Linguistic and Medical Aspects in Health Care

FOCUS ON DEMENTIA

Compilers and scientific editors of collective monograph
Ineta Balode, Dzintra Lele-Rozentāle, Zanda Priede

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The collective monograph reveals dementia as an element of public discourse, an object of interdisciplinary research encompassing the fields of medicine, linguistics, and discursively – social sciences; dementia is considered from a medical perspective and in the context of social care. The findings and conclusions indicate that it is necessary to establish collaborative, interdisciplinary research on dementia in the Baltic states to provide optimal support to the patients in the future and to find far-reaching socially responsible solutions.

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Literary editor Andra Damberga
Layout designer Andra Liepiņa

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Preface. Topicality of the Research from the Multidisciplinary Perspective

In recent years, increasing attention has been paid to the issue of the aging population and the general state of health of country's inhabitants, which can be assessed by including both life expectancy and quality of life at all stages of a person's life. As society ages, the aspects of the quality of life are especially relevant for seniors, who have taken a well-deserved respite after years of working, yet the desired retirement is often influenced by the physical ageing of the body, as well as various diseases that cause worry and suffering to both the patient and relatives. Pragmatically, these factors also imply additional costs in the overall health care system. Therefore, it is self-evident that reminders and recommendations from the public and, above all, from the medical professionals for each individual to take care of themselves, follow a healthy lifestyle and thus contribute to the personal maintenance of good physical and mental condition in later years.

However, this recommendation is idealistic in nature and does not always work effectively when a person is affected by a disease associated with loss of mental capacity and ability to make decisions and act accordingly. This is the case with diseases that cause dementia – brain disorders that, despite all efforts and medical support, sooner or later will irreversibly lead to a fatal outcome. One of the most common and dangerous diseases causing dementia is Alzheimer's disease. Often referred to as the "disease of old age", it affects an increasing proportion of the population, especially in countries where the proportion of older people is increasing due to general well-being, and the quality of healthcare can create a potential risk group for Alzheimer's disease. Despite intensive research, no medication has yet been discovered that would be able to combat this disease in a timely and effective manner. Hence, the main emphasis at the moment is on early diagnosis, as well as treatment. In both cases, it is intended to promote and train mental capacity or brain function – in the first case, to prevent the disease, and in the second case, to prolong the relatively mild phase and help the patient to maintain personal capacity and social independence for as long as possible.

Likewise, language aspects play an important role in highlighting medical advances, both in diagnosis and patient treatment. First of all, language is used in doctor-patient communication; the correct use of language is an important factor in the aforementioned diagnostics, for example, in mental capacity tests. Language as the main communication tool appears in every area where the Alzheimer's patient communicates with other people – relatives, doctors, occupational therapists, nursing staff, social institutions, etc., and this communication is two-way. Thus, there is no conceivable sphere of life – either from a medical, social or even legal point of view – in which communication with Alzheimer's patients or persons suspected of having the disease would be possible without respecting the specific use of the language appropriate to the situation. Finally, there are also issues of how linguistic means and communication principles are incorporated into the education of medical professionals and nursing staff, and how messages are used in communication with the public, drawing attention to the seriousness of the situation.

That is why, when studying dementia, there is a tendency in global practice to expand the medical perspective and guide the research in an interdisciplinary direction, for example, in cooperation with social sciences, cognitive sciences and the humanities, for instance, involving linguists in the research. In the Baltic states, such interdisciplinary cooperation in the study of dementia has not yet been established, although efforts have been made to emphasize the importance of cognitive training, as well as language and its use in different contexts. Taking into account this lack of research, which negatively impacts the diagnosis of Alzheimer's disease and patient care, the linguists of the Department of German Studies of the University of Latvia, in cooperation with the linguists and neurologists of the Baltic states, reviewed and evaluated the current situation in 2021 within the framework of the annual 79th International Conference of the University of Latvia, considering further possibilities of closer cooperation in both interdisciplinary and transnational contexts. This international collective monograph offers several essential aspects of research and practical experience, which, in our opinion, could stimulate both research and public discourse in the Baltic region, while attracting increased attention to the support of Alzheimer's patients in all possible areas of treatment and care.

