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## Speech Therapy Aspects of Aging in People with Intellectual Disability

### SUMMARY

Intellectual disability has been diagnosed in 1–3% of the general population. This group is perceived as different partly because of their manner of communicating with those in their environment. The matter of speech and its disorders noted in people with intellectual disability has not yet been completely studied. One significant issue which has rarely been a subject of research is that of changes in communication occurring with age. Among those with intellectual disability, demographic changes noted in the general population may be perceived. A considerable proportion of them reach senior age, and, therefore, undergo both physiological processes of aging, as well as changes of a pathological character. These cause a range of limitations in communication. These changes should be made a significant subject of research.

**Key words:** intellectual disability, communication, aging, demographic changes

### INTRODUCTION

It is considered that people with intellectual disability<sup>1</sup> constitute 1–3% of the general population. Determining this rate is not easy, as it requires research conducted in large representative samples, and very few such studies have been conducted so far (Pietras et al. 2012). Obtained results also vary depending on the place where a study is conducted (here the socio-economic level of the country is significant), the age of the group studied, and the chosen diagnostic methods. Though precise determination of epidemiological data poses a range of research

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<sup>1</sup> For the reader's convenience, "intellectual disability" will be referred to in this work with the abbreviation ID.

difficulties, ID is recognized as the most frequently occurring form of developmental disorder (Maulik, Harbour 2011). Along with emotional disturbances, particular learning impairments and communication disorders, ID is considered to be one of the disorders of highest frequency (Reschly 2002; for: Short-Meyerson, Benson 2014, 110).

In spite of the considerable number and perceivable differences (especially in the case of severe disability), the functioning of this group has not been sufficiently studied. From the perspective of speech therapy, the manner of communication of people with ID is of particular importance. The specific characteristics and difficulties in this area are one of the basic reasons for perceiving this group as different and not meeting normal criteria. Although intellectual disability in its broadest sense has been a subject of interest among many specializations (mainly doctors, teachers and psychologists, less frequently linguists and speech therapists), the matter of speech and communication difficulties which accompany this disorder still requires research. Indeed, it is recognized that the course of speech and language development in children with ID is, to a lesser extent, known and understood than in the case of people with normal development (Ogletree et al. 2011).

The communicative abilities and changes occurring in this area noted in adults and seniors with ID have been studied to an even lesser extent (see e.g. Kaczorowska-Bray 2017). Researchers have focussed their attention on describing the functioning and developmental difficulties of children with diagnosed mental retardation. They may result from a few causes. A basic reason is the fact that throughout much of the history of research on this disorder, attention was drawn above all to people with a more severe degree of ID and/or this was accompanied by visible anatomical anomalies, dysmorphic features, behavioural disorders, etc., i.e. those who in the most obvious manner diverged from the norm. Also, in this group the mortality rate was considerably higher than in the general population, so these people rarely reached a mature age. In the early 1930s, the average life expectancy among those with ID (regardless of cause) was 15 years for men and 22 years for women. In the case of the occurrence of genetic defects, the situation was significantly worse. An example may be found among people with Down syndrome: in 1929, the life expectancy was for them only 9 years (Cooper, Holland 2010, 169). Taking under consideration the length of life, ID was necessarily associated with childhood.

Ignoring the matter of aging in people with ID in certain countries, such as Germany and Austria, resulted from the dramatic consequences of Nazi rule. Here in fact, very few people survived the systematic extermination of a group considered to be a burden for healthy society, thus, not worthy of life. During the III Reich, a consequence of such an approach was Action T4, during which in the years

1940–1941, about 70 thousand people with various types of disorders, illnesses or disabilities were killed (Bobińska, Gałeczki 2012). People with ID who were born before 1945 are practically non-existent in statistics concerning invalidity in these countries (Haveman et al. 2009, 10).

With the passage of time, the manner of perceiving people with ID has changed. Over the decades, perspectives on this disorder have gradually evolved from a static to a dynamic category. When the developmental possibilities of this group began to be perceived, attention was focussed on children, their education and upbringing. This also became a reason for leaving the issue of people of mature age out of subject publications; researchers were mainly involved with matters of educating the youngest.

