful for their future professional practice, looked better. The students mentioned: Facebook groups (Wszystko o Logopedii, Logopedki bez hejtu, Teczka logopedy, Logopedia – terapia zaburzeń mowy), blogs (https://logopedarybka.pl/, https://matkalogopedka.blogspot.com/, http://bubagada.pl/, http://logomama.pl/), strony internetowe (https://www.printoteka.pl/, https://www.mimowa.pl/, https://domologo.pl/, https://www.logopediapraktyczna.pl)

The answers from the students regarding the question about their attitude towards ICTs implied skepticism. Their statements featured some aversion to technology, a belief that technology has only an adverse effect on children, the belief that the later children start using digital tools, the better.

> *"I used to view the Internet as an enemy, I was aware of the negative impact of electronic devices on children's concentration. Aware of the growing rate of young patients using sensory integration therapies, corrective gymnastics and ophthalmologists' services, I thought the children would have been fine if they just had played in playgrounds, sandboxes and climbed some trees. This would allow their joints and central nervous systems to develop properly. But now I know you cannot take technology away from the little ones. The role of educators and a carers is not to take them away; instead, they should teach kids to make a good use of the possibilities offered by the Internet".* (S4)

The students' initial reluctance may also be due to the lack of previous positive experience or the fact that they have not been exposed to good practices in using ICTs for speech therapy practice. Only one of the students mentioned that she had the opportunity to learn about multimedia speech therapy apps during her internship.

> *"So far I have been exposed to and used only traditional forms of speech therapy assignments without the use of ICTs.* (...) *I didn't even think there could be any free applications that let you create your own speech therapy tasks,"* (S8)

> *"Only on a few occasions have I been exposed to the use of ICT technologies in speech therapist's practice. Most of the speech therapists I had my internships with would work in a regular way, with board games and cards. The children would occasionally practice with the use of a speech therapy app and it was clear they liked this work method a lot. I think that computer-based exercise is more interesting, more attractive to children".* (S10)

It is often the case that the students believe their digital competences are low, which is a noteworthy factor. They wrongly believe that it is difficult to design educational multimedia aids, and mastering apps that will let speech therapists design their own interactive exercises is time-consuming and beyond their capability.

> *"Until now, I have believed it would be very difficult to create any task in a computer application".* (S5)

> *"Until now, information and communication technologies have been alien to me. It seemed to me that it was very difficult to create and prepare therapy sessions with ICTs and it would require extensive knowledge of IT apps. I used to believe that, as far as speech therapist's practice is concerned, it was impossible to design therapy sessions in multimedia or web applications, and that the child's work with the use of such an app would be ineffective".* (S9)

**2. How the attendance to Modern Technologies classes and an experience running online therapy sessions have affected the students' view of the possibility of using ICTs in speech therapy work, based on students' responses.**

After attending classes on the use of modern technologies in pedagogical work, all students said that they had learned about many useful apps. They believe these apps can make therapy more attractive and support the need to repeat a given exercise a number of times in order to consolidate correct pronunciation, something children find tedious. Performing such exercises by means of digital devices can, in their view, partially solve this problem.

> *"This form of exercises provides the child with greater variety, something interesting. Generally, speech therapy sessions should be colourful, varied and original. So why not introduce applications and technology into everyday life?"* (S3)

The students have also changed their minds about the difficulty of preparing digital aids by means of web applications. They viewed these applications as accessible and easy to use.

*"I think these classes have given me an overall idea of how technology around us can be used. I had no idea about some of the apps and I thought they were much more difficult to use, but it turned out to be much simpler than I used to think.* (S10)

*"I am surprised how easy it is to design individual exercises in the apps discussed in the classes and how much I enjoy creating them".* (S9)

Some of the students' statements show that these classes have been very useful and practical.

*"That was one of the most practical subjects taught at the university this semester – considering how useful it is for speech therapy practice".* (S6)

*These classes have strongly contributed to my professional growth and "(...) stimulated my creativity and joy in creating speech therapy aids"*. (S2)

*"*(…) *I have changed my view of this issue. I believe that developing such therapy activities can be very creative for the speech therapist and make them grow, and that there are many positive aspects for children who participate in such activities.* (S9)

According to students, the acquisition of independent skills to design interactive exercises helps them design exercises that are more individual and better tailored to a child's particular needs. Using a child's favourite fairy tale character in the designed exercise makes things more personalized, and the child can feel more encouraged to show effort and exercise. This will definitely support the effectiveness of therapy.

*"Having completed these classes* (…)*, I know you can create these exercises on your own and tailor them to each child's needs. From the beginning, I thought it was a great idea for the activities with children.* (S3)

*One of the students also observed "that this is a convenient and economical solution – it reduced the costs for the production of aids and lets you 'store' them in one place"*. (S2)

The situation that they have faced has had a major impact on changing students' attitudes towards the possibility of using ICTs in speech therapy. Due to the pandemic and the decision to close educational establishments, the students had to complete their internships by conducting remote therapy with their clients. Only one student had completed her internship before the pandemic was announced. Since it was not possible to continue traditional meetings with children, the other students had to deliver therapy remotely. Each of them conducted one-on-one therapy sessions with 1–3 children (the number of children with whom the students conducted therapy depended on the progress of the internship at the time the educational institutions were closed down). Most of them used instant messengers to this end (e.g. Skype, Messenger, Whatsapp, the video communication functionality on Facebook). They were very flexible about their app choices; they picked those that were available to the children's parents (one of the students would use 3 different apps to deliver her speech therapy sessions). Meetings in the form of video calls were usually held 1–2 times a week. Parents did not agree to this form of therapy for organizational reasons only in two cases; instead, they asked students to e-mail them the materials for them to use with their children.

The students' statements show that the use of digital tools to deliver therapy sessions has been a positive experience to them. While using selected communication apps to talk with children, the students made use of the extra features of those apps such as screen sharing to display pictures or to send links to pre-prepared interactive exercises within the chat window.

> "(…) *I have already tested in practice some of the apps I have learned about – during online therapy sessions with a child, on a video call. With the screen sharing feature, I could display the tasks together with my client while at the same time checking if she completed them well"*. (S1)

> *"In the current situation* (…) *this is an ideal alternative to standard speech therapy aids. When I cannot show an aid to a child in person or use cards or board games, I can send them an aid designed in an app.*

*In addition to sending the client printable speech therapy aids, I have also sent them assignments based on Learningapps, Wordart, Quizizz and Smart Notebook. The children liked these kinds of aids a lot, and they are an interesting feature of our online sessions".* (S2)

*"I use the applications I have learned about in that I talk to the child on Skype* (…) *The screen sharing option can be useful* (…) *as the child and the teacher can see the same image on the screen while the child is carrying out assignments* (…)*. As for the tasks I design, the child first has to click, tick or answer a question, and then read a syllable, word or word combination out loud. By means of a webcam, I can supervise the child's completing a given task, I can watch the child doing it and ask them to correct something".* (S6)

Delivering online therapy, the students also noticed another advantage behind their ability to design exercises with publicly available web apps. They argued that these exercises are available to both therapists, children and their parents, as opposed to expensive licensed software used at speech therapy practices. Moreover, as one of the students claims:

*"Although it may appear otherwise, there are not many free speech therapy aids on the Internet. Thanks to the applications, we can create them ourselves".* (S2)

The students have also observed a very positive response from children to the new form of therapy; they claim that children's interest and focus during the classes have increased.

*"My client has great difficulty in focusing her attention. Even before the pandemic, when I had delivered therapy at her house, I had to try very hard* (…) *to make her want to do what I asked her to do in our practice, and now with online tasks, she can* (…) *practice with me even for half an hour, which was impossible before'.* (S1)

Those students who have been providing remote therapy to children accompanied by their parents have also noticed a greater

involvement of parents in the therapeutic process. The parents became more attentive to their child's speech, and it was easier for them to correct their children's speech on a daily basis.

The statements quoted so far demonstrate that students' attitudes towards new technologies have changed and they have recognized the role of those tools in speech therapist's practice. Their statements are marked by greater pragmatism. The students are afraid that too much use of interactive exercises comes with the risk that children may become discouraged to traditional working methods. They also see other risks:

*"I don't believe it's right to send multimedia tasks for children to perform at home on their own, because it does not allow me to track the therapy progress and whether the child correctly consolidates specific sounds".* (S1)

"(…) *this adds some variety and is certainly more interesting for the child, but I wouldn't rely solely on it, because children already have too much contact with technology on a daily basis".* (S11)

The disadvantages they see in online therapy are: the manual methods cannot be used (sometimes it is possible to ask the parent for support, but this is not always possible); it is hard to precisely determine the quality of sounds realized by the child (especially with pronunciation deficiencies that consist in deformed sounds), and child's tongue movements are less visible. They also exclude the possibility of diagnosing the child in this mode.

*"Many children need facial muscle massage, resistance exercises for their tongue muscles, as well as exercises for large motor skills. Unfortunately, we cannot do this remotely. Moreover, I cannot imagine delivering a speech therapy diagnosis without being in the same room with the patient".* (S4)

*"I will not start online work with a child who I have not seen before in person to diagnose them and set their therapy plan".* (S4)

Despite the many advantages behind the use of modern technologies in speech therapy, students' views are very balanced. They are aware of the place and role of ICTs in the speech therapy process. They think of them as a tool that supports the work of speech therapists. They stress that these technologies cannot be a substitute for traditional working methods.

> *"To some extent though. The computer shall not replace the specialists".* (S3)

> *"In my opinion, however, tasks on the computer/tablet should not dominate the activities. Self-control is extremely important in practicing proper articulation, and the mirror is the basic tool with this practice. In using multimedia apps, a child is not able to fully focus and control their speech organs. I believe, however, that such exercises can be used in many different ways, and I will certainly use them in my work to make the activities more attractive".* (S8)

> *"I think that computer-based exercise is more interesting, more attractive to children. However, we need to exercise some restraint in this realm because, as we know, children are spending more and more time with telephones, tablets and TV sets at home".* (S10)

Even though they stressed the priority of therapy delivered in the form of traditional meetings, the students also emphasized some benefits of this form of therapy, such as improving small motor skills and sensory stimulation.

> *"I am in favour of traditional speech therapy aids. Multidimensionality, different textures, colours and the use of various design forms and techniques make children not only interested in particular aids, but also offers them some sensory stimulation. For this reason, I do not exclude therapeutic apps, quite the contrary. I think that they enrich traditional speech therapy activities in an interesting way".* (S2)

> "(…) *These tasks should aim to add variety to your session rather than being the only form of activities proposed. Bringing small items from*

*one box to another, opening cardboard boxes and uncovering the memory pictures improve small motor skills much more than solving tablet tasks"*. (S6)

**3. Speech therapy students' plans for the use of ICTs as part of their future practice, as declared by the respondents.**

All students have declared that information and communication technologies provide them with new tools and working methods. They have said that they would diversify their activities for children by using interactive exercises, would use them for children fed up with over-used materials or as a reward for good work during regular exercises.

Most of the students stated that this was a good solution for home speech therapy exercises between meetings with a speech therapist at their office.

*"I think children should practice previously acquired skills, for example, by receiving mobile homework"*. (S7)

"(…) *you can share a file with a child for them to do tasks at home. It is certainly much more interesting for them than tasks written on a piece of paper. The child exercises more often, which positively contributes to the effect of speech therapy"*. (S3)

According to one of the students, another fact in favour of such a solution is that parents sometimes cannot take time to help their children perform the assignments recommended by speech therapists on a consistent basis.

*"Moreover, it is a good solution for parents who are not always able to assist their children in consolidating the covered language material. Although this can take as little as 10–15 minutes, sometimes they have no spare time to do that. The use of an application and possible support from the parent can greatly facilitate this process* (…)". (S2)

If a child does speech therapy exercises at home, the parent should actively participate in this process, observing and verifying

the effects. However, if parents cannot get involved so, the built-in self-testing feature within interactive exercises automatically verifies the answers provided by the child.

> *"Another advantage is that* (…) *children learn to independently monitor and identify correct and incorrect answers. This facilitates self-control, which is very important from the perspective of supporting a child's motivation. This feedback helps children verify their progress themselves".* (S2)

The students claim that in the future, the newly acquired skills to use technology in their practice will allow them to continue their therapy activities with children not only "in the case of a closure", but also when direct contact with children is difficult, e.g. in the case of a chronic illness or the need for a longer stay abroad.

> *"Providing children with remote activities that use applications is an option I will certainly use frequently in my future career. I believe this is a great solution in particular if the child is sick and cannot attend therapy sessions".* (S8)

## Conclusion

The shut-down of psychological-pedagogical counselling centres has been unprecedented in Poland. In the initial period of the pandemic, most speech therapists hoped that this would be a temporary phenomenon that would end quickly and that the short-term interruption of stationary therapy meetings eventually would not greatly affect the effects of the therapy work. When the period of the temporary closure was extended, therapists faced the risk that this new situation could be a new therapeutic reality rather than a temporary event. Due to the pandemic and the inability to work directly with children, speech therapists have had to become more involved in the world of information and communication technologies. This was also the case with the students participating in this study. The

results of the study show that this crisis has become an opportunity for them to develop skills needed to use ICT tools in their future careers. They have recognised that information and communication technologies can be valuable tools that improve everyday practice. Well selected digital aids may offer some advantages. However, the use of information and communication technologies should be implemented primarily due to their effectiveness in supporting therapy work.

## References


Jatkowska J., *Rozwój językowy dziecka a b-learning,* [in:] Annales Universitatis Paedagogicae Cracoviensis. Studia de Cultura, Vol. 10, No. 4/2018, pp. 125–140.

Juszczyk S., Zając W., *Komputerowa edukacja uczniów z zaburzeniami w czytaniu i pisaniu*, "Śląsk", Katowice 1997.

Łaszczyk J. (Ed.), *Komputer w kształceniu specjalnym*, Wydawnictwa Szkolne i Pedagogiczne, Warsaw 1998.

Pyżalski J., Wstęp, [in:] Edukacja w czasach pandemii. Z dystansem o tym, co robimy obecnie jako nauczyciele, ed. J. Pyżalski, EduAkcja, Warsaw 2020, pp. 2–6.

The Regulation of the Minister of National Education of 25 July 2019 on the standard of training for pedagogical practice. (JOURNAL OF LAWS 2019 NO. 1450).

The Regulation of the Minister of National Education of 20 March 2020 on special solutions in the period of temporary limitation of the operation of educational institutions to prevent, counteract and combat COVID-19. (JOURNAL OF LAWS 2020 NO. 493).

Siemieniecki B., *Komputerowa diagnostyka i terapia pedagogiczna – zarys problemu,* [in:] Komputer w diagnostyce i terapii pedagogicznej, ed. B. Siemieniecki, Wydawnictwo Adam Marszałek, Toruń 1999, pp. 9–23.

Siemieniecki B., *Zastosowanie technologii informacyjnej w pedagogice specjalnej*, [in:] Pedagogika medialna, t. 2, red. B. Siemieniecki, Wydawnictwo Naukowe PWN, Warsaw 2007, pp. 52–62.

Stake R.E., *Jakościowe studium przypadku*, Trans. M. Sałkowska, [in:] Metody badań jakościowych. T. 1, ed. N.K. Denzin, Y.S. Lincoln, Wydawnictwo Naukowe PWN, Warsaw 2020.

Surowaniec J., *Zastosowania informatyki w logopedii*, [in:] Opuscula Logopaedica: in honorem Leonis Kaczmarek, Ed. S. Grabias, L. Kaczmarek, Wydawnictwo UMCS, Lublin 1993, pp. 112–121.

Surowaniec J., *Dekada informatyczna w rozwoju polskiej logopedii 1986–1996,* Logopedia No. 23/1996, pp. 183–189.

Szurek M., *Czy współczesny logopeda powinien wykorzystywać multimedia w terapii logopedycznej?,* [in:] Zastosowanie nowych mediów w edukacji dzieci i młodzieży, Ed. E. Brzyszcz, S. Koziej, Uniwersytet Jana Kochanowskiego, Kielce 2017, pp. 133–143.

Waligóra-Huk A., *Programy multimedialne jako narzędzia wykorzystywane przez nauczycieli w terapii pedagogicznej*, [in:] Edukacja a nowe technologie w kulturze, informacji i komunikacji, Ed. D. Siemieniecka, Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń 2015, pp. 343–354.

Żuchelkowska K., *Edukacyjne programy komputerowe w kształtowaniu prawidłowej wymowy u dzieci,* [in:] Edukacja a nowe technologie w kulturze, informacji i komunikacji, Ed. D. Siemieniecka, Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń 2015, pp. 329–341.

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

Dominika Wiecha, Ewelina Zając

University of Łódź, Poland

# Communicative competence of a child with cerebral palsy and mild intellectual disability

**Abstract**: Dominika Wiecha, Ewelina Zając, *Communicative competence of a child with cerebral palsy and mild intellectual disability*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 243–258. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.12

In the article, the communicative competence of a 12 year old girl with cerebral palsy and mild intellectual disability was characterised. These developmental disorders exert a significant impact on child's skills in the field of speech expression and perception. Moreover, they lead to speech disorders: oligophasia and dysarthria. The case study method was used to conduct the research. In the first part of this article the authors described two issues: cerebral palsy and intellectual disability. They indicated the causes, as well as the most common symptoms of these developmental disorders. In the next part the authors provided an extensive description of various diagnostic tests. They enabled the researchers to explore, among others, speech expression and perception, as well as phonematic hearing. The results of these different tests were thoroughly analysed. Consequently, it has been proved that the level of child's linguistic and communication skills corresponds to the results achieved by children with similar deficits and disorders.