Looking forward to a closer investigation of the topic in the future, the editors would like to thank Baiba Egle and Marianne Smith for their cooperation in the preparation of the texts in this monograph.

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Ineta Balode
Dzintra Lele-Rozentāle
Zanda Priede

I. Dementia from a Medical Point of View

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Frontotemporal Degeneration

Katrin Gross-Paju
Tallinn University of Technology

Frontotemporal degeneration (FTD) is a clinically, genetically and neuropathologically heterogeneous syndrome. The clinical syndromes of FTD are typically characterized by progressive aphasia, decline in executive functions and behavioural problems. Recently, several other phenotypes have been described, such as progressive supranuclear palsy (PSP) and the corticobasal syndrome (CBS), frequently in combinations. Furthermore, the inclusion body myopathy may be a rare feature of FTD. FTD is the most frequent early-onset (<65 years) dementia, according to different studies comprising 3–26% of all dementias. Although FTD is commonly addressed as young-onset dementia, the highest number of patients is diagnosed in the age range from 70 to 84, and the highest incidence at the age of 71, confirming the need to consider FTD in characteristic phenotypes in different age groups. Positive family history is present in 25–50% of FTD, mostly in autosomal dominant pattern, and therefore genetic studies are indicated, if FTD phenotype is present.

Keywords: frontotemporal degeneration, dementia, aphasia, behavioural changes

Epidemiology

Frontotemporal degeneration (FTD) is a clinically, genetically and neuropathologically heterogeneous syndrome [1]. The clinical syndromes of FTD are typically characterized by progressive aphasia, decline in executive functions and behavioural problems [2, 3]. Recently, several other phenotypes have been described, such as progressive supranuclear palsy (PSP) and the corticobasal syndrome (CBS), frequently in combinations [3–5]. Furthermore, the inclusion body myopathy may be a rare feature of FTD [4].

The first patient with aphasia and presenile dementia was described by Arnold Pick in 1892. The patient had progressive aphasia, lobar atrophy and presenile dementia. Alois Alzheimer identified that Pick bodies were the underlying pathology of the disease, and for a long time FTD was diagnosed as Pick's disease [3]. Interestingly, by 1986 Pick's disease was considered to have little relevance and most dementias were attributed to Alzheimer's and vascular diseases. Since 1986, there have been significant advances in scientific research for FTD [6].

FTD is the most frequent early-onset (<65 years) dementia, according to different studies [2] comprising 3–26% of all dementias. The incidence of FTD is the lowest in the Netherlands with 0.44 [7], 1.61 in the UK [8], and the highest, 8.14 in Finland (all data presented for 100 000 person years) [7]. The prevalence of FTD is 10.8/100.000 in the UK and Europe [5]. Although FTD is commonly addressed as young-onset dementia, the highest number of patients is diagnosed in the age range from 70 to 84, and the highest incidence at the age of 71 [5, 7].

The prognosis of FTD is serious. The overall life expectancy is 4.7 years. The life expectancy depends on the dominant syndrome. The shortest life expectancy of 2.9 years is demonstrated with predominantly PSP syndrome, and the longest of 5 to 9 years with progressive aphasias [5].

1. Clinical features of FTD

Classically, FTD is characterized by two phenotypes: behavioural variant FDT and aphasia variant of FTD.

The behavioural variant of FTD (bvFTD) is the most frequent and present in 40% [7]. BvFTD is characterized by early personality changes, disinhibition or apathy, and early loss of empathy. According to diagnostic criteria, progressive deterioration of behaviour and/or cognition has to be present. Furthermore, at least three clinical features of the following must be present for the diagnosis of bvFTD: early (within the first three years) behavioural disinhibition, apathy or inertia, loss of sympathy or empathy, perseverative, stereotyped or compulsive/ritualistic behaviours, hyperorality and dietary changes, and executive deficits with relative sparing of memory and visuospatial function. FTD can be diagnosed, if three of the five behavioural criteria/cognitive criteria are fulfilled [9]. The revised criteria [9] for bvFTD have good sensitivity 95% for possible bvFTD [9, 10] and specificity 82% [10].