It is no wonder, therefore, that a few years ago, the adulthood of people with ID was an area of little research interest and scholarly reflection (Cytowska 2011, 5). Even at present, though the functioning of people in adulthood is slowly becoming a matter that is more often studied, publications on the subject are usually concerned with the sexuality of this group, their possibilities of finding work or becoming independent. Only to a minimal degree do they touch on the matter of linguistic communication, as if this problem had lost its importance together with the maturing of those with disabilities; it had disappeared with the passage of time. One may, thus, come to the astonishing conclusion that this group “grows out” of speech disorders or that speech therapy brings amazing effects. School learning finishes and, with it, therapy which in the social consciousness is still associated with the period of school attendance. However, even a child with the mildest form of ID, given intensive therapy, during this time does not usually reach the level of linguistic communication that is typical for a given age group. Their speech has particular characteristics, is restricted (to a lesser or greater degree) or even reduced, thus, hindering the giving and receiving of information. Developmental disorders, according to their definition, have a chronic character. They cause restrictions or difficulties in typical growing up and developing, as well as restrictions in social, occupational and economic life. These do not lessen with the passage of time, and improvement in the quality of functioning and life as well as comfort, to a large extent, depend on conducted therapy and rehabilitation. The developmental possibilities of people with ID are well characterised by the succinct statement that, “they learn slowly, but quickly forget”. The key to effectiveness in therapy is time and constant repetition of attained abilities. Ending speech therapy, which in Poland normally occurs with the end of school education, may, therefore, lead to a lack of further progress or even worsening of the quality of communication. Indeed, this group has usually not developed internal motivation – they require constant support, motivation, organisation of exercises, strengthening or indication of new goals that are accessible and realisable, as well

as interesting and creating a challenge for the patient. Thus, they require further, well planned therapy.<sup>2</sup>

In the 21<sup>st</sup> century, people with ID not only reach a mature age; they also can and usually do experience aging processes. Despite the fact that they have a higher mortality rate in the early stage of life than the general population, they live increasingly long lives and reach senior age in better and better health (Hollins et al. 1998; Strydom, Torr 2009). Demographic changes that are visible in this group, involving lengthening of the life expectancy, have been apparent since the late 1990s.

This results from changes in the quality of care of support, focussed on individual needs, from improved access to medical care, especially in the case of respiratory infections and congenital heart defects, changes in social attitudes and improvement in standard of living, as well as fewer occurrences of infectious diseases. (...) in comparison with previous data, one may observe an increase in the number of elderly people with intellectual disability and more cases of severe disabilities in all age groups. (Cooper, Holland 2010, 168–169)

In the case of people with various types of developmental disorders, including those with diagnosed mild or moderate disability, the life expectancy is about 70 years, and so is comparable to that reached in the general population. Research conducted in New York State, in a group of 2,752 adults with ID, at the age of 40 years or above, indicated that they reached an average age of 65 years, compared to 70 years in the general population.<sup>3</sup> Similarly as in the general population, men live shorter lives (63 years) than women (67). These statistics appear slightly different in the case of people with syndromes of genetic defects, intellectual disability to a severe degree, child cerebral palsy or multiple disabilities. However, even in these groups, a tendency to lengthening the life expectancy is noted. An example may be seen in those with Down syndrome, who currently have a chance to reach the age of 60 (Baxley et al. 2002, 5; Lightfoot 2006, 53). Of course, one should keep in mind the fact that the group with ID is highly heterogeneous, and differences are also evident in life expectancy. 50% of those with ID still die before reaching the age of 50 years. The most common cause of death is respiratory failure (Strydom, Torr, 2009, 150). Especially vulnerable to premature death are people with specific disorder syndromes, with serious congenital anomalies and/

<sup>2</sup> It should be clearly emphasized that the care-giver most often is not able to replace a therapist. Knowing the patient well – he understands his/her needs. Often, the person with ID does not need to communicate these; they are satisfied even before they really exist. What is more, care-givers emphasize that they do not have difficulties in communication with their child, as the child “speaks with its whole self”. However, this is not sufficient to communicate with people outside the nearest circle. Besides, it is often a sort of over-interpretation of the behaviour of those with ID made by care-givers.