**Key words:** speech, communicative competence, cerebral palsy, intellectual disability, oligophasia, dysarthria

## Introduction

Cerebral palsy is "a group of permanent disorders of development, movement and posture, limiting motor activity, which are attributed to non-progressive disorders of the brain development of a foetus or a neonate".[1] Movement disorders are often accompanied by sensory, cognitive, communication, perception, behavioural or seizure disorders. The majority of people with CP experience speech disorders (50–85%), the most common of which are dysarthria, oligophasia, alalia, speech development delay due to hearing loss or deafness, dysglossia, muteness and stuttering.[2] The main cause of speech development disorders accompanying the described neurological syndrome is damage to the central nervous system, which results in not only motor dysfunctions, but also sensory disorders, which is associated with a cognitive developmental delay in a child. Numerous researchers also indicate the important role of social factors, such as environmental neglect, limited social contacts and insufficient sensory stimulation, which inhibit or prevent the development of linguistic skills.[3]

According to the DSM-V classification, intellectual disability includes "disorders that begin in childhood and are characterised by intellectual difficulties as well as adaptation difficulties in conceptual, social, and practical areas of living. The following three criteria must be met: the presence of deficits in intellectual functioning, the presence of deficits in adaptation, resulting in failures in the achievement of developmental and socio-cultural standards (which makes it impossible to maintain independence and responsibility), the beginning of intellectual and adaptive deficits in the developmental period"[4].

---

[1] M. Michalik, *Mózgowe porażenie dziecięce w teorii i praktyce logopedycznej*, Harmonia Universalis, Gdańsk 2015, p. 19.

[2] U. Mirecka, *Dyzartria w mózgowym porażeniu dziecięcym*, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2013, p. 19.

[3] U. Mirecka, *Dyzartria w mózgowym porażeniu dziecięcym*, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2013, p. 22.

[4] P. Gałecki, M. Pilecki i in., *Kryteria diagnostyczne zaburzeń psychicznych DSM-5,* Edra Urban & Partner, Wrocław 2018, p. 37–38.

## Research methodology

The conducted study included a 12-year-old girl diagnosed with mild intellectual disability and severe cerebral palsy in the form of spastic paresis of both lower limbs. She is brought up in a reconstructed family, the constant care is provided by her mother, but her stepfather is involved in her upbringing. The girl is an only child. The delivery did not take place on time, but the child was born naturally. The condition of the neonate was not normal – the girl weighed 1400 grams and received 7 points on the Apgar scale. According to the mother, the course of the adaptation and neonatal periods was normal. There were no cases of any diseases or disability in the family of the child.

In order to conduct an in-depth and reliable diagnosis of the language difficulties of the respondent, various tests and examinations were used to check individual linguistic skills. The following tests were used in the research process: *Comprehensive speech therapy examination with pictorial material*[5], *Dysarthria scale: version for children*[6], *Speech therapy screening test for school-age children*[7], *Child Speech Therapy Assessment Sheets – CSTAS*[8], *Child Vocabulary Test*[9], *Linguistic Skills Test*[10], a test to investigate the knowledge of phrasemes (own elaboration), a pictorial questionnaire for articulation testing (own elaboration).

---

[5] D. Emiluta-Rozya, *Całościowe badanie logopedyczne z materiałem obrazkowym*, Wydawnictwo Akademii Pedagogiki Specjalnej, Warsaw 2013.

[6] K. Gustaw, U. Mirecka, *Skala dyzartrii: wersja dla dzieci*, Wydawnictwo Continuo, Wrocław 2000.

[7] S. Grabias, Z.M. Kurkowski, T. Woźniak, *Logopedyczny test przesiewowy dla dzieci w wieku szkolnym*, Maria Curie-Skłodowska University. Department of Logopaedics and Applied Linguistics, Lublin 2002.

[8] J. Gruba, *Karty Oceny Logopedycznej Dziecka – KOLD,* KOMLOGO, Gliwice 2016.

[9] Z. Tarkowski, *Test Słownika Dziecka*, Wydawnictwo Digi-Cad-Projekt, Lublin 1996.

[10] Z. Tarkowski, *Test Sprawności Językowej*, Wydawnictwo Digi-Cad-Projekt, Lublin 2001.

## Speech therapy diagnosis

The speech therapy diagnosis consisted of examining the following skills:

1. articulation apparatus performance test,
2. articulation test,
3. phonematic hearing test,
4. phonation test,
5. prosody test,
6. speech understanding test,
7. test of active speech – narrative speech,
8. test of active speech – dialogue-related speech,
9. test of active speech – monologue-related speech,
10. test of active speech – creating requests, orders, wishes and invitations,
11. vocabulary resource test,
12. inflection test,
13. self-esteem test.

## Articulation apparatus performance test

The respondent had a problem with repeating the exercises checking the functioning of the articulator muscles. She had the greatest difficulties with: pushing her left/right cheek with her tongue, quickly contracting and stretching her lips, pointing her tongue to the right/left corner of her lips and quickly repeating [u]-[i], [a]-[y] and [pa]-[ta]-[ka]. Attempts to retract the tongue into the mouth and lift the tip of the tongue inside/outside the mouth were assessed slightly better. A significant slowdown in the movements of the mandible has been noticed. Swallowing of saliva at rest was characterised by slight abnormalities, consisting in the insertion of the tongue between the teeth by the respondent (infantile swallowing). While speaking, the degree of the present disorders in-

creased, and sometimes some saliva leaked out. During the observation, no involuntary movements of the girl were recorded. No asymmetry in the face was observed, both at rest and while speaking.

## Articulation test

The speech of the respondent is quite well understood, not only for people from her immediate surroundings, but also for those who do not spend time with her on a daily basis. In the speech of the respondent there are articulation disorders, which is caused by the minimal work of the articulation organs (due to disorders of their muscle tone resulting from cerebral palsy) and the related lack of tongue erection. Incorrect articulation of the phones of the rustling series: š, ž, č, ǯ, which are not only realised interdentally, but also replaced by hissing phones: s, z, c, ʒ, was diagnosed. Interdental pronunciation also applies to the remaining anterolinguistic dental phones: t, d, n and the anterolinguistic gingival phone l. The low mobility of the tongue also results in the lack of vibration of its tip during articulation of the r phone, which makes the sound of this phone significantly different from the standard. Other phones, or backlingual, middle lingual, labiodental, bilabial phones and all vowels are correctly realised. In the speech of the child numerous pathological linguistic phenomena, such as: substitutions (e.g. Capka-czapka [hat]), elisions (e.g. xopak-chłopak [boy]) or simplification of consonant groups (e.g. pčou̯a-pszczoła [bee]) can be observed.

## Phonematic hearing test

During the test[11] the girl correctly distinguished all phone oppositions. Occasional errors, consisting in indicating the wrong pic-

---

[11] Based on D. Emiluta-Rozya, *Całościowe badanie logopedyczne z materiałem obrazkowym*, Wydawnictwo Akademii Pedagogiki Specjalnej, Warsaw 2013.

ture, probably resulted from fatigue with the test formula. The results of phonematic hearing measurements obtained on the basis of the task from the *Speech therapy screening test for school-age children*[12] are in contrast to the results obtained in the previous tasks. Probably, the respondent had a problem with understanding the formula of the proposed exercise, the perception of false words, and thus qualifying them as identically or differently sounding (after repeating the words, she sometimes changed her answer). Therefore, the results of the first test should be considered reliable, which means that the child does not have phonematic hearing disorders.

## Phonation test

This part of the diagnosis began with the assessment of voice projection, asking for the emission of a phone [a]. The respondent presented a soft voice projection. However, the phonation time was significantly shortened, the girl had been unable to pronounce the vowel fluently even for a few seconds (such a result may also have been caused by the limited ability to understand the commands addressed to her). Both in terms of the intensity and pitch of the voice of the respondents, significant abnormalities can be observed, i.e. the lack of stability of these parameters during the speech. Additionally, the girl was unable to gradually increase or decrease the pitch of her voice, which proves her very limited phonation abilities.

## Prosody test

Various aspects of the suprasegmental plane of speech were assessed, including: intonation, accent, rhythm and pace of speech. The respondent is able to properly imitate the intonation, which she

[12] S. Grabias, Z.M. Kurkowski, T. Woźniak, *Logopedyczny test przesiewowy dla dzieci w wieku szkolnym*, Maria Curie-Skłodowska University. Department of Logopaedics and Applied Linguistics, Lublin 2002.

presented by a correct repetition of a declarative, imperative and interrogative sentence. In her own statements, she also keeps the correct intonation line, possible abnormalities occur only in situations of high excitement. However, the girl has great difficulties in using the correct accent. The ability to repeat sentences with the use of an appropriate logical accent is severely impaired, the respondent did not seem to hear the difference in the sentences spoken by the examiner and repeated them incorrectly. On the other hand, deviations from the norm in the scope of maintaining the correct rhythm in sentences can be considered moderately severe, and they are manifested by a slight tendency to scansion. The girl is able to maintain an appropriate pace of speech, both when repeating sentences and when speaking freely. She also uses phrases of the correct length.

## Speech understanding test

The study covered understanding of single words, longer statements and phrasemes, as well as understanding of commands.

Single-word comprehension test was performed on the basis of a sample from *Child Speech Therapy Assessment Sheets*[13] from the subtest intended for children aged 8–9 years. It consisted in reading three words by the examiner, providing a definition of one of them, and then indicating a word matching the description by the responder. The task assessed knowledge of nouns, verbs, adjectives and adverbs.The respondent obtained a good result by correctly specifying all parts of speech except for two nouns. This relatively high level of task performance is probably related to the fact that the girl did not have to remember the desired name, but chose the correct answer out of the three previously provided words. This formula of the exercise excluded possible problems with retrieving

---

[13] J. Gruba, *Karty Oceny Logopedycznej Dziecka – KOLD,* KOMLOGO, Gliwice 2016.

names on her own and allowed the girl to present real comprehension skills, which remain at a high level.

To test the comprehension of a longer statement, the subtest on fairy tale comprehension from the *Linguistic Skills Test* was used.[14] The task of the respondent was to answer questions about the fairy tale after it was read twice by the examiner. The girl answered only single questions, several times mechanically quoted the text of the fairy tale, without using the remembered information in a creative way to provide the correct answer. The difficulties of the respondent with the correct performance of the task may be related to the rather complicated structure of the text (dependent clauses and coordinate clauses) and the presence of a large number of protagonists (a donkey, a dog, a master, a wolf).

In order to test the ability to understand phrasemes, the authors used their own diagnostic test, on the basis of which it was found that the knowledge of phrasemes (in the form of expressions, terms and phrases) remains at a very low level. The girl can only explain single phrases that are often used in everyday life (e.g. wilczy głód [ravenous appetite], złota rączka [handyman]). She tried to present the other set phrases in a literal way, and was unable to reach their figurative, metaphorical meaning. The respondent several times only paraphrased the content of the phraseme, without attempting to present its hidden meaning.

Understanding of instructions was also tested on the basis of a sample taken from the CSTAS.[15] The respondent was given two commands: the first one was performed correctly after a hint, and the second was performed without errors. Correct performance of the above tests confirms the conclusions drawn during the observation – the respondent has no difficulties understanding the messages addressed to her, follows the instructions of educators and other people and tries (if possible) to do what she is asked to do.

---

[14] Z. Tarkowski, *Test Sprawności Językowej*, Wydawnictwo Digi-Cad-Projekt, Lublin 2001.

[15] J. Gruba, *Karty Oceny Logopedycznej Dziecka – KOLD,* KOMLOGO, Gliwice 2016.

## Test of active speech – narrative speech

Narrative speech was tested on the basis of a picture story from the *Speech therapy screening test for school-age children.*[16] The task showed large deficits of the respondent in the field of cause-and-effect thinking and understanding time relations. The girl was not able to connect the pictures on her own, had a problem with applying the appropriate narrative line and correctly describing the situation. The respondent used short, interrupted sentences, used numerous pauses, did not refer to the emotions felt by the protagonists of the story, did not add an author's commentary. However, there were visible attempts to create an appropriate narrative structure, for example the formula of "one day". After some hints provided by the examiner, the girl correctly presented the consecutive events, maintaining semantic coherence. Nevertheless, the ability to create a narrative statement based on a picture story should be assessed as significantly disturbed.

## Test of active speech – dialogue-related speech

The test was aimed at assessing the ability to produce a statement of a dialogue nature. The respondent kept the correct pattern of this form of expression, or she used polite phrases at the beginning and end of the conversation, after asking a question, she waited for the interlocutor's answer and reacted to the content they provided. The statement was syntactically consistent, there were no pauses or repetitions. However, logical errors and difficulties in understanding time relations can be noticed.

---

[16] S. Grabias, Z.M. Kurkowski, T. Woźniak, *Logopedyczny test przesiewowy dla dzieci w wieku szkolnym*, Maria Curie-Skłodowska University. Department of Logopaedics and Applied Linguistics, Lublin 2002.

## Test of active speech – monologue-related speech

The monologue-related speech was assessed based on the *Linguistic Skills Test*[17] and spontaneous statements. The syntactic structure of the text created by the respondent is characterised by a huge diversification. It includes both compound-complex and simple sentences with occasional inflectional errors. The created text, although semantically coherent, contained pauses and repetitions which indicate difficulties in recreating the content of the story.

During spontaneous speeches, the girl often talked about her experience related to school, contacts with peers and family life. The statements were dominated by the expressive function, the respondent signalled her emotions both verbally (using exclamations and emotional expressions) and non-verbally – through laughter or crying. The monologues of the respondent contained numerous pauses and repetitions, which may indicate difficulties in formulating thoughts and experience. The statements often lacked a logical order, and the presented information did not follow the sequence of cause and effect. The occurring logical errors (e.g. lack of reference to time relations) definitely hampered the reception of statements, making them sometimes completely incomprehensible. However, the girl used a wide range of vocabulary, as well as extensive syntactic structures, such as dependent clauses and coordinate clauses.

## Test of active speech – creating requests, orders, wishes and invitations

The level of mastery of the pragmatic skill in creating requests and orders remains at a very high level. The girl answered all the questions correctly, demonstrating that she can skilfully communicate her thoughts and needs.

---

[17] Z. Tarkowski, *Test Sprawności Językowej*, Wydawnictwo Digi-Cad-Projekt, Lublin 2001.

The wishes created by the respondent contained all important elements, such as the addressee, the occasion of the wishes and their content. This form of expression was probably practised many times during school classes, thanks to which the girl did not experience any problem with its creation. The respondent had problems with the arrangement of the content of the invitation. The respondent included in it all the desired elements only after being asked auxiliary questions. Nevertheless, the level of pragmatic performance remains at a level adequate to the level of the intellectual development of the child.Vocabulary range test

In order to examine the vocabulary resource, the subtest *Vocabulary* from the *Linguistic Skills Test*[18], which consisted in guessing the answers to ten riddles read by the examiner, was used The respondent provided only three names (a lion, a forest, a fireman), and she guessed two words after the hint. This proves the limitations in abstract thinking and difficulties in retrieving names, because the girl knows and uses on her own words being answers to the riddles. Therefore, the results of the test are in contradiction with the vocabulary resources presented by the respondent on a daily basis in spontaneous statements. It also indicates the need for continuous repetition of already acquired vocabulary, and using it in various games, exercises and everyday situations.

The task of the respondent was also to name as many words as possible that fit the described category (e.g. toys, vehicles). Despite providing an example, the girl did not seem to understand the command because after a few words she ended up saying "That's it". As in previous tests, she did not present the richness of her active vocabulary and thus showed difficulties in the formation of secondary words.

Another test, taken from the *Child Vocabulary Test*[19], the assessment of the ability to form primary words. It is at a fairly high level,

---

[18] Z. Tarkowski, *Test Sprawności Językowej*, Wydawnictwo Digi-Cad-Projekt, Lublin 2001.

[19] Z. Tarkowski, *Test Słownika Dziecka*, Wydawnictwo Digi-Cad-Projekt, Lublin 1996.

although the respondent had difficulty in creating superior descriptors to verb names. The results of the described test show decent skills in categorising individual items and assigning words to specific lexical and semantic fields.The aim of the next test was to test the ability to define individual items or concepts. The full definition of a word should include the class, function and trait of the item or be synonymous with the word. The respondent provided a fully correct answer only three times (breakfast, kitchen, dwarf). Usually, her statements contained a description of one of the traits of the item or its function, but they lacked specific information allowing for a clear definition of the item in question. When creating definitions, the respondent referred to her experience, the closest environment or supported herself with a gesture. This proves that she has significant difficulties in generalising and distinguishing essential traits of a given item or phenomenon, which is characteristic of children with this type of intellectual disability.

## Inflection test

The results achieved by the girl indicate high declension skills. The respondent answered all the questions with almost no mistakes, thus demonstrating a high level of the tested linguistic ability.