Behavioural disinhibition means inappropriate conduct in different social situations, also impulsive spending and lending money to strangers that may cause significant financial problems [3]. Clinical features of apathy are decreased interest in social interactions and in everyday life, also neglect of personal hygiene. As the clinical features resemble depression, the early differential diagnosis is complicated. The loss of empathy and sympathy means that the insight to emotions and feelings of other people (closest to the person) is lost [3]. In practice, there are many situations where the patient shows complete indifference to serious problems of their family members. Likewise, stereotyped and ritualistic behaviours are typical. Sometimes binge drinking and eating develop [3]. For instance, one of our patients started to drink alcohol excessively at the age 60 years and at first the family thought that changes in her behaviour were related to her newly developed alcohol abuse. Also, some patients exhibit reduced sensation of pain, leading to burns. Interestingly, at the same time, abnormally brisk response to light touch or increased response to changes in temperature may occur [6].

The second classical phenotype is aphasia. The primary aphasias were described and classified in revised form in 2011 [11]. Language phenotype is present in 29% [7]. Mainly two types of aphasias have been described in FTD. Non-fluent variant primary progressive aphasia (nfPPA) is present in 12.36% [7], and semantic variant of primary progressive aphasia (svPPA) (3,12) – in 8.61% [7]. In nfPPA, speech is impaired, slow with short sentences. Agrammatism and speech apraxia may or may not be present [6, 13]. The understanding of speech is preserved [6,12]. In addition, isolated primary progressive apraxia of speech may be present in FTD. Primary speech apraxia means that patient has only motor speech disorder without language problems. The distinction of pure speech apraxia and nfPPA is difficult and the syndromes frequently overlap [12]. When the patients have svPPA, the speech is fluent but has no meaning. Understanding the meaning of words, objects, and other sensory perceptions are impaired [3, 12].

Not surprisingly, aphasias in general are difficult to spot by family members. Especially slowly progressive reduction of speech characteristic of nfPPA aphasia is difficult to detect at onset [12], and the time from onset to diagnosis is relatively long – 3.5 years [8]. Progressive incomprehensible speech problems that are characteristic to svPPA are more obvious, and this subtype is diagnosed 1.4 years after onset [5].

In clinical practice, the described variants are not always clear syndromes according to classification. There is a lot of overlap and mixed syndromes [12]. PPA is diagnosed when the aphasia is the dominating problem during the first two years of the disease [3] and early behavioural changes are not present [14] but they appear later in the course of the disease [12]. On the other hand, patients with simultaneous onset of PPA and behavioural problems have also been described [15]. Recently, predominantly amnestic dementia syndrome with increasing incidence with advancing age (LATE) has been described with pathological changes typical for FTD. However, it is still unclear if this subtype is part of FTD spectrum or not [12, 16].

2. Cognitive dysfunction

Neuropsychological evaluation is essential in diagnostic process. During testing attention, language, visuospatial function, executive function, and social cognition functions need to be assessed [12].

The principal deficits in cognitive function are related to executive functions. In daily life, it means difficulties with planning and decision making. During formal neuropsychological testing, profound deficits in various executive functions like attention, abstraction, planning and task sequencing are frequently demonstrated. Verbal fluency is typically decreased. A reduced generation of propositional speech is also common. For instance, patients do not initiate conversation. If asked a question, they respond with short phrases. Speech may contain perseverations. In addition, emotion and social recognition are impaired [6].

In bvFTD verbal fluency, inhibition, decision making and neuroeconomics-derived tasks are most sensitive. Likewise, social cognition is severely impaired, whilst episodic memory may be preserved. Typically, well preserved functions include spatial memory, drawing, spatial orientation, and praxis [12].

In clinical practice both Mental State Examination (MMSE) and the Montreal Cognitive Assessment (MoCA) are used for screening, but frequently a more thorough neuropsychological assessment is needed to confirm the diagnosis [17].

3. Motor symptoms

Parkinsonian symptoms are present in more than 26–50% of FTD patients [5, 7]. The most common syndromes are progressive supranuclear palsy (PSP) that is present in 16% and corticobasal syndrome (CBS) that is present in 10% [7]. CBS is characterized by asymmetrical parkinsonism with alien limb, dystonia, and cortical syndromes. PSP is characterized by vertical supranuclear palsy, slowing vertical saccades, early (during the first year) prominent postural instability with falls [18]. Similarly common characteristics are striking apathy, impulsivity and behavioural changes [3].