<sup>3</sup> Frequent causes of death, as in the general population, are heart diseases, pneumonia and cancers.

or metabolic, immunological diseases, movement restrictions, epilepsy, sensory disorders and restricted possibilities of self-care, as well as those fed in a non-oral manner (Strydom, Torr 2009, 150; Acharya et al. 2016, 1423). As a result of these different mortality rates, among seniors with ID are mainly those with a mild or moderate degree and in a generally better state of health than noted in the whole group with ID. It should be emphasized that particular sub-groups of this population have been studied and described to various degrees. For example, not much is known about the health of people with a diagnosed mild degree of ID as they make less use of specialized medical assistance or rehabilitation. In this group, one may expect high rates of alcohol consumption, smoking or drug use, as well as the occurrence of other factors increasing the risk of health problems connected with aging (Strydom, Torr 2009).

In attempting to conduct a synthesis of factors affecting the development of linguistic competence in children, Z. Dołęga (2003, 30) distinguished two groups of factors:

I – factors on the side of the subject:

1. biological – phylogenetic bases of structures and functions of organs and systems responsible for speech; inherited and congenital characteristics of these structures and functions;
2. indicators of subject (individual) acquisition and use of language: cognitive, motivational, emotional characteristics of the child's activity.

II – factors related to external conditions:

1. environmental conditions of speech development: social, familial, cultural;
2. educational indicators: stimulation, language forming;
3. situations and life events.

Considering the above factors affecting the development of speech and language, it should be stated that in the case of children with ID they are disturbed or unrealized, which may cause "(...) delayed speech in the child and lowering of its quality to a level below the capabilities of the child and below the norms expected for a given age" (Hurlock 1985, 330). However, these factors do not only influence the course of speech development, its pace, dynamics and effectiveness. Over the course of time, undergoing obvious modifications, these also shape the level of communicative abilities in people with ID in their adulthood and old-age. The speech of this group (as with peers of typical development) changes along with age, influenced by physiological processes of aging and many other factors of a pathological character, augmenting already existing difficulties in communicating with the environment. The structure and functions of organs and systems responsible for speech are changed; along with age the cognitive, motivational, emotional characteristics of activity change, and there are also fundamental changes in the external conditions and surroundings.

In this work attention has been focussed on only a few aspects of these changes that are important for an understanding of the specific characteristics of processes occurring in the communication of adults and seniors with ID.

## GENERAL STATE OF HEALTH

Health problems occur in people with ID 2.5 times more often than in the rest of society. They belong to a risk group concerning, e.g. epilepsy, sleep disorders, endocrinological and metabolic disorders (Śmigiel 2011, 323). Up to four times as often in this group are noted deaths by causes that could have been avoided (Pawlyn, Carnaby 2006, 9). The reasons for the worse state of health are of course various, but they are often a result of a combination of many processes, including those existing in the early stage of life. Among significant factors influencing the general state of health in this group, the following may be included:

- increased risk of exposure to the negative effects of environmental factors (including the family's low standard of living, poor living conditions, unemployment, social isolation and other forms of discrimination);
- increased risk of the occurrence of genetic defects and causes of biological disabilities, which are accompanied by particular health problems (e.g. congenital heart defects in Down syndrome or Williams syndrome, disorders of hypothalamus activity in those with Prader–Willi syndrome, mental problems in the group with autism spectrum);
- problems in communication and a low level of health awareness presented by the person with ID him/herself as well as the environment. Limited communication skills hinder or even make it impossible for people with this disorder to inform their surroundings of problems and health needs, which often results in their non-recognition or mistaken diagnosis. Difficulties in communication also cause problems in treatment, as the group requires support, e.g. in the systematic administration of medicine. Therefore, if such people are left to look after themselves – treatment may be ineffective;
- restricted and hindered use of health care, resulting, for example, from movement disorders which often accompany intellectual disability (Robertson et al. 2010, 1).