## Self-esteem test

The aim of the task was to check the individual attitude of the respondent to the her dysarthria disorders. The questions concerned four aspects: the assessment of the intelligibility of her own statements, fatigue while speaking, difficulties with breathing and vocal difficulties. Due to the reduced intellectual capacity, the respondent had problems understanding the questions. She mentioned that what she says to her mother, teachers and colleagues is not always understandable. She stated that she did not get tired while speak-

ing, although during the observation muscle fatigue or a problem with respiratory-phonation coordination could be noticed. She added that she had no problems with breathing, and stated "My speech is sometimes not straight, I lose my speech, something like that." This may mean that the respondent is aware of her speech disorders, comparing herself to other people, she notices a different way of expressing, but she is unable to precisely describe the experienced difficulties.

## Conclusion

The results of the conducted exercises and diagnostic tests correspond to the information contained in the literature on the linguistic and communicative competence of people with mild intellectual disability and CP.

The development of the linguistic skills of the respondent remains at the level adequate to her intellectual and executive abilities. The girl has a large resource of vocabulary, but has problems with using it in task situations and retrieving previously learned names. Difficulties arise in creating definitions and secondary words. The respondent showed the correct level of understanding individual words (from the field of different parts of speech) and commands, but she had a significant problem with understanding longer, more complex texts and phrasemes. The girl has mastered the declension skill to a high level, but it is difficult for her to notice grammatical or semantic errors in the statements of other people.

The degree of realisation of various types of statements (monologues, dialogues and narratives), and thus the level of the development of interactive skills, is reduced as a result of deficits in cause-effect thinking and difficulties in retrieving names. Although the statements created by the respondent are often chaotic and incoherent, she is able to transfer her thoughts, needs or the most important content in an understandable way.

The respondent showed a high level of mastering communication competence. This means that despite the linguistic and cogni-

tive deficits, she is able to create statements adequate to the communicative situation, the rank of the recipient and the place of the conversation.

The level of understanding single words as well as sentences and free speech is good. Despite the significant degree of speech impediments, statements of the respondent are almost fully understood even by people from outside her environment. Possible difficulties with the reception of individual words do not have a negative impact on the overall understanding of what the girl wants to say to her interlocutor.

During the examination, no hypernasal or hyponasal speech was noticed, neither during the expression of single words, and sentences by the girl, nor during free speech. However, there were numerous abnormalities related to prosody, phonation and performing alternating movements. However, the disorders occurring in these spheres, do not affect the level of understanding of the utterance, and therefore the need of their elimination is smaller than in the case of deficits in other linguistic skills.

The respondent rarely commits grammatical or semantic errors, but she has trouble finding them on her own. She can notice the absurdity resulting from her errors and, after asking an auxiliary question by the examiner, she provides a correct answer. This may be related to deficits in the cognitive sphere. It also reflects the difficulties of the respondent in acquiring the grammatical rules of the Polish language, especially the inflection of words. Problems with understanding time relations are also visible.

To sum up, a serious neurological disorder, which is cerebral palsy, as well as a mild co-occurring intellectual disability, undoubtedly influences the degree of mastery of linguistic and communication skills by the respondent.According to U. Mirecka, "the level of language mastery and the ability to use it in social situations are quite varied in children with cerebral palsy".[20] In addition, peo-

---

[20] U. Mirecka, *Dyzartria w mózgowym porażeniu dziecięcym*, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2013, p. 19.

ple with intellectual disability experience a whole spectrum of disorders in the development of communication, speech and language – from the inability to communicate, through the use of alternative and assisted communication, to speech development delays or articulation abnormalities.[21] The language and communication difficulties occurring in the respondent are the result of not only her reduced intellectual level, and therefore deficits in the cognitive and social sphere, but also result from disorders of the CP type. It is not without reason that in recent years the postulate that the dysarthria resulting from CP should be treated to a large extent as a separate, autonomous unit has gained popularity.[22] This is because the discussed speech disorder has slightly different conditions in this neurological syndrome, which is associated with an extended spectrum of symptoms – "motor, sensory, intellectual and social macro- and microdeficits prevent the child from mastering their linguistic competence on their own".[23] This leads to a broader look at the described speech disorder and a different approach to its specificity.

Undoubtedly, the presence of such complex disorders in the tested child has a comprehensive impact on her development, including language development. However, systematic and multispecialist therapeutic interactions have a positive effect on the process of shaping and developing the necessary skills, which has been demonstrated in the present paper.

## References

Błeszyński J. J., *Niepełnosprawność intelektualna. Mowa – język – komunikacja*, Harmonia Universalis, Gdańsk 2013.

---

[21] J.J. Błeszyński, *Niepełnosprawność intelektualna. Mowa – język – komunikacja*, Harmonia Universalis, Gdańsk 2013, p. 40.

[22] M. Michalik, *Mózgowe porażenie dziecięce w teorii i praktyce logopedycznej*, Harmonia Universalis, Gdańsk 2015, p. 69.

[23] M. Michalik, *Mózgowe porażenie dziecięce w teorii i praktyce logopedycznej*, Harmonia Universalis, Gdańsk 2015, pp. 71–77.

Emiluta-Rozya D., *Całościowe badanie logopedyczne z materiałem obrazkowym*, Wydawnictwo Akademii Pedagogiki Specjalnej, Warsaw 2013.
Gałecki P., Pilecki M. i inni, *Kryteria diagnostyczne zaburzeń psychicznych DSM-5,* Edra Urban & Partner, Wrocław 2018.
Grabias S., Kurkowski Z. M., Woźniak T., *Logopedyczny test przesiewowy dla dzieci w wieku szkolnym*, Maria Curie-Skłodowska University. Department of Logopaedics and Applied Linguistics, Lublin 2002.
Gruba J., *Karty Oceny Logopedycznej Dziecka – KOLD,* KOMLOGO, Gliwice 2016.
Gustaw K., Mirecka U, *Skala dyzartrii: wersja dla dzieci*, Wydawnictwo Continuo, Wrocław 2000.
Michalik M., *Mózgowe porażenie dziecięce w teorii i praktyce logopedycznej*, Harmonia Universalis, Gdańsk 2015.
Mirecka U., *Dyzartria w mózgowym porażeniu dziecięcym*, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2013.
Tarkowski Z, *Test Sprawności Językowej*, Wydawnictwo Digi-Cad-Projekt, Lublin 2001.
Tarkowski Z., *Test Słownika Dziecka*, Wydawnictwo Digi-Cad-Projekt, Lublin 1996.

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

RENATA GLIWA
University of Łódź, Poland

# Assessment of the language, communication and interaction competences and skills of a patient with aphasia following aneurysm clipping and diagnosed symptomatic epilepsy

**ABSTRACT**: Renata Gliwa, *Assessment of the language, communication and interaction competences and skills of a patient with aphasia following aneurysm clipping and diagnosed symptomatic epilepsy*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 259–283. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.13

The article describes a case of a patient with aphasia, diagnosed with symptomatic epilepsy seizures after aneurysm clipping. A speech therapy diagnosis was made, consisting of patient observation, analysis of clinical documentation and speech test results. The subject was diagnosed with disorders of linguistic competence and skills caused by the presence of acoustic-mnestic aphasia. Their consequences are dysfunctions in terms of communication and interaction skills and abilities.

**KEY WORDS:** aphasia, aneurysm, epilepsy, speech therapy diagnosis

## Introduction

The objective of the article is an assessment of the condition of language, communication and interaction competences and skills

of a patient diagnosed with aphasia, following aneurysm[1] clipping and with a diagnosis of symptomatic aphasia.[2]

The speech therapy diagnosis of patients with broad neurological medical histories requires the consideration of an interdisciplinary assessment and of factors that could influence the present condition of the communication skills of the patient. In most such cases, communication dysfunctions are complicated, and are the consequence of other cognitive functions as well.

## Research methodology

The article uses research material concerning a 58-year-old male.[3] The data was collected according to the assumption of the clinical and experimental approach[4]. During the diagnostic procedure, the

---

[1] An intracranial aneurysm is a consequence of an illness of cerebral arteries, forms on an artery wall as a prominence that, when growing, reduces artery wall thickness. It bursts due to excess blood pressure, causing an intracranial haemorrhage (conf. W. Kozubski, P.P. Liberski, *Neurologia*, Wydawnictwo Lekarskie PZWL, Warszawa 2014, p. 526).

[2] Epilepsy is a set of somatic, vegetative and mental symptoms that may emerge due to diverse morphological and metabolic changes of the brain (J. Jędrzejczak, *Padaczka*, [in:] *Neurologia*, ed. by W. Kozubski, P.P. Liberski, Wydawnictwo Lekarskie PZWL, Warszawa 2014, pp. 662–666). It can influence language skills and competences, but the scope and character of disturbances depends on the type, intensity and cause of the epilepsy, and the location of the damage. Adults with epilepsy frequently complain of diverse language "difficulties", mainly in terms of oral fluency or the ability to express words, however, usually, the problems are not as severe as to be classified as typical aphasia (conf. www.epilepsy.com/article/2014/3/types-language-problems-epilepsy). An exception are cases, in which seizures develop due to changes such as an aneurysm or stroke located in an area important for speech. Functional magnetic resonance imaging (fMRI) tests showed that epilepsy influences the consolidation of the linguistic network (conf. www.epilepsy.com/article/2014/3/types-language-problems-epilepsy).

[3] The patient consented to the research and its publication.

[4] Conf. J. Panasiuk, *Język a komunikacja w afazji*, Wydawnictwo UMCS, Lublin 2019, p. 112.

interview, observation, data taken from medical documentation, psychometric tests as well as free proprietary research techniques and tools were used, selected so as to clearly show the modalities of pathological changes observed in the patient.[5] The procedure involved data collection, analyses and explanation.[6]

The first measure taken was to confirm the MMSE[7] results. Subsequently, the language, communication and interaction skills of the patient were assessed on the basis of observations, free conversations as well as diagnostic attempts from the publications: *Metody badania afazji*[8] and *Badanie neuropsychologiczne*[9] A (formal[10], semantic[11] and verbal[12])[13] dictionary fluency test[14], and an attempt at confrontation naming[15] were also carried out.

---

[5] Conf. A. Hamerlińska-Latecka, *Logopedia a metodologia badań społecznych*, [in:] *Problemy badawcze i diagnostyczne w logopedii*, ed. by I. Jaros, R. Gliwa, Wydawnictwo UŁ, Łódź 2018, pp. 19–34; T. Pilch, T. Bauman, *Zasady badań pedagogicznych. Strategie ilościowe i jakościowe*, Wydawnictwo Akademickie „Żak", Warszawa 2001, p. 78; M. Przybysz-Piwko, *Dobór prób badawczych – podstawa opisu i interpretacji stanu języka, (kompetencji językowej) u osób z afazją*, [in:] *Metodologia badań logopedycznych z perspektywy teorii i praktyki*, ed. by S. Milewski, K. Kaczorowska-Bray, Harmonia, Gdańsk 2019, pp. 198–212; R.K. Yin, *Studium przypadku w badaniach naukowych*, Wydawnictwo UJ, Kraków 2015; Z. Jaworska-Obój, *Studium przypadku jako metoda diagnozy klinicznej*, [in:] *Materiały do nauczania psychologii. Seria III. Metody badań psychologicznych*, ed. by L. Wołoszynowa, Wydawnictwo PWN, Warszawa 1985, pp. 334–349.

[6] J. Panasiuk, *Metodologia badania afazji a praktyka logopedyczna*, [in:] *Metodologia badań logopedycznych z perspektywy teorii i praktyki*, ed. by S. Milewski, K. Kaczorowska-Bray, Harmonia, Gdańsk 2019, pp. 172–197.

[7] The *Mini Mental State Examination* is a screening tool used to assess the presence and progress of dementia (conf. D. Perkin, *Neurologia w praktyce lekarza ogólnego*, Via Medica, Gdańsk 2003, p. 78).

[8] J. Szumska, *Metody badania afazji*, Wydawnictwo Lekarskie PZWL, Warszawa 1980.

[9] E.M. Szepietowska, *Badanie neuropsychologiczne. Procedura i ocena*, Wydawnictwo UMCS, Lublin 2000.

[10] The patient was asked to name words beginning with *k* (broad category) and then *f* (narrow category).

[11] The patient was asked to list animal names (broad category), and then sharp objects (narrow category).

Due to aphasia-typical symptom instability, the diagnostic procedure was spread out across several meetings, so observation would be sufficiently long to warrant an exhaustive description of the functioning of the patient. The tests were conducted under home conditions.

## Patient description

By education, the patient is a textile industry technician. He has two adult children, currently lives alone. He has not worked in his trade for a long time, operating a sole proprietorship over the recent years of his professional activity. For over three years now he has not worked any more due to his inability to work. His mother language is Polish, he used to speak German well. He is right-handed.

He suffered his first epileptic seizure about four years ago. A CT scan revealed a hyperdense, round structure, ca. 1.8–1.7 cm in diameter in the lateral fissure of the left half of the brain, with a clear

[12] The patient was asked to list as many activities performed by a person, the question was posed: *What does a man do?* More broadly on verb fluency, conf. e.g. R. Gliwa (*Fluencja słowna czasownikowa w fazie otępienia w stopniu lekkim w przebiegu choroby Alzheimera*, [in:] *Contributions to the 23rd Annual Scientific Conference of the Association of Slavists (Polyslav)*, ed. by K. Bednarska, D. Kruk, B. Popov, O. Saprikina, T. Speed, K. Szafraniec, S. Terekhova, R. Tsonev, A. Wysocka, Die Welt der Slaven. Sammelbande/Сборники. xx., Wiesbaden 2020, pp. 109–118.

[13] 60 seconds were alotted to each task.

[14] Description rules follow E.M. Szepietowska and B. Gawda (*Ścieżkami fluencji werbalnej*, Wydawnictwo UMCS, Lublin 2011; conf. also E.M. Szepietowska, J. Lipian, *Fluencja słowna neutralna i afektywna u chorych z uszkodzeniem prawej, lewej lub obu półkul mózgu*, „Psychiatria Polska” 2012, vol. XLVI, no. 4, pp. 539–551; M. Ponichtera-Kasprzykowska, T. Sobów, *Adaptacja i wykorzystanie testu fluencji słownej na świecie*, „Psychiatria i Psychologia Kliniczna” 2014, no. 14(3), pp. 178–187; M. Piskunowicz, M. Bieliński, A. Zgliński, A. Borkowska, *Testy fluencji słownej – zastosowanie w diagnostyce neuropsychologicznej*, „Psychiatria Polska” 2013, no. XLVI (3), pp. 475–485.

[15] The patient was shown 135 colour photos showing objects belonging to various semantic categories. Conf. also M. Pąchalska, *Afazjologia*, Wydawnictwo Naukowe PWN, Warszawa – Kraków 1999, p. 391.

ring-like sclerosis, indicating the presence of an aneurysm in the area of the left middle cerebral artery. An angio-CT scan revealed the presence of an aneurysm in the left MCA. The patient was qualified for neurosurgical therapy, and soon thereafter the aneurysm was clipped. The patient indicated that the first speech impediments occurred after the operation.

About a year after the operation, the patient was admitted to hospital again due to the emergence of further generalised tonic-clonic epileptic seizures. The neurological examination indicated confusion and the presence of mixed aphasia. The documentation included the information that speech impediments persist ever since the aneurysm clip treatment. A CT scan revealed a broad hypodense zone around the left temple akin to a post-traumatic change in the area of the terminal segments of the left middle cerebral artery. No other changes were found.

Since the described period, the patient had suffered four further generalised tonic-clonic epileptic seizures. A neurological examination in the year 2019 confirmed the previous diagnosis of symptomatic epilepsy and epileptic symptoms with seizures with localised focus (G40 according to ICD-10). The most recent epileptic episode occurred about six months earlier (beginning of 2020). The results of the most recent VIDEO-EEG examination indicate changes in the frontal and temporal zones, with the right side being dominant, with marked seizure activity. A CT examination without contrast found condition post aneurysm clipping in the MCA field on the left side; reinstated osseous lobe, stabilised craniofix in the left frontal-temporal-vertical zone; cavity area on left side in the arterial area of the MCA. No areas of recent ischaemia or traces of intracrainal bleeding were found; the chamber arrangement was found to be symmetrical, without transpositions, with the subarachnoid liquid reserve maintained. The neurologist transferred the patient to a speech therapy practice asking for a consult due to difficulty in understanding (an audiological examination excluded significant hearing impediments). The neurologist found no dyspraxia.

A psychiatric assessment concluded that the patient still has mild cognitive disorders, the supposition of psychoorganic syndrome was excluded.

Documentation additionally includes information about the patient having pharmacologically uncontrolled arterial hypertension and nicotine addiction.

The patient is quite independent, he does not require care. He can generally navigate financial affairs (he does his shopping and pays his bills independently, etc.) as well as socio-political affairs (one gets the notion that he is interested in sport and politics). The patient is able to move about fully autonomously. He is fully aware of objectively existing disorders. The patient comments on his speech difficulties, sometimes bluntly and brashly.

## Examination results

### Auto- and allopsychical orientation

The patient scored 23 points in the MMSE, this is the upper limit for mild dementia. He is oriented autopsychically yet disoriented allopsychically. The results of the individual tests suggest the presence of generalised deterioration of cognitive functioning, a fact that does not fully correspond to the results of the patient observation.

### Comprehension

The patient correctly indicated 95% images and activities corresponding to the names heard, however, requiring up to ten seconds to make his choice.

He correctly executed 75% of commands made of simple syntactic structures.[16] Significant dysfunctions were noted for commands with a complex logical, semantic and grammatical structure, as only

[16] E.g. *Please raise your hand* (acc. to J. Szumska, *Metody…*, op. cit., p. 43).