The possible link between FTD and motor neuron disease (MND) was recognized already in 1980 [19] that has been confirmed now in many studies [3, 20–22]. MND in FTD has classical features – both upper and lower motor neuron damage. In the course of the disease, dysarthria, dysphagia, and pseudobulbar affect may develop. Interestingly, MND signs and symptoms vary in severity, showing both very mild and severe phenotypes [3, 22]. Mild symptoms were present in about 30% of studied FTD patients and MND was diagnosed in 6 to 12.5% [7, 22].

Psychiatric symptoms are relatively uncommon in FTD. However, in some genotypes florid psychotic symptoms may occur. A number of patients are initially diagnosed with delusional psychosis, somatoform psychosis or paranoid schizophrenia [23]. Also, amnestic phenotype may be dominant at onset similar to Alzheimer's disease in 3–8%, depending on specific genotype [24]. In clinical practice, syndromes overlap and change in the course of the disease [5, 15].

4. Proteins and genes

The most common proteinopathies in FTD are tau (tauopathy) and TAR DNA-binding protein 43 **(**TDP-43).

Tau pathology was the first to be identified in relation to FTD [19], and about 40% of all FTD cases are tauopathies [25].

TDP-34 protein pathology was discovered in 2006 as cause of FTD [26, 27]. Currently, more than 50% of all FTD are TDP-34 positive, both in familial and sporadic forms [1]. Importantly, TDP-34 was present both in FTD and MND phenotypes, confirming that two seemingly different diseases are both TDP34 proteinopathies [27]. These findings confirmed earlier clinical observations of the link between the two diseases [19]. At present, four different subtypes of TDP-34 have been identified associated with different genotypes, but in some patients, different subtypes are present simultaneously [6, 28, 29].

More recently, aggregation of all members of the FET protein family pathology was discovered that accounts for 5–10% of all FTD cases. In conclusion, it is suggested that vast majority of proteinopathies present in FTD have been discovered [1].

Although the phenotypes of different proteinopathies are somewhat different there is still overlap and coexistence of different proteinopathies in patients. Therefore, predicting the specific proteinopathy based on clinical features is unreliable and unnecessary [12].

5. Genetic factors

Positive family history is present in 25–50% of FTD, mostly in autosomal dominant pattern [1].

The first gene linked to FTD was microtubule-associated protein tau (MAPT) gene on chromosome 17 that codes tau protein and was discovered in 1998 (30). Incidence of the MAPT gene associated with FTD is very variable across different populations. Generally, it is present in 1.5% of sporadic and 6.3% of familial cases [4]. Interestingly, in Sweden [31] and in Finland [32] the frequency of the MAPT gene is very low but in the Netherlands 43% of familial cases were carrying mutations to MAPT gene [33].

MAPT gene mutations are usually fully penetrant. [34]

MAPT gene explained only about 5–20% of familial FTD cases [1]. Taking into account the high incidence of familial cases, it was obvious that other genes play an important role.

Mutations of the progranulin (GRN) gene on chromosome 17 were identified in 2006, and the results were published in two separate papers in July [35] and in August [36]. GRN gene is associated with TDP-34 pathology [1]. GRN gene is very close to MAPT gene region that made it difficult to discover [4, 36]. GRN gene mutations cause 5–10% of all FTD cases [4]. FTD with GRN mutations has autosomal dominant mode of inheritance and 95% of patients have at least one affected family member [4,37]. GRN mutations have age-related penetrance with a number of patients demonstrating first symptoms in their 80s and 90s [34, 38].

The expansions of the hexanucleotide repeats of the *C9orf72* gene on chromosome 9 in relation to FTD was discovered in 2011 and published simultaneously by two groups [21, 39]. The number of repeats in affected individuals is often >1000 but already more than 30 repeats cause FTD. [39–42]

C9orf72 is responsible for 4–29% of all FTD cases and in 24–29% if family history is present [39, 42, 43].

These expansions are associated with variable TDP-34 pathology [1]. It has also been confirmed that *C9orf72* mutations cause TDP-34 pathology both in FTD and MND phenotypes [20].