Along with age, similarly as in the general population, in those with ID there is an increase in health problems which appeared in earlier stages of life, as well as new illnesses restricting daily activity. A deteriorating state of health is generally considered to be part of the aging process. One of the most significant problems is the quickly growing rate of mental illnesses and dementia among seniors, always considerably higher than in the general population (Strydom et al. 2010;

Bobińska, Gałęcki 2010). As S.-A. Cooper states (1997, 375), in people with ID (age group 65 years and above) a higher rate of mental illness is noted than in the control group of people of younger age, from 20 to 64 years (68.7% and 47.9 %, respectively). Together with age, there is also an increase in the risk of occurrence of depression and anxiety neurosis. In both age groups, on the other hand, the frequency of schizophrenia, autistic disorders and behavioural disorders is similar.<sup>4</sup>

There is a range of genetic syndromes which are characterised by increased vulnerability to this type of illness. In people with Angelman or Rett syndrome, not only is there a higher frequency of dementia, but it also afflicts patients at a younger age. The relationship between Down syndrome and Alzheimer's disease is also well documented. Not every person with this syndrome will fall ill to this disease, however, the majority of this group already presents certain neuropathological changes before the age of 40. In the age group of 40–50 years, the disease is recognized in 9% of those studied. In 30–40% of people with Down syndrome, diagnosis of Alzheimer's disease occurs between 50 and 55 years of age, thus considerably earlier than in the case of those with a typical course of development.<sup>5</sup> In many sources, considering the high vulnerability of those with Down syndrome to dementia, separate data are given for the group with this syndrome and for the remaining people with ID with a basis other than trisomy 21 (Strydom, Sinai 2014, 191).

It is not only dementia that significantly weakens interaction with the world and the physical activity of people with ID. There is also a restricting effect in the problems with movement growing with age, resulting, e.g. from arthritis, often further augmented by broken bones or injuries that occur as a result of accidents. These problems are further enhanced by diseases of the heart and respiratory tract and others. In the case of seniors with ID, generally more than one chronic illness is diagnosed (multi-morbidity). Canadian research conducted by M. Fortin et al. (2005, 223), involved a group of 320 men and 660 women with ID. The results allowed one to state that in the case of nine tenths of those studied, the occurrence of more than one chronic illness was confirmed. Two or more illnesses were evident in 68% of the women and 72% of the men from 18 to 44 years old, and in 95% of the women and 89% of the men at the age of 45 to 64 years. In the oldest group

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<sup>4</sup> Evidence of the scientific interest in the mental disorders appearing with age may be seen in the creation of the term "geropsychiatry". This term has appeared, for example, in the book entitled *Geropsychiatric and Mental Health Nursing*, by K. Devereaux Melillo and S. Crocker Houde (2010).

<sup>5</sup> A.J. Holland and collaborators (1998, 493), using *The Cambridge Examination for Mental Disorders of the Elderly* (CAMDEX), stated that in the group of adults with Down syndrome, indicators of the occurrence of Alzheimer's disease amounted to 3.4% in the group 30–39-year-olds, 10.3% among 40–49-year-olds and as high as 40% in those studied at the age of 50–59 years.

(65 years and above) the phenomenon of chronic illnesses combining was confirmed in 99% of the women and 97% of the men of the study group. Especially at risk of the occurrence of many chronic illnesses are those with a specific ID etiology (Table 1).

Table 1. Health problems noted in people with genetic syndromes

Genetic syndrome	Health problems
Angelman syndrome	kyphosis; corneal disease (keratoconus)
Down syndrome	premature aging, visual and hearing impairments related to age; epilepsy; dementia
Fragile chromosome X syndrome	mitral valve pathology, Barlow's syndrome; muscle-skeleton disorders; initial ovary failure; premature menopause; shaking and ataxia; epilepsy, vision impairments
Prader-Willi syndrome	cardiovascular disease; diabetes
Rett syndrome	worsening of gross motor skills; kyphosis
Williams syndrome	premature memory loss; problems with movement

Source: Acharya et al. (2016, 1427).