33% of the actions were in line with expectations, e.g. (*Please point to the floor, ceiling and wall*[17]): *The floor, now, what did we have later on, stairs, the floor, a wall and a table* [the patient pointed to what he himself said][18]; (*Please touch your right ear with your left hand)*: *Touch what with my right hand? My right ear?* [the patient took a pen from the table and touched his ear with it]. He managed fairly well in tasks using so-called decisive questions[19], giving 70% correct answers. Much more errors, ca. 55%, were found for complementary questions, e.g. (*What is your profession?)*: *The twentieee… Tomorrow! Sixty years, the twentyy eighth?*; *(What is the current season?) Season… January… two thousand twentieth! It's Dece…, we have snow falling, not spring… not summer not autum…, winter! Yes!*

The type of errors made in the above trials suggests that the comprehension disorders primarily encompass decoding of nouns and verbs (and other parts of the sentence), further on moving to the order of comprehension of relations expressed by inflectional endings. These are quite clearly overlapped by memory disturbances and discrete execution dysfunctions.

## Dialogue skill assessment

The patient was keen to participate in dialogue and initiated it in order to satisfy his social and physical needs. He eagerly initiated statements, but when he wound become convinced of his inability to finish it, he fell silent, withdrew, hoping that his interlocutor would complete the message. Resignation and impatience was frequently noted in the patient because of his limitations. Dialogue structure disturbances were caused by its complexity, with higher-level automation phrases and short replies coming quite fluently.

---

[17] Acc. to J. Szumska, *Metody…*, op. cit., p. 43.

[18] The statements in round brackets are those of the researcher, others in italics are statements by the patient; square brackets hold possible comments of the researcher on the task.

[19] The patient was asked ten questions like: *Does the sun shine at night?*

Less automated, longer statements were frequently so deformed that the lack of knowledge of the situational context prevented the comprehension of the patient's intent, e.g. *Here what they want to kill in our sea, and in Hel, they have, they teach 30 years ago we had only one, back then in Hel.*[20]

His responses contained logical, semantic, inflection and syntactic errors, e.g. (*Could I see the results of your last neurological examination?)*: *They are divided, please check, I did not do them, only, there, where…* [mumbling] *if the doctor would be so kind, yes, one copy is for you sir, sir, madam! You can take home, and the second is for me, I asked for to be done*. The suppression of the speech fluency of the patient was significantly influenced by word amnesia, even through the patient attempted to compensate them using descriptive structures (formulated both in a straightforward manner as well as through semantic negations). At times the patient would fuse periphrasing with non-verbal communication in the form of deictic or pantomimic gestures, e.g. *Doctor, coould yoooou* [the patient pointed at the kitchen] *to dri-drink, I'm speaking wrong again…* [the patient stood up and brought the kettle over].

Speech pressure was not observed. Noted was a tendency to move off topic and for the patient to lose sight of the objective of his statement – loss of the logical-content[21] dialogue structure, mainly as a result of lack of word readiness, and hence, the need to alter the sentence structure. Following the emergence of a distraction, the patient would not return to the topic on their own, he would inquire about what he was speaking about (a component of so-called absent-minded speech). He adhered to the rule of role interchangeability. He would most commonly use courtesy statements correctly, errors would be related to using phrases not fitting the situation, e.g. *good-bye* instead *good morning*.

---

[20] Hel is a city by the sea in Poland, where the study was performed [translator's note].

[21] On diverse mechanisms of the loss of the logical-content sentence structure: A. Domagała (*Zaburzenia sprawności dialogowych w chorobie Alzheimera. Charakterystyka na materiale języka polskiego*, [in:] *Choroba Alzheimera. Zaburzenia komunikacji językowej*, ed. by A. Domagała, E. Sitek, Wydawnictwo UMCS, Lublin 2018, pp. 100–124).

## Confrontation naming

The patient was shown 135 illustrations objects from diverse semantic categories.[22] He named 34% of these correctly and without doubt. In case of further ones (almost 7%) he was accompanied by doubts as to whether he chose the right word or recognised the object correctly, with uncertainty being expressed by intonation: *These are… map?*; *Banana?*; or statements like: *It may be…*; or comments: *It would seem that this is* […]. The reduced tempo of the name search process is indicated by pauses or comments like: *Here we have… this… smoke*; *So this is… rain*; *Oh God! Mmm one can go… sleighing!*; *These are… shadow.*

The patient replaced the majority of names with descriptive structures (ca. 28%), these were mostly simple periphrases, e.g. (ladder) *One can stomp there, go upwards to the ceiling… ladder*; (note) *Here, well… Wysocki, clearly…*

In few cases, the periphrase would be related to recalling the suitable word (slightly over 2%), e.g. (paintbrush): *One can paint with this, pain…, paintbrush*; (goat) *The one that… that runs against… goat!* A few periphrases were noted having the form of semantic negations (3%): (train car) *Here we have… not a train… you can only get in and riiiide*; (tent) *I neeeever had such a big one! Just only for two people… not a backpack! But…* The patient would rarely compensate anomia using verbal-gestural structures (5%) e.g. (rainbow) *MMm the suuun is shining and what I like very much… some people, and I don't care about it* (the patient made a gesture indicating the rainbow shape); or just with a gesture (ca. 3%): (crown) the patient recreated the gesture of placing a crown on his head, and of its shape (referential, descriptive, pantomimic gesture).

The semantic errors made (ca. 8%) indicate disturbances in information search and selection processes among competitive, semantically related data, the restriction of these unwanted associations, for which executive functions are responsible.[23] Semantic

---

[22] Conf. also M. Pąchalska, *Afazjologia*, op. cit., p. 391.

[23] E.M. Szepietowska, B. Gawda, *Mechanizmy neuronalne fluencji semantycznej i literowej: badania z użyciem fMRI. Implikacje kliniczne*, „Polskie Forum Psycholo-

paraphasiae were usually based on some relation, noted were, among others, cohyponyms: (leg) *Let's say arm*; meronyms: (head) *Hair*; (bathroom) *Shower*; hyperonyms: (knee) *Leg*. Perception errors constituted ca. 6%[24] e.g. (umbrella) *This is… a hat, a hat*. The inability to recognise images is indicated by comments like: (earthworm) *Oh… I cannot see what this is at all* (ca. 5%).[25] The patient did not recall the name and used no compensation strategy for ca. 10% of the images. For ca. 2% of the presented photographs, he used so-called self-references, e.g. *Oh! That's me!* […] (he recalled the correct name of the animal, the name of which is identical to his last name), or a reference to the bird he owned (parrot) *Pa… Ste… well… my Steven!*

## Assessment of execution of automated strings

The patient experienced difficulties in the execution of automated statements that are typical for aphasia[26], e.g. (*Please name the days of the week*): *January, Feb… not that? Monday, Tuesday* […] [continues correctly]; (*Please count from ten to twenty*): *Sev…, ten, eleven,* […] [continues correctly]; (*Please name the days of the week*) *And you're annoying, December, Novem… December, Novem… of the week?…*

The fundamental deficit stemmed from comprehension disorders of heard instructions, disorders of the mechanism of semantic activation (with semantic paraphasiae most certainly being the re-

---

giczne" 2016, 21(2), pp. 170–187; conf. M. Rutkiewicz-Hanczewska, *Wiek a nazywanie. Procesy wyszukiwania słów w starszym wieku*, [in:] *Gerontologopedia*, ed. by W. Tłokiński, S. Milewski, K. Kaczorowska-Bray, Harmonia, Gdańsk 2018, pp. 241–269.

[24] In this situation, errors in naming cannot be fully excluded; more on visual perception conf. E. Zawadzka, *Świat w obrazach u osób po udarach mózgu*, Difin SA, Warszawa 2013.

[25] Conf. also E. Zawadzka, *Świat w obrazach u osób po udarach mózgu*, Difin SA, Warszawa 2013.

[26] Their recreation requires the usage of right-hemisphere strategies (conf. E.M. Szepietowska, J. Lipian, *Fluencja…*, op. cit., pp. 539–551).

sult of word selection anomia), while disorders of task initiation capacity (however, without greater disturbances of task course control) cannot be excluded.[27]

## Assessment of repetition activity

The patient correctly repeated 100% vowels and consonants, 97% syllables, but only 71% syllable pairs. Lesser difficulties were observed when repeating short, one- or two-syllable words (80% correct), with the errors mostly being phonetic paraphasiae and perseverances. Significant difficulties were found when the patient was to repeat paronyms, with only 70% being executed appropriately; phonetic paraphasiae and omissions were found, e.g. (*dome – tome*) *dome, home? I don't know…*; (*fog – dog*) *dog?*[28]

Dysfunctions were also found when repeating words with a complex phonetic structure, above three syllables, e.g. (*etagere*) *Oh my, that's France, en…eta…*; (*ventilator*) *Please repeat it, fe, fee… ventilator*. The patient only repeated 20% of structural neologisms, e.g. (*timsa*) *I don't know what this is*; (*prewak*) *Pre…ga, it's no good, I'm a fool*.[29] During attempts at repetition of word series, he only recreated one two-component and one three-component string, e.g. (*oven, gate, lamp, cheese*): *Over… it's already gone… I heeeard everything, I know everything, but…*[30]

He was not able to remember sentences composed of more than three words[31], e.g. (*In a green meadow, a boy is running*): *First, what?*

---

[27] Conf. E. Sitek, A. Barczak, K. Kluj-Kozłowska, M. Harciarek, *Afazja pierwotnie postępująca – diagnostyka różnicowa i terapia*, [in:] *Gerontologopedia*, ed. by W. Tłokiński, S. Milewski, K. Kaczorowska-Bray, Harmonia, Gdańsk 2018, p. 560.

[28] Acc. to J. Szumska, *Metody…*, op. cit., p. 21.

[29] Acc. to J. Szumska, *Metody…*, op. cit., p. 22.

[30] Acc. to J. Szumska, *Metody…*, op. cit., p. 22. The proprietary test aiming at the comparison of auditory and visual memory saw the patient score just ca. 10% better, indicating dysfunctions in visual memory as well.

[31] Acc. to J. Szumska, *Metody…*, op. cit., p. 22.

*In a green children, God, sorry, in a gree… oh, a green child I would put that on the end, in a green…*; (*Round, juicy, red cherries grow in the garden*): *Rou… nd… doctor, one word after another, I can do that, but not this way*. One could speak of several conditions of correct repetition, the first – fully operational auditory cortex, second – a postcentral (kinaestetic) cortex that would provide precise articulation, third – the possibility of switching from one articuleme to another, requiring flexibility of the premotor cortex of the left hemisphere, fourth – the possibility of abstraction from well-developed stereotypes and the reduction of alternatives, as provided with direct participation of the frontal lobes.[32] The repetition test results indicate that the dysfunctions observed in the patient mostly apply to the first of these links, hence, the patient experiences a significant impairment of the capacity to copy linguistic symbols.

### Dictionary fluency assessment

The patient scored fairly low in verbal fluency assessments. In terms of formal fluency, for narrow categories, he only listed one word (*Please list as many words as possible beginning with f*): *My son's dog, Foto*; for broad ones, just six (*k*): *K? Koń, kot, król, książę* [horse, cat, king, prince[33]] *of course, too, k, right?… Well… I will not list Jarosław, I'll get angry again* [referring to a certain politician], […] *k is for, for, I already said księżniczka* [princess], *komuniści* [communists] […]. Similar results were found for semantic fluency, listing just seven animal names for a broad category: *Which ones? Animals… horse, cat, dog, goat, well then let's try she-ep*[34], *sheep, I looked in mirrors*

---

[32] A. Łuria, *Podstawy neuropsychologii*, Wydawnictwo Lekarskie PZWL, Warszawa 1976, pp. 338–339; conf. also J. Panasiuk, *Afazja a interakcja. Tekst – metatekst – kontekst*, Wydawnictwo UMCS, Lublin 2013.

[33] Translator's note: Translations into English provided for this test for convenience of the reader; in general, only those statements were left in Polish that either do not require comprehension in terms of meaning or must remain in the original language for reasons of language itself.

[34] Hyphens indicate subdivision into syllables by the patient.

*and I saw sheep, the ones in Africa… pacas, that carry… camel, those that are dying in Australia right now… I can see them, all these white* […]. In a narrow category – names of sharp objects – only two lexemes conformed to the task criterion, with one semantic error and repetitions noted: *Axe, hammer, well, no… but one can hurt oneself… so, hammer… I already said mallet… axe… pitchfork is also fine… well, I can't say what else might leave blood on ice…* For verb fluency, the patient only named four lexemes. No significant difference was found in terms of the capacity to retrieve common nouns and verbs, in both attempts the fluency was well below the standard, with slight superiority in terms of noun fluency.[35]

Quite a high score was only found for a fluency test for proper nouns, with the patient quoting 23 city names. During the task, OTV was seen, e.g. […] *let's make it fun, do you know the one about Przemyśl* […]. The quoted names were mostly fused in clusters based on the criterion of geographic location (eight clusters, two unrelated names), only one was built on the basis of a formal criterion.

Several causes for the reduction of word fluency in the patient can be named, with the most basic one seeming to stem from so-called post-semantic anomia. The disorder encompasses the decay of semantic networks to a lesser extent. One cannot exclude bad thinking organisation and strategy as well, with these being related to the loss of general cognitive flexibility, execution disorders, memory and attention disorders. A reduction of the basic capacity – to understand commands – was rather not observed in this test.[36] The good result in proper noun fluency should be related to the fact that the related search processes occur along other cerebral pathways than for common nouns, as they are found in separate cerebral networks.[37]

---

[35] Latest MRI examinations indicate that noun searches are dominated by areas of the left temporal lobe, while the prefrontal area of the dominant hemisphere handles verbs (conf. M. Rutkiewicz-Hanczewska, *Neurobiologia nazywania. O anomii prioprialnej i apelatywnej*, Wydawnictwo Naukowe UAM, Poznań 2016, p. 121).

[36] K. Jodzio, *Neuropoznawcze korelaty spadku fluencji po udarze prawej półkuli mózgu*, „Studia Psychologiczne" 2006, no. 44(2), pp. 5–18.

[37] More on this see M. Rutkiewicz-Hanczewska, *Neurobiologia nazywania…*, op. cit., p. 121.

## Narrative skill assessment[38]

### Self-narrative

The patient presented generally correct data about himself. He recalled his biography quite chaotically, making minor factual errors that applied to dates of specific events, he recalled periods, sometimes omitting significant facts and recalling unimportant data, but not confabulating: *November 21st, I was born… October 21st,* […] *of, well, school, primary school, naturally, secondary textile technical school… I wanted to become a journalist, but I was not accepted, in Kraków,* […] *I did not want to study at… oxen… at Łódź… at the Technical University… as an engineer… in the tex-tile industryyy… went to the army… to…* […], *I passed some… but I wouldn't give, then we started, I started working* […].

### Description

The patient referenced the image he was in quite a limited manner.[39] He did not use typical introductory phrases. He saw diverse layers of events, but referred to them fragmentarily. He had difficulty using event presentation rules: *House… house… houses… highrises… well, cars going… this way… pers, passenger… one… or truck… well, passenger in fact, it's just, that it's just a tr… a tree, a lady is walking… a dog, I don't remember its name… but I did… I did not want to have one like that, this story… one of a hundred… there are houses… from the beginning of the twentieth century, and then women… women in front of a… store, not with photographs, with overloads, not with overloads* […].

---

[38] More on narrative, see: A. Domagała, *Narracja i jej zaburzenia w otępieniu alzheimerowskim*, Wydawnictwo UMCS, Lublin 2015; T. Woźniak, *Narracja w schizofrenii*, Wydawnictwo UMCS, Lublin 2005; S. Grabias, *Postępowanie logopedyczne. Standardy terapii*, [in:] *Logopedia. Standardy postępowania logopedycznego*, ed. by S. Grabias, J. Panasiuk, T. Woźniak, Wydawnictwo UMCS, Lublin 2015, pp. 955–995.

[39] The image was used found in the test suggested by J. Szumska (*Metody…*, op. cit., p. 19).

## Re-narrative

In the re-narrative test, the patient was asked to listen to and abridge a short story.[40] The mode of retelling indicates that he is unable to create a coherent narrative: *A drunkard wanted to drink hoo-ot wine… he slept and dreamt that he is drinking on ho-ot wine, but when he woke… it's cold and he has to drink wine… with cold wine…* The created narrative scene contained few significant references, the patient was aware of the existence of the story line, he wanted to bring events in order, express a cause-and-effect relationship, but as the story progressed he lost significant data, hence, references became rare, with pragmatic cohesion also missing.

## Assessment of simultaneous and successive gnosis

Tests to assess the capacity to perceive cause-and-effect relations by the patient, entailing the arrangement of so-called "picture stories" and telling them, suggest the presence of dysfunctions of complex thought processes. The patient was only able to arrange an uncomplicated three-part story[41], with the narrative tangentially referring the pictures and lacking significant data.

## Assessment of calculia

The patient correctly named all the numbers presented to him and mathematical signs, recognising 87% of them[42]. He correctly executed so-called "non-verbal" (simple and complex)[43] tasks. Deficits were noted for word problems, e.g. (*There were four crates with*

---

[40] *The drunkard dreamt of holding a jug of cold wine in his hand. He wanted to have it heated, when he suddenly woke. „I should have drunk it cold" he thought with regret* (J. Szumska, *Metody…*, op. cit., p. 54).

[41] E.M. Szepietowska, *Badanie…*, op. cit., pp. 87–89.