Mutations in the gene encoding Valosin-Containing Protein (VCP) on chromosome 9 were discovered in 2004 [44]. VCP gene is associated with 1.6% of FTD, and causes TDP-34 proteinopathy [37, 45].

Some other genes causing TDP-34 pathology (including TARDB) have been described, but the incidence of these genes is rare and available data are still limited [1].

Mutations in the fused in sarcoma (FUS) gene are on occasion described in FET proteinopathies [28].

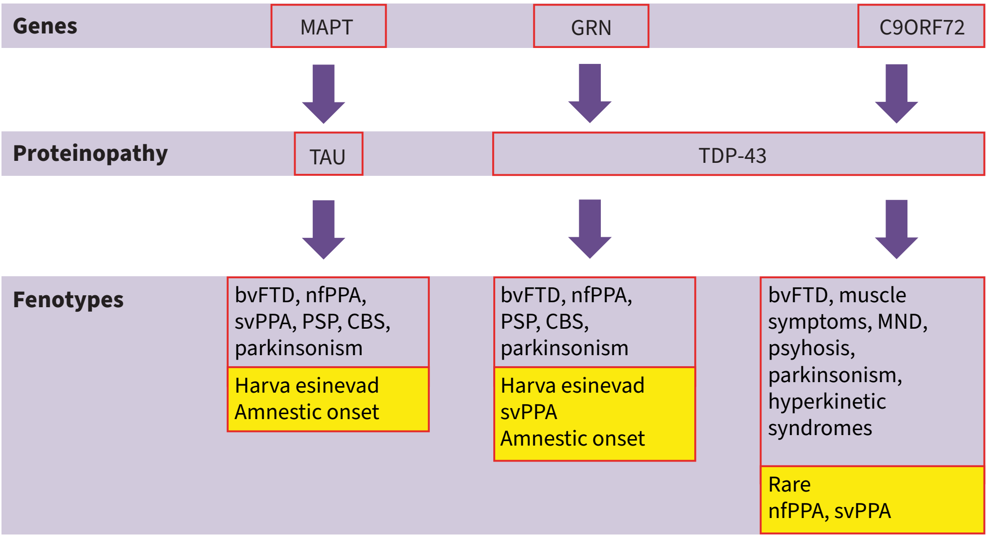
6. Genotype-phenotype correlations with the most frequent genotypes

6.1 MAPT gene phenotypes (figure 1)

MAPT gene mutations have large variety of phenotypes. However, by far the most common is bvFTD [4, 46]. Rare mutations of the MAPT gene cause CBS [46–48], PSP [46, 48], nfPPA [49, 50] and svPPA phenotypes [51].

PPA is usually combined with behavioural symptoms, but rare mutations can cause isolated PPA [4]. Parkinsonian symptoms may be present at onset with bvFTD or develop during the course of the disease [48].

Figure 1. **MAPT gene phenotypes. Genes, proteinopathies and clinical feature of the most common frontotemporal degeneration types**



MAPT = microtubule-associated protein tau, GRN = progranulin, TDP-43 = TAR DNA-binding protein 43, bvFTD = behavioral variant of FTD, nfPPA = Non-fluent variant of primary progressive aphasia, svPPA = semantic variant of primary progressive aphasia, PSP = progressive supranuclear palsy, CBS = corticobasal syndrome, MND = motor neuron disease

Few cases have been described with predominantly amnestic syndrome at onset that may lead to clinically misdiagnosed Alzheimer's disease [4].

Importantly, heterogeneity of phenotypes and incomplete penetration may be present also within one family with the same mutations, further complicating the clinical evaluation of patients [52].

6.2 GRN gene phenotypes

The phenotypes of GRN gene mutations are similar to MAPT gene phenotypes with the most common syndrome bvFTD [4, 53]. PPA is relatively common, and present in 20–25%, nfPPA is the most frequent subtype [4, 14, 53, 54].

Amnestic onset is atypical for FTD and this subtype is difficult to differentiate from Alzheimer's disease at onset. Parkinsonian syndrome or behavioural problems develop during the course of the disease. The absence of amyloid pathology typical for Alzheimer's disease is helpful for differential diagnosis [12].