## SENSORY DISORDERS

Sensory disorders are often noted in people with ID. C. Hatton (2012, 12) states that they appear in from 10% to 33% of this section of the general population.<sup>6</sup> Among these, impairments of sight and hearing seem to be especially important.

It is considered that nearly 80% of the stimuli reaching us are perceived through the sense of sight, whose functioning has a fundamental influence on the intellectual development of every human being (Gwatkin 2016, 1165). Neurological damage existing in an early stage of development indicate a strong correlation with vision problems. People with ID are thus a group at particular risk of the occurrence of damage to the visual organ and disorders of visual perception. One should also consider the possibility of the occurrence of visual problems that are

<sup>6</sup> This rate was obtained using clinical criteria in diagnosis. With the use of functional criteria, this value increases (ibid).



a result of or augmented by the side effects of taking medicinal drugs (Isralowitz et al. 2003). Therefore, visual defects are noted in the group of people with ID ten times more frequently than in the general population (Isralowitz et al. 2003; Isralowitz et al. 2005). This is supported by data collected for example in Great Britain. It is estimated that 96,500 adults with ID resident in this country are blind or visually-impaired, while six out of ten of those studied require glasses or encouragement to use them (Pilling 2011, 1). The main causes of visual problems noted in this group include:

- operations in the area of refractive surgery (correction of vision defects);
- vision impairment;
- strabismus;
- congenital cataracts;
- secondary cataracts;
- nystagmus;
- disorders of vision pathways;
- disorders in the reception and interpretation of visual stimuli
- corneal disease (*Ophthalmic Services Guidance. Eye Care for Adults with Learning Disabilities*, 2015).

Among people with ID noted especially often are: reduced vision clarity, deep disorders of refraction (astigmatism), strabismus, nystagmus, vision impairment, cataracts, corneal disease, eye inflammation, turning up of eyelids, etc. (Gwatkin 2016, 1152). Of course, specific forms of intellectual disability are often combined with particular irregularities or diseases in the area of the visual organ. For example, among those with Down syndrome often diagnosed are ametropia (irregular eye measurement), short-sightedness, which may be a result of this, glaucoma, low vision, cataracts, and nystagmus. With child cerebral palsy, noted are atrophy of the visual nerve, hyperopia and nystagmus. In the group with diagnosed fragile chromosome X syndrome, far-sightedness and strabismus occur (Gwatkin 2016, 1152; Ashwal et al. 2004, 860).

Diagnosis of vision defects, both congenital as well as those worsening over time, is particularly difficult in this group due to communication problems, low awareness of processes occurring in one's body, difficulties in perceiving increasing changes, etc. For care-givers, perceiving regression may also be very difficult. It is extremely important that therapists, including speech therapists, have knowledge on the subject of possible visual problems, as well as an awareness that many of these have a tendency to become more serious over time. There are a range of patient behaviours confirming increasing visual problems which should be perceived by care-givers. These include:

- anxiety, especially visible in new situations and a person's new surroundings; in the case of hearing impairments occurring simultaneously, the level of stress felt will be even higher;

- characteristic caution when walking, increasing in difficult situations, e.g. while going up stairs or crossing at a place with insufficient lighting;
- withdrawal and depression, which may be evident in loss of interest in activities which until then gave the person pleasure, loss of appetite, insomnia;
- frustration, connected with inabilities or restrictions in exploring the surroundings,
- rubbing of the eyes<sup>7</sup>.

The group with ID is also burdened with other sensory disorders, among which hearing impairments are often noted. According to the World Health Organisation (2017), about 5% of the general population, i.e. around 360 million people in the world, have hearing problems. 32 million in this group are children. The main causes of hearing loss are genetic causes, illnesses appearing after birth, contagious diseases, chronic ear infections, side effects of certain medicines, exposure to the effects of excessive noise and changes in the reception of hearing stimuli related to aging. About 40% of children with a damaged hearing organ indicate additional problems, including developmental delays, intellectual disability, autism and vision impairments. A range of studies have confirmed that hearing loss is noted especially often in those with autism and intellectual disability. A group at high risk are children with child cerebral palsy – in about 4 to 12% of them damage of the hearing organ is diagnosed, while the noted changes may deepen at a quick pace in the case of severe movement restrictions, vision impairment and more severe forms of intellectual disability (Ashwal et al. 2004, 860).