[42] J. Szumska, *Metody…*, op. cit., p. 58.

[43] J. Szumska, *Metody…*, op. cit., pp. 59–60.

*applies in the basement, each contained 120 apples. One crate was sold, how many apples remain?*)[44]: *I already forgot, I forgot the first time.* [Wording was repeated] *Okay… 120 in total, and … one sold… how many? How many, well… you need to divide 120 by… by four times three, or 120, sixty… thirty… ninety… I think.*

The errors made and the tasks that they emerged in indicates that the patient used arithmetic facts when performing non-text tasks, and that he used aid strategies when handling word problems. The patient has retained the ability to present values by numbers, but his ability to bind amounts with symbolic representations using words is impaired.[45] The lack of disorders in tasks aimed at comparing numbers or the assessment of set sizes suggests that the area responsible for these activities, e.g. the horizontal segment of the intraparietal sulcus of both hemispheres was not damaged.[46] A comparison between the ability to perform tasks requiring the use of verbal and non-verbal code allows the conclusion that the dyscalculia observed in the patient is secondary, hence, caused by language and memory deficits, and, to a lesser extent, a disorder of the general plan and the executive partrequiring the execution of quasi-spatial operations.[47]

## Reading assessment

The patient used the correct names for the majority of the letters he was presented with[48] (89%) (with minor errors in execution: (s) *se*, (ł) *uł, ał, eł* and one perception error (b) *ha, ha, well one can say it's b, it's written-down like this, I thought it was be*). The patient made

---

[44] J. Szumska, *Metody…*, op. cit., p. 61.

[45] Conf. M. Gryko-Sobańska, *Rehabilitacja osób z akalkulią w neuropsychologii poznawczej*, [in:] *Wybrane zagadnienia rehabilitacji neuropsychologicznej,* ed. by E. Łojek, A. Bolewska, Wydawnictwo Naukowe Scholar, Warszawa 2008, p. 157.

[46] Conf. M. Gryko-Sobańska, *Rehabilitacja…*, op. cit., p. 157.

[47] Conf. A. Łuria, *Podstawy…*, op. cit., pp. 338–339.

[48] Acc. to J. Szumska, *Metody…*, op. cit., p. 51.

no errors when reading pairs of letters differentiated by one property. The paronyms he read out[49] showed some execution errors and perseverances (8%) e.g.: (*rama – mama*): *rama-wama, rama wama, mama sorry, rama wamama*.

In the texts read[50] errors were observed that were analogous to those noticed in the subject's speech, e.g. perseverances, stuttering, division of words into syllables, sound elongation. These phenomena may indicate dysfunctions in the transformation of graphemes into morphemes. Minor phonetic deformations and elisions were found of sounds difficult to execute. No disturbances were found for the mechanism of searching of lines with the sight.[51] No significant disturbances were noted for reading of functional words (with their reading being most commonly disturbed in aphasiae[52]), it is also difficult to see for which part of speech they were most common, as this generally depended on word length, e.g. (Trees bloom in the spring) *Trees blo-om in the sprin spring, spr-ing*; (Berries are tasty, black and round): *Merr… merr… ber-ries are tasty, black and ro-und*.

Structural neologisms[53], the ability to read which is considered a measure of pure phonological processing (as one cannot compensate difficulty through lexical or grammatical knowledge), were read by the patient several times, he looked for meanings, did not make errors in execution. It was very difficult for the patient to indicate the word written wrong among those written correctly, and made multiple analyses of their sound and letter structure, ultimately failing this test.[54]

A disproportion was noted between reading aloud and reading with comprehension, in particular for sentences and longer texts[55]

---

[49] Acc. to J. Szumska, *Metody…*, op. cit., p. 52.

[50] Acc. to J. Szumska, *Metody…*, op. cit., pp. 53–54.

[51] Conf. A. Domagała, *Zaburzenia komunikacji pisemnej u osób z chorobą Alzheimera*, [in:] *Zaburzenia komunikacji pisemnej*, ed. by A. Domagała, U. Mirecka, Harmonia, Gdańsk 2017, pp. 524–545.

[52] Conf. M. Pąchalska, *Język…*, op. cit., p. 174.

[53] Acc. to J. Szumska, *Metody…*, op. cit., p. 22.

[54] Acc. to J. Szumska, *Metody…*, op. cit., p. 55.

[55] Test used as suggested by E.M. Szepietowska, *Badanie…*, op. cit., p. 23.

(the patient recalled the content they read in a very limited manner, he was also usually unable to give answers corresponding to the read text).[56]

## Writing assessment

In general, the patient made no errors when listening to letters (if any, they mostly applied to the pair voiced – unvoiced), usually having no difficulty in finding the graphic counterparts of sounds (96% correct).

In the attempt to write automated texts, he had difficulty choosing the correct string, but continued it without error (see image no. 2).[57] Slight difficulties were observed for the written expression of fundamental data about his person – he wrote the first version of his first and last name slowly and using capital letters, and only after he was confident that the note is correct, he repeated it, using capital and small letters correctly. He correctly noted the name of the street where he lives, making an error in the building number, similar to the one he made when speaking. He recreated a formalised text (a sheet with greetings) correctly, correctly entering the necessary formal data, limiting himself to the word *regards*.

Significant changes were found for written words and sentences. Errors were found indicating disturbances of the model of graphically-similar marks, errors caused by disturbances in syllable, sound and letter analysis. During attempts at writing longer word structures, mechanisms showed up indicating disturbances to inertia, e.g. he would divide several times into syllables (usually making errors) a word he was told to write, eventually writing the structure

---

[56] Conf. H. Marczewska, *Zaburzenia językowe w demencji typu Alzheimera i demencji wielozawałowej*, [in:] *Nie tylko afazja…*, ed. by H. Marczewska, E. Osiejuk, Energeia, Warszawa 1994, pp. 7–60.

[57] Damage of left hemisphere structures lead to decay in conscious writing skills, while habitual writing forms are frequently more resistant to decay, rather being related to memory mechanisms than modes of processing of new information (conf. J. Panasiuk, *Język…*, op. cit., p. 169).

that was best available to him at the time, or he would fall back on the previous one (conf. image no. 2). Executions were also seen not aligned with the ortophony: (po górach): *po kórach* (conf. image no. 2). It is difficult to assess the quality of spontaneous writing, even though he was frequently encouraged, he avoided creative writing.

Noticeable was an increase in font size and limited line freedom and fluidity.[58]

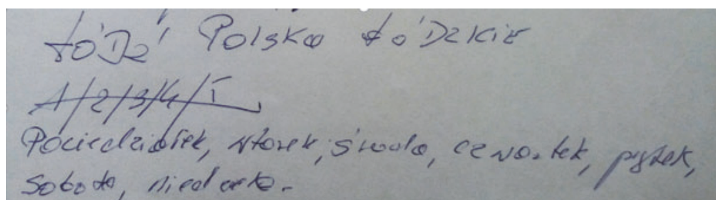


**Image no. 1.** Source: own research. Writing sample

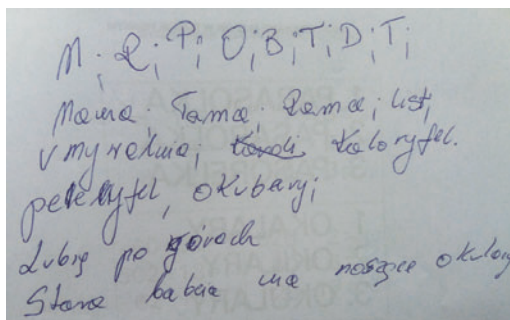


**Image no. 2.** Source: own research. Writing sample

## Research results analysis

Comprehension and execution of units of the phonological subsystem: The patient would generally recognise system units, but did

[58] Conf. A. Domagała, *Zaburzenia…*, op. cit., pp. 524–545.

not always execute them correctly. The most significant phonetic changes were found in repetition tests, but they were also present in spontaneous speech. The disturbances were quantitative and qualitative, with perseverations, elisions, contaminations, transmutations, metatheses, epentheses and reductions.[59] Some phonetic disturbances stemmed from the mode of execution of alternations conditioned by the morphological or phonological context, e.g. *I don't know what this could be, it could be backing, bayking; Wash*ing, *she's wasing, waaashing.* Seen were also – even if rarely – changes contrary to ortophony, e.g. *waz-ter* (water). Changes interfering with the linear order of the phonological order are rather tied to imbalance of auditory word templates.[60]

The patient would correctly recognise prosodic properties, but would rarely execute them correctly. In fact, only highly automated statements were appropriate in terms of intonation and accent. In spontaneous speech and exercises requiring metalinguistic operations, variable efficiency was recorded. The intonation form was very frequently fragmented, the accent was shifted and pauses emerged caused by disturbances in the correct formulation of statements. Changes were also noted in terms of the use of vowel length – the patient masked the presence of auditory agrammatisms by lengthened vowel articulation. The patient's rhythm of speech was also highly disturbed.[61]

Comprehension and articulation of units of the morphological subsystem: among the significant properties that were registered in this regard, listed must be capacity disturbances: word decoding and actualisation, comprehension and expression of meaning using

---

[59] The pathology of such phenomena, which may emerge in the speech of healthy people as well, is clear from their high frequency and chronicity (conf. J. Panasiuk, *Język…*, op. cit., p. 126).

[60] Conf. J. Panasiuk, *Język…*, op. cit., p. 139.

[61] Quite a typical phenomenon in aphasia. It is worth noting that the patient also had problems with perception and the recreation of rhythmic patterns, possibly in relation to mnestic difficulties and analysis unit (auditory, kinetic and kinaesthetic) coordination disorders (conf. J. Panasiuk, *Język…*, op. cit., p. 165).

inflection endings, comprehension and construction of sentence syntactic structures, comprehension and execution of metalinguistic operations.

The patient had very limited capacity to decode the verbal commands directed at him, in particular those with a complex logical, semantic and grammatical structure, hence, he used diverse mechanisms to mask deficits, e.g. repeating the command, asking for it to be repeated[62] or giving an answer immediately, one that was to a certain extent semantically related to the required response. Disturbances of the capacity to decode and actualise lexical resources expressed in the lack of word readiness, the TOT syndrome[63], the presence of semantic paraphasiae, the usage of descriptive structures or non-verbal communication. Their consequence was the loss of the train of thought and syntax disturbances shining through in agrammatisms. The engagement of a significant portion of cognitive abilities to look for a specific word caused the patient to be unable to return to the original statement plan and to continue the sentence they originally started.[64] He would quickly lose the data needed to construct a statement, and disturbed feedback control, with an extended processing time, caused the objective to be lost and the intratextual relations to decay.[65]

The mechanism of emergence of the agrammatisms noted should be tied to the volatility of auditory word patterns.[66] Agrammatisms also shone through in the dropping of grammatical mor-

---

[62] In both cases, the patient would gain time to analyse the heard message. Command repetition may also suggest a reduction of speed or disturbances in the capacity to initiate purposeful activity.

[63] Conf. M. Kielar-Turska, K. Byczewska-Konieczny, *Specyficzne właściwości posługiwania się językiem przez osoby w wieku senioralnym*, [in:] *Biomedyczne podstawy logopedii*, ed. by S. Milewski, J. Kuczkowski, K. Kaczorowska-Bray, Harmonia, Gdańsk 2014, pp. 437–441.

[64] Conf. E. Sitek, *Mowa w chorobie Alzheimera*, [in:] *Choroba Alzheimera zaburzenia komunikacji językowej*, ed. by A. Domagała, E. Sitek, Harmonia, Gdańsk 2018, p. 62–70.

[65] Conf. T. Woźniak, *Narracja…*, op. cit. p. 115.

[66] Conf. J. Panasiuk, *Język…*, op. cit., p. 179.

phemes that were free (functional words) as well as bound (inflection endings), the reduction of phrase length and complexity and the reduction of speech tempo.[67] Most errors applied to the execution of the grammatical case. Statements by the patient clearly indicated a reduction of the verb count as compared to the requirements of text cohesion, but, when he used them, he used the grammatical tense category rather correctly. Examples were seen of usage of the wrong person (errors usually spanned bidirectional exchange between the first person singular and first person plural). No significant errors were seen in terms of the use of aspect, mood[68] or voice, but thus is most probably the result of the limited number of verbs and the formation of very similar syntax structures, and not of skilful usage of the listed categories. Visible was neutralisation of properties in the passive voice forms, e.g. for activity naming tests: (get dressed:) get dressed or undress; (wash oneself:) wash, bathe.

## Conclusions

The quantitative and qualitative analysis of the acquired data suggests a diagnosis of the patient with disturbances of language competences and skills, which best fit the image of changes noted in acoustic-mnestic aphasia. Their consequence are dysfunctions in terms of communication competences and skills, which lead to reduction of patient interaction in a group (in particular verbal interaction). Significant disturbances were also noted in terms of other linguistic activities.

The speech disturbances are significant enough for the patient to execute their communication intentions appropriately, being not always able to properly recognise their interlocutor's intentions. He

---

[67] Conf. J. Panasiuk, *Język*…, op. cit., p. 178.

[68] In statements encouraged by the speech therapist, the patient most commonly used the indicative mood, due to the grammatical cohesion of the text; however, he could not cope at all in metalinguistic tasks using transformation possibilities of one mood into another.

has significantly reduced capacity to influence other people's behaviour in social situations.[69] The logical content statement structure of the patient decays, and he himself requires an increased participation of their counterpart during interaction. The patient frequently uses non-verbal communication forms, at times using the statements of their interlocutor, and rather does not use other forms of language communication.[70]

The functioning of the patient is determined by disturbances in the linguistic, communication and interaction spheres, overlaid by disturbances of memory and concentration, reduction in information processing speed and a drop of the learning performance.[71] The patient's cognitive skills do not completely correlate with the depth of speech disturbances (he is quite independent), however, they do correlate with their type.

## References

Biechowska D., Kaczmarek I., Witkowska M., Steinborn B., *Przydatność prób fluencji słownej w diagnozie różnicowej zaburzeń neurologicznych u dzieci i młodzieży*, „Neurologia Dziecięca" 2012, no. 21, pp. 45–51.

Domagała A., 2018, *Zaburzenia sprawności dialogowych w chorobie Alzheimera. Charakterystyka*, [in:] *Choroba Alzheimera. Zaburzenia komunikacji językowej*, ed. by A. Domagała, E. Sitek, Wydawnictwo UMCS, Lublin 2018, pp. 100–124.

Domagała A., *Narracja i jej zaburzenia w otępieniu alzheimerowskim*, Wydawnictwo UMCS, Lublin 2015.

Domagała A., *Rozpad sprawności leksykalnych u pacjenta z otępieniem umiarkowanym w chorobie Alzheimera*, „Logopaedica Lodziensia" 2019, no. 3, pp. 45–61.

Domagała A., *Zaburzenia komunikacji pisemnej u osób z chorobą Alzheimera*, [in:] *Zaburzenia komunikacji pisemnej*, ed. by A. Domagała, U. Mirecka, Harmonia, Gdańsk 2017, pp. 524–545.

---

[69] Conf. A. Tomorowicz, *Struktura kompetencji społecznych w ujęciu interakcyjnym*, „Psychiatria" 2011, vol. 8, no. 3, p. 91.

[70] Conf. M. Pąchalska, *Skala komunikacji niewerbalnej*, 2012, p. 397.

[71] Conf. D.I. Dominguez, B. De Strooper, *Novel therapeutic strategies provide the real test for the amyloid hypothesis of Alzheimer's disease*, „Trends in Pharmacological Sciences" 2002, no. 23, pp. 324–330.

Dominguez D.I., De Strooper B., *Novel therapeutic strategies provide the real test for the amyloid hypothesis of Alzheimer's disease*, „Trends in Pharmacological Sciences" 2002, no. 23, pp. 324–330.

Gliwa R., *Fluencja słowna czasownikowa w fazie otępienia w stopniu lekkim w przebiegu choroby Alzheimera*, [in:] *Contributions to the 23rd Annual Scientific Conference of the Association of Slavists (Polyslav)*, ed. by K. Bednarska, D. Kruk, B. Popov, O. Saprikina, T. Speed, K. Szafraniec, S. Terekhova, R. Tsonev, A. Wysocka, Die Welt der Slaven, Wiesbaden 2020, pp. 109–118.

Grabias S., *Postępowanie logopedyczne. Standardy terapii*, [in:] *Logopedia. Standardy postępowania logopedycznego*, ed. by S. Grabias, J. Panasiuk, T. Woźniak, Wydawnictwo UMCS, Lublin 2015, pp. 955–995.

Gryko-Sobańska M., *Rehabilitacja osób z akalkulią w neuropsychologii poznawczej*, [in:] *Wybrane zagadnienia rehabilitacji neuropsychologicznej*, ed. by E. Łojek, A. Bolewska, Wydawnictwo Naukowe Scholar, Warszawa 2008, pp. 156–180.

Hamerlińska-Latecka A., *Logopedia a metodologia badań społecznych*, [in:] *Problemy badawcze i diagnostyczne w logopedii*, ed. by I. Jaros, R. Gliwa, Wydawnictwo UŁ, Łódź 2018, pp. 19–34.

https://www.epilepsy.com/article/2014/3/types-language-problems-epilepsy [access: 09.09.2020].

ICD-10, 2008, *Międzynarodowa Statystyczna Klasyfikacja Chorób i Problemów Zdrowotnych ICD-10*, <www.csioz.gov.pl/interoperacyjnosc/klasyfikacje/> [access: 9.09.2020].