Importantly, phenotypes with the same GRN mutations may vary within one family, for instance, bvFTD and nfPPA have been described within the same family with the same mutations [54]. Parkinsonian syndromes, like CBS and PSP, are less frequent [4, 53].

6.3 *C9orf72* expansion phenotypes

The most typical phenotypes of *C9orf72* expansions are FTD with or without MND [55]. Patients may present with combinations of clinically definite FTD and MND. However, about 30–40% of FTD patients may have either MND or mild symptoms like muscle wasting, rare fasciculations or muscle weakness that may indicate underlying pathology [22].

The most typical variant of FTD is bvFTD [9, 54].

Importantly, 38% of patients presented with florid psychosis and 28% had paranoid delusion and irrational thinking that was present in patients with or without MND [23].

Parkinsonian features may present in the form symmetrical rigidity, with or without tremor and autonomic dysfunction [56]. PPA is rarely seen in *C9orf72* expansions [4].

Importantly, *C9orf72* expansions may also present as Huntington's disease-like hyperkinetic disorder [57].

The penetrance, and therefore the development of clinical phenotypes depend on repeat size of *C9orf72* expansion. When the repeat size is high the symptoms develop earlier (mean age 53) compared to lower repeat size when symptoms develop later (mean age 62) [58]. Also, anticipation (earlier onset in younger generations) may occur [58–60].

6.4 VCP gene phenotypes

VCP gene phenotypes are different as the clinical picture includes inclusion body myositis, Paget disease with or without FTD [37, 44, 45, 60]. In fact, 90% of VCP gene carriers have inclusion body myositis and 30% FTD.

The FTD phenotype is bvFTD but psychiatric disorders, language problems and very rarely parkinsonian syndrome have been described [4]. The most common syndrome is inclusion body myositis [60] making the link to FTD difficult sometimes.

Clinical features of FTD are very heterogenous and change in time. Therefore, categorical delineation of the leading syndrome like bvTFD, PPA or specific parkinsonian syndromes may not be always possible as syndromes overlap [5, 15]. Typically, behavioural symptoms develop in 95% of patients with svPPA [5]. Also, taking into account that the same mutation/expansion may result in different phenotypes the distinction may not be so important in clinical practice.

Conclusions

FTD is the most common form of dementia with the onset before the age of 65, but it is most commonly diagnosed in the age frame from 70 to 84 [5]. It is important to recognize early onset of behavioural changes in patients with dementia, indicating the possibility of bvFDT. Unfortunately, many FTD patients manifest with associated symptoms that are not always considered characteristic of FTD. Although PPA is frequently sporadic [49], many FTD patients manifest with more or less isolated PPA. Also, the differential diagnosis of atypical parkinsonian syndromes, especially in patients with PSP or CBS phenotypes or without frank dementia point to the possibility of FTD. MND is a relatively common manifestation of FTD. Likewise, mild muscle symptoms: mild wasting, weakness, rare fasciculations may indicate the underlying FTD.

In neurological practice, we may see psychiatric symptoms less commonly, but it is well recognized that florid psychosis is relatively frequently present in FTD, sometimes erroneously leading to the misdiagnosis of a psychiatric disorder. The predominantly amnestic onset does not rule FTD out completely as several cases have been described with clinical features at onset that resemble Alzheimer's disease.

Comprehensive family history is crucial. Several aspects should be kept in mind. First, even in one family the phenotype and penetrance may be very different. So, it is important to analyse in detail all neurological, psychiatric and muscle (and bone) diseases in relatives. It has been shown that many patients are diagnosed with Alzheimer's disease, Parkinson's disease, psychiatric disorders including schizophrenia, muscle disease, but all these may be FTD mimics. Likewise, anticipation has been described in some families, therefore detailed history of the offspring is equally important.

Unfortunately, even the most detailed clinical picture does not reliably predict the underlying broad genetic pathology. Therefore, next generation whole exome or genome sequencing studies are appropriate. It is also important to remember, that c9orf is a repeat expansion pathology and cannot be detected during whole exome sequencing.

How rare are these conditions in everyday clinical practice?

Since 2016, at West-Tallinn Central Hospital have been identified 4 patients with c9orf, 4 patients with GRN mutations, 2 patients with TARDB and also 2 patients with mutations of MAPT and VCP.