Hearing impairments are also accompanied by movement problems, disorders of balance, control of the vestibular system or sensory processing, which additionally restricts the individual's independence and activity.

## DENTAL PROBLEMS<sup>8</sup>

The state of the oral cavity has an effect on well-being, the general state of health, self-esteem and life comfort of the individual. In a fundamental way it also influences the realisation of speech sounds and the manner of accepting food. There are relatively few publications related to dental problems noted in people

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<sup>7</sup> Such behaviour may, of course, also result from other causes, e.g. allergies, inflammation of the cornea and conjunctivitis, the presence of foreign objects in the eye, tiredness, auto-stimulation, etc.

<sup>8</sup> Problems of this type are noted in various countries with various frequency, depending on factors such as the social-economic status and level of health care. However, even in developed countries reports are not optimistic. For example, there are Australian studies, on the basis of which it has been stated that various types of dental disease, especially periodontal disease, pathological mucosal changes and biting irregularities are noted in those with ID seven times more often than in the general population (Scott et al. 1998).

with ID (Solanki et al. 2014). However, a series of published studies indicate frequently occurring irregularities in the structure and functioning of the articulatory apparatus (Śmigiel 2011). In this group, there have been noted especially many biting anomalies, often occurring gothic palate, delayed tooth growth, cases of macroglossia and irregular functioning of the temporo-mandibular joint, caused in large part by disorders of muscle tension. These are particularly often noted in children with severe ID or with facial-skeletal defects. Also, often observed are persistent parafunctions such as: bruxism, thumb or tongue sucking, etc. as well as swallowing dysfunctions which may result in excessive salivation (Wyne 2002, 4).

In people of an advanced age with ID, a generally poor periodontal state is diagnosed<sup>9</sup>, often inflamed gums and tooth decay (Solanki et al. 2014; Haveman et al. 2009). Mucosal desiccation and a dry sensation in the mouth, tooth decay, gum inflammation, and periodontal disease are mentioned among ten factors restricting the activity of those with ID (Haveman et al. 2009, 12). Some studies allow one to state that in this group the frequency of inflamed gums is noted from 1.2 to 1.9 times more often than in the general population. Others indicate that gum inflammation affects from 6 to 97% of all people with ID (in comparison: 8–59% of the general population). The risk of the disease occurring increases with the age of study subjects. It is stated that gum inflammation was diagnosed in 42% of subjects in the age group of 8 to 17 years, in 58% of 18–34-year-olds, 62% of 35–50-year-olds and 84% among those from 51 to 70 years. This study included participants of the “World Summer Games”, which took place in Ireland in 2003, and so people who should not have problems in obtaining dental assistance (Corbin et al. 2005, for: Haveman et al. 2009, 13).

Of course neither periodontal disease nor tooth decay are direct results of disability. Publications on the subject clearly emphasize the negative effect on the state of the oral cavity of lacks and neglect in the area of hygiene care of the oral cavity and dentist treatment (Feldberg, Merrick 2016, 1165).

There are many causes of such a state of affairs. I. Feldberg and J. Merrick (2016) include among the main causes the often hindered access to dentist assistance (e.g. because of distance or architectural barriers), but also insufficient professional knowledge of dentists and their limited experience in contact with this group of patients, lack of cooperation and the communicative difficulties of those with ID, the insufficient awareness of care-givers concerning the importance of dental problems, and financial problems. At times, the source of problems is not so much the lack of dental care, as its improper course of treatment. For example, many studies have indicated a significant problem, that of loss of teeth. This often results from the fact that in the case of patients with ID, more rarely than in

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<sup>9</sup> Among people with intellectual disability, especially prone to periodontal disease are those with Down syndrome (Feldberg, Merrick 2016, 1175).

the general population is treatment undertaken, e.g. root canal therapy, and more often a decision is made to remove the tooth (Haveman et al. 2009, 13). Dental treatment may also be hindered by the different anatomical conditions of the oral cavity and teeth noted in this group (Śmigiel 2011, 329).