Jaworska-Obój Z., *Studium przypadku jako metoda diagnozy klinicznej*, [in:] *Materiały do nauczania psychologii. Seria III. Metody badań psychologicznych*, ed. by L. Wołoszynowa, Wydawnictwo PWN, Warszawa *1985,* pp. 334–349.

Jędrzejczak J., *Padaczka*, [in:] *Neurologia*, ed. by W. Kozubski, P.P. Liberski, Wydawnictwo Lekarskie PZWL, Warszawa 2014, pp. 662–666.

Jodzio K., *Neuropoznawcze korelaty spadku fluencji słownej po udarze prawej półkuli mózgu*, „Studia Psychologiczne" 2006, no. 44(2), pp. 5–18.

Kielar-Turska M., Byczewska-Konieczny K., *Specyficzne właściwości posługiwania się językiem przez osoby w wieku senioralnym*, [in:] *Biomedyczne podstawy logopedii*, ed. by S. Milewski, J. Kuczkowski, K. Kaczorowska-Bray, Harmonia, Gdańsk 2014, pp. 429–443.

Kozubski W., Liberski P.P., *Neurologia. Podręcznik dla studentów medycyny*, Wydawnictwo Lekarskie PZWL, Warszawa, 2014.

Łuria A.R., *Podstawy neuropsychologii*, Wydawnictwo Lekarskie PZWL, Warszawa 1976.

Marczewska H., *Zaburzenia językowe w demencji typu Alzheimera i demencji wielozawałowej*, [in:] *Nie tylko afazja…*, ed. by H. Marczewska, E. Osiejuk, Energeia, Warszawa 1994, pp. 7–60.

Panasiuk J., *Afazja a interakcja. Tekst – metatekst – kontekst*, Wydawnictwo UMCS, Lublin 2013.

Panasiuk J., *Język a komunikacja w afazji*, Wydawnictwo UMCS, Lublin 2019.

Panasiuk J., *Metodologia badania afazji a praktyka logopedyczna*, [in:] *Metodologia badań logopedycznych z perspektywy teorii i praktyki*, ed. by S. Milewski, K. Kaczorowska-Bray, Harmonia, Gdańsk 2019, pp. 172–197.

Pąchalska M., *Afazjologia*, Wydawnictwo Naukowe PWN, Warszawa – Kraków 1999.

Perkin D., *Neurologia w praktyce lekarza ogólnego*, Via Medica, Gdańsk 2003.

Pilch T., Bauman T., *Zasady badań pedagogicznych. Strategie ilościowe i jakościowe*, Wydawnictwo Akademickie „Żak", Warszawa 2001.

Piskunowicz M., Bieliński M., Zgliński A., Borkowska A., *Testy fluencji słownej – zastosowanie w diagnostyce neuropsychologicznej*, „Psychiatria Polska" 2013, no. XLVI(3), pp. 475–485.

Ponichtera-Kasprzykowska M., Sobów T., *Adaptacja i wykorzystanie testu fluencji słownej na świecie*, „Psychiatria i Psychologia Kliniczna" 2014, no. 14(3), pp. 178–187.

Przybysz-Piwko M., *Dobór prób badawczych – podstawa opisu i interpretacji stanu języka, (kompetencji językowej) u osób z afazją*, [in:] *Metodologia badań logopedycznych z perspektywy teorii i praktyki*, ed. by S. Milewski, K. Kaczorowska-Bray, Harmonia, Gdańsk 2019, pp. 198–212.

Rutkiewicz-Hanczewska M., *Neurobiologia nazywania. O anomii prioprialnej i apelatywnej*, Wydawnictwo Naukowe UAM, Poznań 2016.

Rutkiewicz-Hanczewska M., *Wiek a nazywanie. Procesy wyszukiwania słów w starszym wieku*, [in:] *Gerontologopedia*, ed. by W. Tłokiński, S. Milewski, K. Kaczorowska-Bray, Harmonia, Gdańsk 2018, pp. 241–269.

Sitek E., Barczak A., Kluj-Kozłowska K., Harciarek M., *Afazja pierwotnie postępująca – diagnostyka różnicowa i terapia*, [in:] *Gerontologopedia*, ed. by W. Tłokiński, S. Milewski, K. Kaczorowska-Bray, Harmonia, Gdańsk 2018, pp. 488–522.

Sitek E., *Mowa w chorobie Alzheimera*, [in:] *Choroba Alzheimera zaburzenia komunikacji językowej*, ed. by A. Domagała, E. Sitek, Harmonia, Gdańsk 2018, pp. 62–70.

Szepietowska E.M., *Badanie neuropsychologiczne. Procedura i ocena*, Wydawnictwo UMCS, Lublin 2000.

Szepietowska E.M., Gawda B., *Mechanizmy neuronalne fluencji semantycznej i literowej: badania z użyciem fMRI. Implikacje kliniczne*, „Polskie Forum Psychologiczne" 2016, no. 21(2), pp. 170–187.

Szepietowska E.M., Gawda B., *Ścieszkami fluencji werbalnej*, Wydawnictwo UMCS, Lublin 2011.

Szepietowska E.M., Lipian J., *Fluencja słowna neutralna i afektywna u chorych z uszkodzeniem prawej, lewej lub obu półkul mózgu*, „Psychiatria Polska" 2012, vol. XLVI, no. 4, pp. 539–551.

Szumska J., *Metody badania afazji*, Wydawnictwo Lekarskie PZWL, Warszawa 1980.

Tomorowicz A., *Struktura kompetencji społecznych w ujęciu interakcyjnym*, „Psychiatria" 2011, vol. 8, no. 3, pp. 91–96.

Woźniak T., *Narracja w schizofrenii*, Wydawnictwo UMCS, Lublin 2005.

Yin R.K., *Studium przypadku w badaniach naukowych*, Wydawnictwo UJ, Kraków 2015.

Zawadzka E., *Świat w obrazach u osób po udarach mózgu*, Difin SA, Warszawa 2013.

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

AGNIESZKA HAMERLIŃSKA
Nicolaus Copernicus University in Toruń, Poland
JULITA KIECZMER
Kazimierz Wielki University in Bydgoszcz, Poland

# The use of the mirror in speech therapy

**ABSTRACT**: Agnieszka Hamerlińska, Julita Kieczmer, *The use of the mirror in speech therapy*. Interdisciplinary Contexts of Special Pedagogy, no. 30, Poznań 2020. Pp. 285–308. Adam Mickiewicz University Press. ISSN 2300-391X. e-ISSN 2658-283X. DOI: https://doi.org/10.14746/ikps.2020.30.14

The article begins the description of the history of a mirror: its origin, creation and use. Then the characteristics of the mirror as a typical element of the speech therapy room equipment were made. The article discusses the issue of its use in the opinion of speech therapists. Speech disorders specialists note that it should be used first of all for people with articulation disorders and less for people with mutism.

**KEY WORDS:** mirror, speech disorders, speech therapist, speech therapy, specifications

## Introduction

The mirror (Latin: *speculum*) is derived from the words 'zerknąć' (glance), 'spojrzeć' (look) in Polish. The same goes for Czech – *zrcadło* and *zrkadło* – and Russian – *zercało* and *zerkało*. In French (*mirori*) and English (*mirror*), it means: look, admire.[1] In Italian (*lustro*) it

[1] M. Wallis, *The history of the mirror and its role in various fields of culture* (*Dzieje zwierciadła i jego rola w różnych dziedzinach kultury*), Łódzkie Towarzystwo Naukowe, Łódź 1956, p. 15.

stands for glare or gloss. We can notice that all aforementioned explanations have one thing in common: the common function and intended use of the mirror (looking at one's own reflection in it).

Katarzyna Luft notes that in the practice of everyday life the mirror is simply a surface on which we see our own image. Usually regarded as an artifact used for contemplating the corporeal image, the mirror has been associated with spirituality in many aspects in the cultural & semiotic dimension.[2]

The presence of the mirror in the speech therapist's room seems natural. In the therapeutic process under way, the use of each educational aid should be justified and substantively adapted to the disorder and the person concerned. When reviewing literature, it is difficult to come across guidelines on the use of the mirror in the speech therapist's room. It is usually indicated that the mirror should simply be and that its main purpose is to control the work of vocal organs.

This paper starts the outline of the history of the origin and development of the mirror from ancient times and continues it till modern times. It also contains a description of existing superstitions where the mirror plays a fundamental role. The next step was the analysis of literature on the use of the mirror in the speech therapist's room. The aim of the paper is to describe the method of use of the mirror in speech therapy by speech therapists working in Poland. On the basis of a diagnostic survey, a study was conducted in a group of 264 speech therapists. Their results and conclusions are the last part of this paper.

## The history of the mirror

Originally, the function of mirrors was performed by springs, in which people could see their own reflection. Speaking of spring

---

[2] K. Luft, *The body trapped in mirrors: the issue of corporeality of the human being towards the discourse of the mirror in modern humanistic thought* (*Ciało osaczone lustrami, czyli problem cielesności istoty ludzkiej wobec dyskursu zwierciadła we współczesnej myśli humanistycznej*), Scientific papers of the Academy of Physical Education in Wroclaw, 2012, pp. 38–44.

reflections, it is worth quoting the figure of Narcissus – the hero of a Greek myth who fell in love with his own beauty upon seeing his own reflection in a spring.[3] A less known character is Högn – a prince who looked at himself in the water to check the words of people who said he looked ugly.[4]

Thin, round or four-sided polished stone slabs dating back to the Neolithic Age, found in Scotland, are probably the first produced mirrors. Copper of bronze polished slabs are mirrors produced in the Bronze Age. The date of making the first glass mirror is unknown. We know, however, that in the 12th and 13th century the method of making mirrors was already known as 'laying a thin metal sheet on the rear side of the glass'[5], but it was rarely put into practice. Glass mirrors were produced in Nuremberg as early as 1383. *Ochsenaugen* – 'ox's eyes' – is the name of small convex glass mirrors produced in Germany since the 15th century.[6]

Further mirrors were medieval pocket mirrors, known and used both in the bourgeois society and among the poorer rural people. In subsequent years of the Middle Ages, free-standing mirrors, called *damoyselle* in French, started to appear. Wall-mounted mirrors were already known at that time[7].

Mirrors have changed significantly over the centuries: from various materials and equipment used for their production to their use, which differs from the original one in many cases today (Table 1).

As early as the middle of the third millennium B.C. in Egypt, mirrors were made of metal sheet, from which the desired shape was cut and moulded (these mirrors were most often shaped like the sun, a pear or a heart). It was from Egypt that metal mirrors began to be disseminated; in subsequent periods, they became known and were produced in Mycenae or in Greece. Egyptian mir-

[3] R. Graves, *The Greek myths*, Polish translation: *Mity greckie*, Państwowy Instytut Wydawniczy, Warszawa 1982, p. 250.

[4] M. Wallis, *The history of the mirror…*, op. cit., p. 16.

[5] M. Wallis, *The history of the mirror…*, op. cit., p. 33.

[6] Ibidem.

[7] Ibidem.

**Table 1.** Mirror production chronology

| Material used for making mirrors | Production place | Duration |
|---|---|---|
| Stone slabs | Scotland | Neolithic Age |
| Copper | Elam | first half of the 3rd millennium B.C. |
| Copper and bronze | Egypt | first half of the 3rd millennium B.C. |
| Bronze | Scythia, China | 7th century B.C. |
| Metal | Greece | 7th century B.C. |
| Bronze | Among the Celts | 1st century B.C. |
| Copper and bronze | Russia | middle of the 1st century B.C. |
| Blown glass | Rome | 1st century |
| Bronze | Ukraine | From the 5th century |
| Bronze | Among the Slavs from the early Middle Ages | From the 10th century |
| Leaded glass | Western Europe | Circa 1250 |
| Glass | Europe | 15th century |
| Glass poured with amalgam (an alloy of mercury with lead or tin) | Venice | Middle of the 16th century |
| Glass, silvered on the reverse | by Drayton, Petit-Jean and Liebig | 1843 |
| Glass with aluminium or silver on the back wall | | currently |

Source: M. Wallis, *The history of the mirror*, op. cit., pp. 62–64.

rors were flat and convex or slightly concave, usually small (their diameter ranged from 15 to 20 cm). These mirrors always contained a handle usually made of Acacia and cedar wood. A gilded or ivory handle was attached to more expensive mirrors. The mirror was a part of Egyptian women's garments for the time of worship. The possession of this item was a proof of the social status and the privilege that a woman from a higher social stratum had. Once the use of a mirror by a maidservant was impossible; because of the function

fulfilled by her, it 'was equal to …the overthrow of the existing order'. Mirrors were a particularly appreciated and recognised object; they were stored carefully in order not to be destroyed. They were kept in leather or wicker cases, and more valuable copies were kept in locked caskets. At the turn of the 13th century B.C., Egyptian mirrors became prevalent in Mycenae. Here their shape was round (in contrast to shapes formed in Egypt).[8]

The Greek Hellenic culture, in which the beauty of the human body played a significant role, was closely connected with the use of the mirror, which also enabled people to admire human beauty. As in Egypt, the possession of a mirror in Greece was a privilege. It was intended for persons who came from the ruling classes. The possession of a mirror emphasised the status of its holder that a majority of society could not afford because of costs. In Korinth, free-standing mirrors began to appear in the middle of the 4th century B.C., but their real prime started in the 5th century B.C. Later mirrors were made with a cover and decorated with a relief (which was first pressed and then moulded). In almost every case, mirrors were used only by women and put into their graves after death.

In ancient Rome, all three types of mirrors produced in Greece were known: free-standing, with a handle and with a cover. Introducing modifications and focusing on functionality, the Romans started creating square and rectangular mirrors. Their production took place in the territory of current Brindisi. Unfortunately, bronze mirrors became quickly covered with blue-green or black deposit due to moisture, which eventually led to the opaqueness of beautiful polished bronze panels.

Slavic peoples inhabiting the western borders of the Slavic language area knew metal mirrors coming from Rome from the 10th century. Made of round metal plate, these mirrors also had a handle.[9]

During the reign of the Chinese T'ang dynasty (618–907 A.D.), the edges of bronze mirrors were adorned with beautiful motifs of

---

[8] Erman A., Ranke H., *Aegypten und aegyptisches leben im altertum*, Tubigen 1923.

[9] Niederle L., *Život starých Slovanů*, vol. 1, part 1, Prague 1911.

lions and bunches of grapes. This pattern was a sign of wealth and abundance.[10]

In the middle of the sixteenth century, the production of mirrors started in Venice; their back side was poured with a mixture of mercury with tin or lead –such a compound was called an amalgam.[11] As we know today, mercury is a very toxic element, but this knowledge was absent in the past. Mercury was excavated by physically weaker persons or prisoners. Persons exposed to the toxicity and harmfulness of its impact survived only around three years in this environment.[12] In 1861, Adolf Kussmaul –a German doctor and scientist –conducted an examination of persons who had been employed in the production of mirrors in Nuremberg and Fürth. On the basis of this examination, he wrote a work in which he described chronic mercury poisoning. At that time, mirrors were produced according to the following technology:

> 'The glass was first cut at an angle and coated with a tin layer, after which mercury was rubbed in by means of flannel rags. Then such a mirror was cleaned and dried to avoid the formation of air bubbles and left for the binding of the amalgam. After around 3–4 weeks, the mirror was ready'.[13]

The high incidence of disease among employees exposed to mercury was caused by many factors. During their work, they not only breathed in the fumes of this substance, but also their clothes were saturated with it. Such a long exposure to mercury resulted in poisoning that A. Kussmaul described in three stages:

> 'at first there was excessive stimulation, then the fine tremor of limbs appeared, and the cachexy of the whole body followed'.[14]

---

[10] Cammann S., *The lion and Grape Patterns on Chinese Bronze Mirrors*, [in:] Artibus Asiae, Artibus Asiae Publishers, A 16, 1953.

[11] http://www.allum.pl/zagrozenia-i-alergeny/rtec

[12] R. Szozda, *Mercury from the earliest times till the 19th century* (*Rtęć od najdawniejszych czasów do wieku XIX*), Atest – Ochrona pracy, no. 1, 2005, p. 38.

[13] R. Szozda, *Mercury…*, op. cit., p. 39.

[14] R. Szozda, *Mercury…*, op. cit., p. 39.

The publication of the confirmed multitude of the harmful and toxic impact of mercury through Kaussmal's studies contributed to the adoption of very strict regulations. They specified general rules of work concerning the production of mirrors, but, most importantly, led to a change in the method of manufacturing; mercury was no longer used, being replaced with silver compounds.

The first glass mirrors had the size of a small plate. Glass was initially melted from sand that contained iron oxide –an element reducing transparency. Attempts were made to use 'sodium with potassium with an admixture of ash from fern' in glass production processes[15], which gradually improved the quality of products after many tests.

The production of glass mirrors was not an easy task and required certain skills. The Romans mastered and used a technique based on the application of hot lead to a thin and fairly even glass layer –otherwise, if glass were thick and uneven, it would not survive such a big change in temperatures. Hot lead poured into a bubble blown from glass solidified during cooling and covered the concave part; the last stage was cutting the bubble into pieces. This method of making mirrors also meant that their size could not be big. Another drawback was the convex shape of the mirror, which deformed the reflection of the person looking in it.[16]

In the northern part of Europe, at the beginning of the 16th century, mirrors were increasingly widespread. As can easily be guessed, in the first phase of their prime they appeared more and more frequently in castles, then in houses of wealthy burghers and at fairs, where they could be bought.