Low threshold for ordering genetic testing in neurological diseases including FTD is important and enables to reach accurate diagnosis that is important for patients and their families.

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Diagnostic Challenges of Alzheimer's Disease in Clinical Practice

Zanda Priede, Sintija Strautmane
Rīga Stradiņš University

Alzheimer's disease (AD) is the most common form of dementia. Together with other dementias, it is the 7th leading cause of death worldwide. AD is a chronic, neurodegenerative disorder, usually affecting people after the age of 65. There are no pathognomonic signs, furthermore, the beginning of AD is very insidious. Most frequently, AD starts with memory impairment, speech difficulties, difficulties to orientate oneself in space, changes in patient's behaviour and personality, which result in patient becoming bedridden. Diagnostics is still challenging, however, with development of technologies, there is a hope to diagnose the disorder as soon as possible to provide optimal quality of life for the patient.

Keywords: Alzheimer's disease, neurodegenerative disorder, memory, behaviour

Introduction

According to the World Health Organization, global population life expectancy has increased by more than 6 years. When comparing population life expectancy in 2000 with 2019, it is found that the average population life expectancy in the world in 2000 was 66.8 years, while in 2019 the average population survival in the world reached 73.4 years. Quality of life and health status also play an important role when it comes to life expectancy. Life expectancy with good health and subsequent optimal quality of life has increased by 8%, i.e. from 58.3 years in 2000 to 63.7 years in 2019. These data are more associated with a reduction in mortality than with a reduction in the number of years spent living with a disability. Consequently, the increase in survival for people in good health (5.4 years) still lags behind the increase in overall life expectancy (6.6 years) [1].

Global changes in population age demographics and the subsequent expected increase in age-related diseases indicate a serious public health problem. In the elderly population, multimorbidity is more common, which includes, for example, arterial hypertension, atherosclerosis, diabetes mellitus, heart rhythm disturbances, heart failure, lung diseases, thromboses, cerebral infarctions, oncological diseases and other diseases, including dementia [2].

According to the guidelines published by the European Federation of Neurological Associations in 2012, which promote the diagnosis and management of dementia-related diseases, dementia is defined as a brain disorder that causes permanent and versatile cognitive impairment, including impairment of memory, language, visual spatial sensations, various skills, causal understanding and reasoning abilities. These cognitive changes culminate in personality and behaviour changes of varying intensity, negatively impacting the individual in their daily activities, limiting them in comparison with the previous period of life. Therefore, early recognition of dementia symptoms is very important to delay the development of dementia and correct the course of the disease, which would be realized in the best possible quality of life [3].

It is currently known that dementia affects 5.4% of people over the age of 65, in addition, its prevalence increases with age to 20–25%, and even more at the age of 85 [4, 5]. Alzheimer's disease and other dementias are the most common cause of disability later in life and dementia is currently the 7th leading cause of death [6, 7]. According to statistics on the prevalence of Alzheimer's disease in the world today, about 50 million people have Alzheimer's disease or related dementia, and in addition, only one in four of the population has a proven and diagnosed Alzheimer's disease [6]. Alzheimer's disease is now more common in Western Europe, with 14 million Europeans expected to develop dementia by 2030 [3].

Neurodegenerative diseases are defined as a group of heterogeneous diseases characterized by progressive diseases of the central nervous system. Their origin can be related not only to heredity, but also to sporadic cases that develop when structural changes occur in the cells of the nervous system, or neurons, resulting in abnormal cellular function or even loss of cellular functions. Abnormal protein products precipitate, triggering the mechanism of neuronal death.

1. Definition of Alzheimer's disease

As established above, dementia is a general term for persistent and multifaceted cognitive impairment, which includes Alzheimer's disease, vascular dementia, Lewy body dementia, frontotemporal dementia. Consequently, this term is non-specific [3].

In turn, Alzheimer's disease is defined as a chronic neurodegenerative disease, the characteristic histological picture of which includes two typical findings:

1) extracellular aggregates of the beta-amyloid protein, which cause an inflammatory reaction, progressive oxidative damage to nerve cells or neurons and their synapses, and subsequent neuronal death, which gradually leads to brain atrophy;
2) intraneuronal platelets of phosphorylated tau protein, the structure of which is altered, and when these platelets bind to other tau proteins, the cell transport

system is damaged, causing inter-neuronal signal transmission disorders and inevitable neuronal death [8, 9, 10].