In characterising the problems in the area of the dental system noted in people with ID, one also needs to take into consideration improper diet and the administration of many medicines, often in the form of sweetened syrups, which leads to worsening of the generally poor state of the oral cavity. Research results clearly indicate the existing problems in this group. For example, 36.5% of adults with intellectual disability and up to 80% of adults with Down's syndrome have health problems of the teeth and gums (Barr et al. 1999, 1487).

Particularly prone to this type of problems are a few groups of people with ID. Among these are those with Down syndrome, who often breathe through the mouth, and those with child cerebral palsy, whose dental and mucosal state worsens as a result of commonly occurring reflux, and hygienic and dental treatments themselves may be hindered by the presence of remaining biting reflex. In the case of people with ID to a severe degree, neglects in hygiene sometimes result from the care-giver's belief that the condition of the oral cavity or systematic check-ups are not a priority for those under their care. It is also difficult to predict the behaviour of such people in a new situation, often linked to unpleasant experiences. In the case of multiple disabilities, with restrictions in the area of movement, often access to dentist treatment is restricted for this very reason.

The dental system undergoes dynamic changes throughout a person's life. Most problems that are observed in children with ID remain with them through their whole lives. Others appear together with aging or become more serious. They hinder the course of basic functions of the stomatological system, such as speech, swallowing and breathing (Milewski, Kaczorowska-Bray 2015). To the greatest degree this relates to teeth, the periodontal condition and that of the mucous membrane of the oral cavity, the tongue and functioning of the salivary glands. Also the structure and functioning of the temporomandibular joint is changed.

The above indicated problems hinder the proper acceptance of food and proper articulation. They also have a strong influence of the social reception of people with ID, affecting their appearance, communication abilities and behaviour. The task of the speech therapy is to make care-givers more sensitive to the issue and explain the importance of perceived problems, as well as to undertake actions that will enable those with ID to improve the condition of their oral cavity, thus, for example, desensitising the oral-facial area or alleviating the remaining biting reflex, which would enable greater hygienic care of the oral cavity and use of dental treatment. There are also ways of stimulating and rehabilitating the stomatological system which the patient could carry out under the supervision of a speech

therapist. There are four groups of exercise: mimic muscles, tongue, formation of saliva and swallowing. These exercises bring visible improvement not only to physiological activities, but also improve the clarity of speech (Zapała, Szuta 2012, 155).

## DIET

A proper diet is of key importance for the health and quality of life of all people, regardless of age. It affects the mother's health, fetal development, the course of pregnancy, height and growth of children, effects of treating chronic illnesses, and partly determines life expectancy. Without doubt, people with ID are a group at high risk of malnutrition occurring, which may in their case increase their disabilities. An improperly selected diet and sedentary lifestyle may become causes of obesity<sup>10</sup>, diabetes, osteoporosis, cardiovascular disorders, high blood pressure and increased risk of cancer (Torres Mughal, Novak 2016, 1225; Draheim et al. 2007, 392).

Proper nutrition and diet control is made even more important by the fact that the health of this group is burdened by the administering of many medicinal drugs of various side effects as well as by various dietary restrictions. The necessity of following an exclusion diet may result from existing problems with acceptance of food (e.g. dysphagia), remaining reflexes of the oral-facial sphere, stomach-intestinal illnesses (e.g. reflux, Crohn's disease, coeliac disease), allergies and food intolerance (e.g. fructose or lactose intolerance), sensory disorders e.g. preference of certain food structures, colours, temperature, etc.), diseases of the oral cavity and tooth loss, behavioural and emotional disorders. These problems occur with particular frequency in genetic syndromes, e.g. Down syndrome, Williams syndrome, Apert syndrome, fragile chromosome X, but also among autistic children. A separate group are, of course, those fed by non-oral methods. Problems connected with food acceptance and proper diet among those in this group rarely end with their reaching adulthood.