For a very long time, changes in the production of mirrors progressed very arduously. There were also no transformations that would make work easier for people engaged in this production. This applied also to mirrors themselves, which still were not made perfectly. The modernisation of mirror production processes oc-

[15] S. Melchior-Bonnet, *A tool of magic. The history of mirrors* (*Narzędzie magii. Historia luster i zwierciadeł*), Bellona, Warszawa 2007, p. 21.

[16] Ibidem, pp. 21–22.

curred in the 19th century. The huge changes introduced at that time made work easier and improved that quality of products – mirrors. A blade wheel was used for grinding and polishing, and open-hearth furnaces helping to obtain higher and better distributed temperatures contributed to a decrease of defects occurring in molten glass. The system of work changed significantly, too. The pouring, flattening and rolling of molten glass was improved. The reduction of the production time resulted in the better quality of the product.

The history of mirrors is connected with the making of artistic mirrors and intertwined with the history of metalworking and glassmaking, sculpture and engraving on metal, enamelling and inlay and then with the history of framing, furniture-making, interior design and architecture.[17] Mirrors were put to use also in engineering and contributed to many discoveries in physics and astronomy. They have also been used for a long time in sport, ballet, dancing, cosmetology, fashion, hairdressing and speech therapy.

## Mirror-related superstitions

Superstitions have played an important role in people's lives and the culture of society for a long time.[18] The lexeme 'superstition' is described as 'a strongly rooted, mistaken and groundless belief; a mistaken and unjustified view on something; prejudice'.[19] Metelska stresses the use of the word 'erroneous' in the definition, which indicates unjustified reasons and the absence of (reasonable) grounds for belief in something. In Bruce Hood's opinion, religious beliefs are a source of various superstitions. Generally speaking, a supersti-

---

[17] M. Wallis, *The history of the mirror…*, op. cit., p. 62.

[18] K. Metelska. *Superstitions and customs as factors shaping the behaviours of society (on the example of a Ukrainian wedding)* (*Przesądy i obyczaje jako czynniki sterujące zachowaniami społeczeństwa (na przykładzie ukraińskiego wesela)*). Acta Humana, 7, 2016.

[19] *A universal dictionary of Polish* (*Uniwersalny słownik języka polskiego*), vol. 3, ed. S. Dubisz, Warszawa 2003, p. 728.

tion is a folk belief in the supernatural. Superstitions are connected with the social and cultural circle, as well as views taken over without a second thought from other persons – often parents or people regarded as authorities. In the Polish version of the lexeme ('przesąd'), even the name suggests that something is prejudged a priori.[20] Superstitions are obviously devoid of the scientific dimension. However, when learning the history of the mirror, it is hard not to reveal surprising beliefs connected with it.

It was once believed that the mirror reflection shows human soul and that this mirror may deprive the human being of this soul. That was something in which inhabitants of Melanesia, the Zulus or the Aztecs believed. The Jewish society still cultivates the habit of covering all mirrors in the house in which a dead person is presented (the soul of the dead person that still wanders around the house cannot see him, or an inhabitant of the house cannot see it). The same occurs in Muslim religion.[21]

There is also a very popular belief that breaking a mirror brings bad luck for seven years.[22] There are many theories how to get rid of this bad luck. The most popular suggestion is to throw that mirror out of the house as quickly as possible. Another one is to wrap the broken item in paper, stand with one's back towards the water and throw it into the water. In older collections, we can also find information that if a broken mirror was a souvenir, it could not be thrown out, but in order to avoid bad luck, it was necessary to hide

---

[20] A. Grzywa, *Manipulation. Everything you should know about it* (*Manipulacja. Wszystko, co powinieneś o niej wiedzieć*), Lublin 2013, p. 40.

[21] K. Luft, *The body trapped in mirrors: the issue of corporeality of the human being towards the discourse of the mirror in modern humanistic thought* (*Ciało osaczone lustrami, czyli problem cielesności istoty ludzkiej wobec dyskursu zwierciadła we współczesnej myśli humanistycznej*), Scientific papers of the Academy of Physical Education in Wroclaw 2012, pp. 38–44.

[22] E. Krajewska-Kułak, P. Radziejewski, K. Van Damme-Ostapowicz, J. Lewko, Barbara Jankowiak, B. Kowalewska, K. Wróblewska, J. Chilińska, E. Ortman, A. Moczydłowska, *Attitudes of adults and young people to traditional superstitions and prejudices* (*Postawy dorosłych i młodzieży wobec tradycyjnych przesądów i zabobonów*), Problemy Higieny i Epidemiologii, 2011, 92(3), pp. 441–450.

the mirror and it was no longer possible to look at one's own reflection in it.[23]

In the folk culture of Warmia, a number of prohibitions and requirements was observed for the sake of protection against ghosts; for example, entering the barn bareheaded or washing the dishes after Thursday supper was forbidden. In order to make a ghost believe that nobody is home, the inhabitants of Warmia placed shoes towards the door and laid a sheaf of hay on the bed or slept in a position different than usual. It was also believed that a ghost is afraid of a mirror hung in the barn.[24]

Although Internet portals are not a source of scientific knowledge, it is worth noting widely available superstitions. The mirror seems to be in the centre of created superstitions. Many parents still have a dilemma whether to show their child's reflection to it before it is one year old, and they experience even bigger stress when their child has not been baptised yet. Some parents believe that their child is exposed to the devil's actions before it is baptised. Even today, many villagers are still convinced that a child may see the *devil* in the mirror upon seeing its own reflection before the baptism[25]. Moreover, there is a superstition that if a child will often see its reflection in a mirror, it may begin to stutter.[26] There is also a belief among people that infants should not be shown a mirror, because if a child sees its own reflection in a mirror, it may drown in the future.[27]

## The mirror in the speech therapist's room

A study on the professional and social image of the speech therapist conducted by Zbigniew Tarkowski showed that, according to

---

[23] Ibidem, p. 80.

[24] R. Kaczorowski, *Superstitions and beliefs in the folk culture of Polish inhabitants of the Warmia region at the turn of the 20$^{th}$ century* (*Przesądy i wierzenia w ludowej kulturze polskich mieszkańców Warmii na przełomie XIX i XX wieku*). Studia Elbląskie, V, 2003.

[25] https://www.sosrodzice.pl/dziecko-a-lustro/, access: 22$^{nd}$ July 2020.

[26] https://www.rodzice.pl/temat/przesad-z-lustrem/, access: 22$^{nd}$ July 2020.

[27] http://www.nowiny.rybnik.pl/artykul,42115,przesady-zwiazane-z-lustrem.html, access: 22$^{nd}$ July 2020.

92.5% of respondents, 'the speech therapist is associated with a woman sitting in front of a mirror and calling out sounds'.[28] Although this study was performed many years ago, and the profession of speech therapist has intensely developed, both the speech therapist and the speech therapy room are still associated with the mirror. It must be acknowledged that the mirror is the speech therapist's main professional attribute.

According to the Ordinance of the Minister of Health of 6th November 2013 on guaranteed benefits within the scope of therapeutic rehabilitation that was published in the Journal of Laws of the Republic of Poland on 12th December 2013, each speech therapy room where a therapy is conducted should contain a speech therapy mirror or a control mirror. According to the act, the speech therapy mirror is an obligatory part of each speech therapy room where the rehabilitation of persons with a hearing and speech dysfunction is conducted, whereas the control mirror must be put in each room intended for the therapy of children with developmental age disorders. However, there is more than one existing model of a speech therapy room.[29]

A few types of mirrors are recommended for the speech therapist's room:

1. Horizontally hanging mirror – the most frequent, rectangular type of mirror hanging on the wall in front of the child and the speech therapist. Its huge advantage is that faces of persons undergoing therapy are very well visible. Unfortunately, it may reflect various objects located in the room, which may distract the patient's attention.
2. Free-standing table mirror – less popular in speech therapy rooms; it is of average size and can be freely put aside. Unfor-

[28] Z. Tarkowski, *The professional and social image of the speech therapist* (*Wizerunek zawodowy i społeczny logopedy*), [in:] *Speech therapy: theory and practice* (*Logopedia teoria i praktyka*), Agencja Wydawnicza a linea, Wrocław 2005, p. 397.

[29] A. Walencik-Topiłko, *The speech therapy room – the therapist's professional knowledge and practices (Gabinet logopedyczny – warsztat pracy terapeuty)*, [in:] *The fundamentals of neurological speech therapy. An academic handbook* (*Podstawy neurologopedii. Podręcznik akademicki*), 2005, pp. 328–343.

tunately, it is possible to see only one person in the reflection. While holding the mirror, the patient does not see the speech therapist and vice versa.
3. Pocket mirror – used most frequently during group sessions, so that each participant would have access to his/her own mirror. Unfortunately, the whole face of the practising person cannot be seen in such a mirror, so it must be held manually during the therapy.
4. Double-wing mirror – additional side mirrors allow the therapist to observe the practising person from a half-profile, and they can be closed when the use of the mirror is not required during an exercise. The size of the mirror is a drawback – it occupies much space.[30]

Functions of the mirror in the speech therapist's room are as follows:
- it helps to build a therapeutic bond between the patient and the speech therapist;
- it is a diagnostic tool (used for the examination of hypernasality);
- it is used as a means for controlling the patient and for his self-control;
- it acts as an auto-corrector;
- it can be treated as a tool supporting the development of imitation.

The first element worth attention is the role of the mirror is the construction of a therapeutic bond between the patient and the speech therapist. Watching each other in front of the mirror may be even an intimate activity; it is an act where one person opens up to another. If the meeting takes place in front of this tool, and the speech therapist and the patient sit beside each other, there is a risk that the therapist will enter the sphere of the patient's mental comfort too violently. Ensuring comfort is connected with keeping and respecting a physical distance towards the patient. The physical distance is a 'personal space and an invisible changeable border that

---

[30] Ibidem.

regulates the distance at which we establish relations with other persons'.[31] The interpersonal distance, particularly in the first phase of establishing contact, gives a chance to develop a relation that is safe for the patient. The physical distance remains connected with the psychological distance, which is understood as a level of intimacy and closeness between interlocutors, depends on the dynamic self-disclosure process and occurs on the cognitive level – comprehension, the emotional level – empathy and the behavioural level – listening, communication.[32] The typical distance during a conversation is the distance of an outreached hand. It is worth keeping these guidelines in mind particularly during the speech therapy diagnosis process. Sometimes it is not worth reducing the distance between the patient and the speech therapist at once by inviting the patient to sit beside the therapist in front of the mirror. The verification of the build and fitness often does not need a mirror (for example, laryngologists do not evaluate the build of the mouth in front of the mirror).

The mirror as a therapeutic tool plays a significant role in conducting the therapy of persons with dyslalia, hypernasality, autism spectrum disorders, speech disfluency, facial nerve paralysis and hearing disorders, which will be explained below.

The mirror in the speech therapy room is used mainly for controlling purposes. Therapists treat mirrors as a tool for observing the biofeedback mechanism, because when they speak a sound or perform a face exercise, they can observe their own intentions and their implementation.[33] The mirror is most useful during a demonstration of the proper positioning of speech organs. It creates the possibility of comparing the performance of exercises and is useful in calling out sounds.

---

[31] P. Bell, T. Greene, J. Fisher, A. Baum, *Environmental psychology* (*Psychologia środowiskowa*), GWP, Gdańsk, 2004, p. 345.

[32] A. Suchańska, *Conversation and observation in psychological diagnosis* (*Rozmowa i obserwacja w diagnozie psychologicznej*), WAiP, Warszawa, 2007, p. 231.

[33] A. Grossinho, S. Cavaco, J. Magalh, *An interactive toolset for speech therapy.*

The small cosmetic mirror is a diagnostic tool that helps to check if hypernasality occurs in the patient. If the mirror mists up, this means that the air escapes through the nose, which proves the existence of hypernasality (in the case of non-nasal sounds, the air escapes through the mouth and the mirror should not mist up). This kind of examination is called a mirror test.[34]

It also turns out that the mirror is used as a tool for teaching imitation in children with autism spectrum disorders. Autistic persons often show deficits in imitation skills[35], and imitation is a prerequisite for the development of successive development stages, including social communication skills. It has been noticed that Video Self Modelling is treated as an effective imitation teaching method, but it involves high costs and requires the adaptation of rooms. Studies were conducted with the use of mirrors as a new treatment method improving imitation skills in children diagnosed with autism spectrum disorders. In the opinion of authors of the project, the use of the mirror allows participants to observe their engagement in a specific behaviour; at the same time, mirrors save more time and money than the VSM method does. The use of mirrors lead to the improvement of imitation skills in persons with autism spectrum disorders, both in school and at home. In addition, it allows patients to imitate movement and voice.[36]

The mirror is also used in the therapy of persons with speech disfluency. It primarily helps the patient to observe himself/herself during the occurrence of blocks and teaches them to maintain eye contact with himself/herself. It is recommended to use a relatively large mirror (in which persons see themselves from the waist up) that can be moved and put in the place where the patient is. Talking

---

[34] C.J. Crowley, M. Baigorri, M.S. Sommer, *Cleft Palate Speech and Feeding Train the Trainer*, LEADER Sproject.org Teachers College, Columbia University, 2016.

[35] C.M. Freitag, C. Kleser, A. Gontardf, *Imitation and language abilities in adolescents with autism spectrum disorder without language delay*. European Child & Adolescent Psychiatry, 15(5), 2206, pp. 282–291.

[36] V. Woude, Chelsea, *Examining the Effects of a Mirror on Imitation in Children with Autism, Honors*, Theses. Paper 2311, 2013.

and observing oneself during a phone conversation is recommended. The mirror is useful in allowing the individual to understand his/her audible and visible speech disorders. The patient is advised to perform exercises: reading in front of the mirror, looking at himself/herself, paraphrasing sentences and maintaining eye contact.[37]

In the therapy of children with hearing disorders, a system consisting of a mirror, a microphone, an amplifier (Pocketalker® PKT C1 Model) and headphones is used during speech training sessions at school. During exercise, the speech therapist and the pupil sit beside each other, looking into the mirror placed in front of them. The therapist holds the microphone and the pupil wears headphones. The audio file from the microphone is reinforced and sent to the pupil's headphone. When the therapist is talking, the child with a hearing deficit hears his/her voice in the headphone and sees the movement of lips in the mirror.[38]

The mirror is also a necessary tool during the facial nerve paralysis therapy. In the rehabilitation process, self-control is of huge importance, and the mirror plays a fundamental role because, in combination with the neuromuscular therapy, it facilitates visual feedback for the purpose of controlling movements during exercises.[39] This strategy triggers the plasticity of the brain (the central nervous system is believed to be plastic and this quality remains active for the whole human life). The motor cortex is able to reorganise itself in response to the training of tasks. Thus, the voluntary control of movements allows for neuron reprogramming[40], thereby ensuring

---

[37] Ibidem.

[38] S. Nanayakkara, L. Wyse, E. Taylor, *The haptic chair as a speech training aid for the deaf,* Proceedings of the 24th Australian Computer-Human Interaction Conference, 2012, pp. 405–410.

[39] R. Cury, M.L. Fouquet, P.R. Lazarini, *Reabilitação da paralisia facial periférica por biofeedbackeletroneuromiográfico,* [in]: Lazarini P.R., Fouquet M.L. *Paralisia facial: avaliação, tratamento e reabilitação.* São Paulo, Lovise, 2006, pp. 177–180.

[40] M.L. Fouquet, D. Serrano, I. Abbud, *Reabilitação fonoaudiológica na paralisia facial periférica: fase flácida e de recuperação do movimento,* [in]: P. Lazarini, M. Fouquet. *Paralisia facial: Avaliação, tratamento e reabilitação.* São Paulo, Lovise; 2006, pp. 149–159.

harmonious and symmetrical movements. For this reason, the use of the mirror is necessary during each session, and using the same procedure at home is recommended to the patient.

In literature there is actually no clear guidelines for which speech disorders the use of the mirror is recommended and for which it should be avoided. There is also no information what should be done with the mirror when it is not in use and whether its steady presence may disturb the therapeutic process. Moreover, literature lacks suggestions concerning technical specifications of mirrors that should be used in speech therapy rooms with regard to specific speech disorders.

## Research project

The subject-matter of the study concerned was the use of the mirror in speech therapy. The theoretical aim was to present the method of use of this educational tool by speech therapists. The quantitative research strategy was adopted. The following main research question and seven specific questions were formulated:

1. How is the mirror used in speech therapy by speech therapists?
   - 1.1. For which speech disorders do speech therapists use the mirror as a therapeutic tool?
   - 1.2. In the case of which speech disorders speech therapists do not consider it advisable to use the mirror during speech therapy?
   - 1.3. Is the patient's age the factor that determines the use of the mirror in speech therapy?
   - 1.4. For what purpose do speech therapists use a mirror during speech therapy?
   - 1.5. What is the method of use of the mirror in speech therapy by speech therapists?
   - 1.6. What are the technical specifications of mirrors used in speech therapy by speech therapists?