According to the definition of speech therapy promoted by the CPLOL, one area of its interest is that of swallowing disorders.<sup>11</sup> The diet problems of the dis-

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<sup>10</sup> Some studies indicate that in nearly 80% of adults with ID to a mild or moderate degree, overweight or obesity is confirmed. In this group about 45% are described as significantly overweight, while in 8% obesity is diagnosed (Haveman et al. 2009, 15).

<sup>11</sup> The definition of speech therapy, included on the website of the *Comité Permanent de Liaison des Orthophonistes-Logopèdes de l'UE* (CPLOL) is the following: "**Speech Language Pathology and Logopaedics is both a scientific domain and an autonomous profession. As a science, it is at the intersection of medical, linguistic, educational and psychological sciences and focuses on etiology, assessment and intervention of communication and swallowing disorders**" (authors' emphasis) (<http://www.cplol.eu/profession/general-info.html>).

cussed group require monitoring, the conduct of workshops for care-givers concerning, for example, the choice of food consistency, the manner of its serving and proper positions during feeding.

## CHANGES IN THE ENVIRONMENT

In most cases, children with ID are under the care of parents and live with them in the family home, where they remain also in the period of adulthood. T. Heller claims that nearly 76% of the group with developmental disorders live with their parents (Heller 2010, 2). Socialisation and contact with the wider surroundings are highly varied in the case of these people. However, it has been indicated that people with ID, living with parents, experience restrictions in contacts with the environment; opportunities to enter into relations with those outside the nearest circle are lesser in their case than among those remaining under institutional care (Heller 2010).

People with ID are living increasingly long lives, and, therefore, the period of care and assistance of their functioning is extended, creating a range of new problems. As D. Braddock states, over 25% of care-givers of this group have reached an age above 60 years old, and around 38% are in the age group of 41 to 59 years (Braddock 2001). They themselves experience difficulties related to advanced age. They also require or will require assistance over the next dozen or so years. It then becomes necessary for care of the person with ID to be taken over by another member of the family or to apply for institutional assistance. This is a relatively new problem which began to be perceived at the end of the 1980s.

Remaining in the relatively closed and narrow family circle has, of course, a range of advantages for the person with ID. They feel safe and accepted; daily activities are ritualised, calming them, giving a feeling of order. In their known environment, it is easier for them to understand verbal messages, especially if their interlocutors are well known to them. The messages sent by the person with ID reach a helpful receiver, who is able to understand them thanks to years of practice. Old age and the departure of care-givers ruin this safe world. The necessity of changing environment is for a person with ID an unimaginable change, which often results in withdrawal, lowered activity, or even depression, which may worsen the cognitive functioning of the patient. In depression, especially deep, there may occur restrictions of perception, attention, memory, thought and learning, operative functions, word fluency, psycho-motor speed and agility (Talarowska et al. 2009, 36). Those with ID to a more severe degree, with serious disorders of linguistic communication or using an alternative system of communication, who until then were able to express their needs and make satisfactory contact with the surroundings, in a new environment may not have anyone they can communicate

with. New care-givers are often not able to understand the reduced speech or do not know a given AAC system. In institutions whose purpose is offering support and care for the person with ID, it is necessary to employ speech therapists who are properly prepared for work with this group. Their cooperation with other specialists and care-givers would be important not only due to the necessity of assisting the proper course of language communication, enabling the use of alternative and supportive communication, but would also allow an evaluation of the course of dietary activities and possible undertaking of their therapy.

## CONCLUSIONS

Speech therapy is intensively developing in the theoretical sphere as well as in practice. It is taking into its scope an increasing number of research areas. It also turns out that diagnosis and speech therapy are needed by a group of people, who for many reasons (e.g. demographic changes) until now were not the subject of scientific reflection or practical activities. Perhaps one should consider the creation or initiation of forms of higher training for speech therapists who would like to specialise in the diagnosis and therapy of people with ID at an advanced age. Work with seniors with ID is a very difficult task because of the great amount of knowledge that such a specialist should have, but also due to the required predisposition to conduct this profession. Therapy of a patient burdened with many illnesses and restrictions of a cognitive nature, whose life is nearing its end, indeed involves a heavy mental burden for the therapist, of whom a high level of empathy and understanding is required for those under their care.

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