1.7. How many stations do speech therapists have in their room to conduct speech therapy?

The diagnostic survey was used as a research method, the survey questionnaire was used as a technique, and the questionnaire prepared by researchers served as a tool. The sampling was random, the request for participation in the study was sent to members of speech therapy groups, and the survey questionnaire was filled by volunteers. The survey questionnaire was available for a period of one month. 264 speech therapists took part in the study. The group consisted of women only. The age group of respondents was 22–62 years, and the average age was 32 years. Respondents were employed in various places; some of them worked in more than one place. The largest group that took part in the study comprised speech therapists working in kindergartens/nurseries (59.8%) and the second largest group consisted of speech therapists working in private rooms and having their own speech therapy practice (33.3%). Other participants of the study included speech therapists who conducted therapy in mainstream schools (33.3%), as well as those working in special schools (15.9%) and educational-psychological counselling centres (17.6%). Among the respondents, there were also speech therapists who worked in medical counselling centres and hospitals (8.7%).

## Results of the study

The main research question of the research project in question concerned the use of the mirror by speech therapists in speech therapy. 96% of respondents said that the mirror is used by them during speech therapy, and only 4% answered that they do not use the mirror.

## The use of the mirror in speech therapy vs. speech disorders

For speech therapy practitioners, it is interesting to obtain a suggestion concerning speech disorders for which the use of the mirror is recommended. A vast majority of respondents (98%) answered that

they use the mirror when conducting the therapy of persons with dyslalia, 58% use the mirror during the therapy of persons with extrinsic speech development retardation and 27% use it during the therapy of persons with intrinsic speech development retardation caused by intellectual disability factors. 32% of respondents use the mirror for conducting the therapy of persons with aphasia/dysphasia and the same percentage of specialists use it for the therapy of persons with dysarthria/anarthria. The speech therapy of persons with specific language development disorders is conducted in front of the mirror by 20% of speech therapists, and the therapy of persons with communication disorders caused by autism spectrum factors is carried out in the front of the mirror by 24% of therapists. A slightly smaller group of respondents (23%) conduct the therapy of persons with speech fluency disorders in front of the mirror. The mirror is used for the therapy of persons with muteness by 11% of speech therapists and for the therapy of persons with dysphonia/aphonia by 5% of them. The least frequent use of the mirror occurs in the therapy of persons with schizophasia (3%). The results of the study suggest that the mirror is a commonly used tool in the therapeutic process.

For the purpose of building standards of good speech therapy practices the necessary opinion was the one concerning indications whether there are any speech disorders for which the use of the mirror is not recommended. 13% of respondents believe that the mirror should not be used for the speech therapy of persons with autism spectrum disorders, whereas 6% think that the mirror is not recommended for the therapy of persons with muteness. Another group – 7% – consists of speech therapists who think that the use of the mirror in speech therapy depends on the individual patient and should not be dependent on the type of speech disorder. 3% of respondents admitted that they did not have the knowledge that would disqualify the usability of the mirror in therapy, and 4% thought that speech therapy should not be conducted in front of the mirror in the case of patients with schizophasia and speech fluency disorders. It is important, however, that no substantive grounds for such an approach were specified.

The presence of the mirror and spending time in front of it may produce various emotions: from embarrassment to enchantment. Not everyone spends the same amount of time in front of the mirror and using it is not natural to everyone. Respondents were asked if the patients' age also has an impact on the decision to use the mirror for therapy. 83% of respondents answered that the patient's age is not important for the decision to use the mirror during speech therapy, whereas 17% of therapists answered that their decisions are influenced by the criterion of age. The group included also persons who remarked that the mirror distracts the attention of small children, which makes it difficult to perform tasks (6%). It was also noticed that the mirror causes embarrassment in teenagers and adults.

The participants of the study were also asked what happens to the mirror when it is not used. According to the results, 30% of respondents have another place of therapy without a mirror, 33% do nothing with the mirror, treating it as a decorative part of their room and simply sitting in front of it, 18% cover the mirror when not using it, and 15% hide the mirror.

## Advisability of use of the mirror

The advisability of tools used for speech therapy is an important factor in the planning of such therapy: 94% of respondents use the mirror when presenting position of articulation organs for calling out a sound, 84% use the mirror for exercises of articulation organs, 29% perform breathing exercises in front of the mirror and 10% conduct all activities in front of the mirror without any specific justification, 2% believe that the mirror makes the child's self-control easier, 1% use the mirror for correcting the posture of the patient's body, 1% use it for fun and for teaching the recognition of emotions, less than 1% of persons admitted that they use the mirror for relaxation (without describing the method), during the training of eating (not fully specified, either) and for eye contact and imitation exercises.

## Method of use of the mirror

In order to establish proper contact with the patient, it is important to assume the right position of the body and to determine the mutual positioning of interlocutors. This is regarded as particularly important in psychological therapy. The use of the mirror makes it necessary to assume a certain position of the body.

73% of respondents assume a parallel position when using the mirror, whereas 27% sit perpendicular to the mirror. Speech therapists determined also the position of patients towards the mirror: 74% of patients assume a parallel position towards the mirror when conducting therapy, and 26% of patients assume a perpendicular position of the body towards the mirror.

## Technical specifications of mirrors used by speech therapists

A vast majority of speech therapists – 89% – use a rectangular mirror when conducting speech therapy, 8% use an oval mirror and 6% use a square mirror.

With regard to the size of the mirror, 74% of respondents answered that they have a medium-sized wall-mounted mirror in which two persons can see themselves, 19% use a large mirror (e.g., a double-wing or free-standing mirror) and 7% use a small cosmetic mirror that can be held in the hand.

## Number of stations for conducting speech therapy in the speech therapy room

In order to achieve the best results of speech therapy, it is important to use proper tools. The arrangement of the speech therapy room plays an important role in reaching this goal. According to the presented study, speech therapists note that there are speech disor-

ders for which therapy in front of the mirror is not recommended. It was, therefore, natural to ask them if they have more than one workstation in their room. The analysis of the survey questionnaire shows that:

– 66% of speech therapists have a desk, chairs and a mirror,
– 56% of therapists have a small (child's) table with small chairs and a mirror,
– 19% of persons have small tables and chairs (without a mirror),
– 16% of specialists have a desk and chairs (without a mirror),
– 37% of therapists have a playing mat on the floor, and 55% have a carpet,
– 14% of therapists have a (big) table and chairs.

None of the speech therapists mentioned having a couch.

## Conclusions and summary

The mirror is treated as an attribute of the profession of speech therapist. The growing demand for help provided by speech therapists and the multitude of disorders around which therapy standards are elaborated forces us to verify the available teaching tools. The mirror as a working tool fulfils many important functions in speech therapy.

The following conclusions can be drawn from the completed study:

1. The mirror is an important therapeutic tool of speech therapists.
2. Speech therapists recommend the use of the mirror mainly during the therapy of persons with dyslalia. They recognise its important role as a device that stimulates self-control and self-correction.
3. In the opinion of speech therapists, there are speech disorders for which exercises using the mirror are not recommended. Among such speech pathologies, respondents mentioned mainly those where difficulties in establishing social communication are the main symptom (e.g., muteness, autism spec-

trum, speech disfluency, schizophasia). Therapists did not provide any justification for this kind of approach. It is worth noting that this approach is not consistent with speech therapy standards presented in the theoretical part of this paper.

4. Speech therapists use mainly a medium-sized wall-mounted rectangular mirror in which both the patient and the therapist can see each other. Such a solution helps to establish a common field of concentration. Therapists sometimes use small cosmetic mirrors in order to explain the position of articulation organs more precisely to patients.
5. In the opinion of speech therapists, the use of the mirror should be adapted primarily to the needs of the individual patient, and the decision to use the mirror should result from the functioning of the patient in the disorder he/she has been diagnosed with. Speech therapists are quite unanimous in saying that if a patient avoids work in front of the mirror, it is proper to respect his attitude and abandon this kind of therapy.
6. Speech therapists often have more than one workstation. It is usually a desk with chairs and a mirror, but they have also small tables adapted to younger patients.
7. Respondents did not take the diagnostic function of the mirror into account when examining hypernasality.

The position of the mirror in the speech therapist's room is very important and there are grounds for using it on the basis of completed studies. At the same time, it is worth noticing that there are no clear guidelines as to the method of use and technical specifications of the mirror. Many speech therapists act intuitively and adapt the mirror both to their own needs and the patient's needs.

## References

Bell P., Greene T., Fisher J., Baum A., Psychologia środowiskowa, GWP, Gdańsk 2004, p. 345.

Cammann S., The lion and Grape Patterns on Chinese Bronze Mirrors, [in:] Artibus Asiae A.16, Artibus Asiae Publishers, 1953.

Crowley C.J., Baigorri M., Sommer M.S., Cleft Palate Speech and Feeding Train the Trainer, LEADER Sproject.org Teachers College, Columbia University, 2016.
Cury R., Fouquet M.L., Lazarini P.R., Reabilitação da paralisia facial periférica por biofeedbackeletroneuromiográfico, [in]: Lazarini P.R., Fouquet M.L., Paralisia facial: avaliação, tratamento e reabilitação. São Paulo, Lovise, 2006, pp. 177–180.
Dunaj B., Słownik współczesnego języka polskiego, Wydawnictwo Wilga, Warszawa 1996.
Erman A., Ranke H., Aegypten und aegyptisches leben im altertum, Tubigen 1923.
Fouquet M.L., Serrano D., Abbud I., Reabilitação fonoaudiológica na paralisia facial periférica: fase flácida e de recuperação do movimento, [in]: P. Lazarini, M. Fouquet. Paralisia facial: Avaliação, tratamento e reabilitação. São Paulo, Lovise; 2006, pp. 149–159.
Freitag C.M., Kleser C., Gontardf A., Imitation and language abilities in adolescents with autism spectrum disorder without language delay. European Child & Adolescent Psychiatry, 15(5), 2206, pp. 282–291.
Graves R., Mity greckie, Państwowy Instytut Wydawniczy, Warszawa 1982.
Grzywa A., Manipulacja. Wszystko, co powinieneś o niej wiedzieć, Lublin 2013.
Kaczorowski R., Przesądy i wierzenia w ludowej kulturze polskich mieszkańców Warmii na przełomie XIX i XX wieku. Studia Elbląskie, V, 2003.
Krajewska-Kułak E., Radziejewski P., Van Damme-Ostapowicz K., Lewko J., Jankowiak B., Kowalewska B., Wróblewska K., Chilińska J., Ortman E., Moczydłowska A., Postawy dorosłych i młodzieży wobec tradycyjnych przesądów i zabobonów, Problemy Higieny i Epidemiologii, 2011, 92(3), pp. 441–450.
Luft K., Ciało osaczone lustrami, czyli problem cielesności istoty ludzkiej wobec dyskursu zwierciadła we współczesnej myśli humanistycznej, Scientific papers of the Academy of Physical Education in Wroclaw, 2012.
Malcolm F., Self-therapy for the stutterer, Stuttering Foundation of America, 2010.
Melchior-Bonnet S., Narzędzie magii. Historia luster i zwierciadeł, Bellona Warszawa, Warszawa 2007.
Metelska K. Przesądy i obyczaje jako czynniki sterujące zachowaniami społeczeństwa (na przykładzie ukraińskiego wesela). Acta Humana, 7, 2016.
Nanayakkara S, Wyse L., Taylor E., The haptic chair as a speech training aid for the deaf, Proceedings of the 24th Australian Computer-Human Interaction Conference, 2012, pp. 405–410.
Niederle L., Život starých Slovanů, vol. 1, part 1, Prague 1911.
Suchańska A., Rozmowa i obserwacja w diagnozie psychologicznej, WAiP, Warszawa 2007, p. 231.
Szozda R., Rtęć od najdawniejszych czasów do wieku XIX, "Atest -Ochrona pracy" no. 1/2005.
Tarkowski Z., Wizerunek zawodowy i społeczny logopedy, [in:] Logopedia teoria i praktyka, Agencja Wydawnicza a linea, Wrocław 2005.

Uniwersalny słownik języka polskiego, vol. 3, ed. S. Dubisz, Warszawa 2003, p. 728.
Walencik-Topiłko A., Gabinet logopedyczny – warsztat pracy terapeuty, [in:] Podstawy neurologopedii. Podręcznik akademicki, 2005, pp. 328–343.
Woude V, Chelsea, Examining the Effects of a Mirror on Imitation in Children with Autism, Honors, Theses. Paper 2311, 2013.

# REPORTS

Interdisciplinary Contexts of Special Pedagogy
NUMBER 30/2020

Joanna Bartkowiak
University of Adam Mickiewicz Poznań, Poland

# *"Neurologopedics in theory and practice. Selected aspects of child's diagnostics and therapy"* Published by: Wydawnictwo Naukowe Akademii Techniczno-Humanistycznej, Bielsko-Biała 2012 Scientific edition by: Joanna Skibska, Dawid Larysz

A few weeks ago I had a chance to read a very interesting book entitled: *"Neurologopedia w teorii i praktyce. Wybrane zagadnienia diagnozy i terapii dziecka" ("Neurologopedics in theory and practice. Selected aspects of child's diagnostics and therapy")* scientifically edited by Joanna Skibska and Dawid Larysz, published in 2012. I was inspired to reach for this book by my academic classes as well as by my professional work. The contained information proved very useful at the beginning of my professional career and as a novice speech therapist searching for information regarding therapies for children with various dysfunctions I found answers to many nagging questions.

The above book is a collection of papers of many authors, more or less known scholars, special education teachers and speech therapists. When presenting the contents of the book one should mention the following names: Dawid Larysz, describing the psychomotor development of children's central nervous system, Katarzyna Meroń, systemizing knowledge on early speech therapy intervention and Marzena Machoś-Nikodem, writing about early neurologopedic diagnostics. As we continue we begin to immerse in particular developmental dysfunctions, such as children's aphasia described by Joanna Skibska, paediatric mutism presented by Izabela Janik, coexistence of selective mutism in neurotic disorders described by Agnieszka and Matuesz Warchał as well as nursery children stammer-

ing problem observed by Katarzyna Węsierska. Another very interesting topic is speech in the context of the development of children with mental disabilities described by Joanna Palacz, as well as speech stimulation in children with the Down's syndrome presented by Katarzyna Knyps-Korycka and the subject of cerebral palsy (CP) in neurologopedic theory and practice by Katarzyna Kubanek. However, the part which was of particular interest to me was the subject of autism in children and relevant diagnostics and nuerologopedic therapy described by Joanna Belter-Czerniak, most likely due to the fact that she usually works with autistic children.

In the first part of the book we can find some very useful theoretical knowledge regarding central nervous system development in prenatal and postnatal period as well as information on mechanisms associated with brain plasticity. This information, often incomprehensible due to complex terminology, has been presented in such a manner that readers know what they are reading about and understand all the topics which are addressed. The second paper begins with explanation of early speech therapy intervention and quotes an easy to follow table with pre-lingual activity development. Also, the topics of buccofacial reflexes as well as child's speech development up to the third year of age and speech therapy management are presented. Apart from "pure" theory we can also find some practical advice for speech therapy practices with children. The third part presents a wider context of speech development. The author quotes Lenneberg, whose words cannot be objected and are as follows: *"It should be argued that it is not a specific or particular brain aspect that is responsible for the ability to acquire language but rather the cooperation of multiple parts of the brain"*. Moreover, the author very clearly presents the methods of therapies and stimulation of children with psychomotor dysfunctions. Other papers discussing the problem of aphasia, mutism, staggering, the Down's syndrome, autism and cerebral palsy contain theoretical information on these disorders, explanations of terminology, classification and characteristics both of particular conditions as well as related speech disorders. Additionally, every paper includes some practical information, which adds to the knowledge that can be used both in professional work as well as in a home setting.

Practical application of these texts is an undoubted asset that I often stress here since even the best written book that introduces terminology and very important theory is not sufficient as a tool to implement this knowledge into practice. Yet, the discussed book contains such descrip-

tions and inspirations that it is much easier for me to imagine functioning of a child with particular disorders and related therapies. Thus, this is the book that in my opinion enables the reader not only to enrich and systematise the theoretical knowledge but also to upgrade their professional practices and therefore is useful for students, novice speech therapists and more advanced professionals.

Having read this book I have to admit that my feelings are definitely positive. When I was reaching for these texts I was prepared for another dose of difficult theory. However, to my surprise, both the cited information, theoretical and more practical one, as well as the simple language have created a very readable completeness and thus, I have found the book that I will be surely returning to. The only flaw that caused my mixed feelings is the terminology used in the part describing the development of mentally impaired children since in my opinion the expressions such as: mental retardation or mental handicap have negative and depersonalizing connotations. I definitely prefer “intellectual disability” or “people with disabilities”, as thanks to such terminology we avoid perceiving such persons through the prism of their disability. Nevertheless, I do believe that this book is worth recommending.

Published on the basis of an authorised copy

Cover design: Izabella Grzesiak

Technical editor: Dorota Borowiak

Computer DTP: Eugeniusz Strykowski

WYDAWNICTWO NAUKOWE UNIWERSYTETU IM. ADAMA MICKIEWICZA W POZNANIU
61-701 POZNAŃ, UL. FREDRY 10
www.press.amu.edu.pl
Sekretariat: tel. 61 829 46 46, faks 61 829 46 47, e-mail: wydnauk@amu.edu.pl
Dział sprzedaży: tel. 61 829 46 40, e-mail: press@amu.edu.pl

Ark. wyd. 14,50. Ark. druk. 19,625.

DRUK I OPRAWA: VOLUMINA.PL DANIEL KRZANOWSKI, SZCZECIN, UL. KS. WITOLDA 7–9