Despite these two typical histological findings, patients with Alzheimer's disease are additionally characterized by a selective loss of neurons and their interconnections, or synapses, as well as an increased number of astrocytes (glial cells) and their activity, acetylcholine deficiency, as well as dysfunction or even atrophy of the limbic system structures [11, 12].

As a result of Alzheimer's disease, patients develop cognitive deficits, which hamper the performance of even the most basic everyday tasks; the patients become fully dependent on care, incurring a burden on caregivers and significantly increasing health care costs. This disease leads to the premature death of the affected individual – the projected survival is on average 10 years from the time of diagnosis [11].

Alzheimer's disease is the most common form of dementia, accounting for up to 75% of all moderate forms of cognitive impairment on its own or in combination with other cognitive disorders [10]. The disease usually starts after the age of 65, and its incidence doubles every five years, but it is not part of normal aging [10, 11]. It should be noted that age is the primary and main risk factor for the development of Alzheimer's disease. Interestingly, gender also plays a role in the development of Alzheimer's disease – in women, this risk is higher due to hormonal differences from men, different contact with environmental agents during life, as well as different lengths of education. However, these are not the main risk factors. No less important is a positive family history of first-degree relatives, chromosome 21 trisomy (Down syndrome), including specific mutations in chromosomes 14 and 1, low level of education, low educational and career achievement, social isolation, insufficient physical activity, prolonged psycho-emotional stress, diabetes mellitus and impaired glucose tolerance, as well as small head size and brain volume; presenilin mutation and altered APP gene, apolipoprotein E-e4 allele, head injury. Possible risk factors include lifestyle factors such as smoking, excessive use of alcohol and other intoxicating substances, exposure to industrial solvents and pesticides, as well as exposure to electromagnetic fields, increased maternal age, cerebrovascular disease, cardiovascular disease and thyroid dysfunction [11].

2. Chameleons in the clinical picture of Alzheimer's disease

As indicated above, age is a major risk factor in the development of Alzheimer's disease. Unfortunately, there are no clinical symptoms of pathognomies, i.e. no symptoms that specifically indicate Alzheimer's disease. Similar to other forms of dementia, the onset of Alzheimer's disease is slow, non-specific and sometimes does not even raise suspicion of the disease.

Initially, the medial temporal cortex and associative fields are affected pathologically. The process then spreads to the frontal and parietal cortex. Consequently, temporary memory impairment develops (the brain structure involved is the hippocampus), but due to memory impairment and aphasia (the brain structure involved is the pre-Silvian groove region) – orientation disorders, visual spatial dysfunction (the brain structure involved is the cortex of the parietal lobe) and executive function deficiency (the brain structure involved is the cortex of the frontal lobe) [13].

Thus, Alzheimer's disease starts with memory problems. The patient begins to forget recently learned information or events. It is believed that such manifestations have occurred in all people, regardless of age, so additional examination is not always necessary. However, in the event that the deterioration of memory (quick forgetting, repetition of previously asked questions or something that was previously said, loss of objects, inattention, placement of objects in places not normally suitable for them) progresses obviously, and if the patient increasingly forgets recent events, one should start to think [11, 14].

In connection with memory impairment, difficulties in expressing oneself also appear. Patients begin to have a difficulty to find words in sentences, make pauses; patients can replace the required words with a wrong word or substitute a more complex word with a simpler one. Often family members automatically replace the missing words in the conversation themselves. Other serious illnesses, such as cerebral infarction affecting the Brock area of the left hemisphere of the brain, which is directly related to the provision of normal language function, may also have similar symptoms [11, 14].

The visual spatial sense of a patient is affected, for example, they may become confused in previously familiar and safe places, even get lost in them; it may be difficult to memorize a new route. Again, there is a differential diagnosis between ischemic brain injury in the posterior vascular area. In patients with Alzheimer's disease, when the frontal cortex is affected, its dysfunction also appears [11, 14].

As the disease progresses, the behavioural disorders gradually worsen – the patient may be emotionally labile, crying, become quickly irritable and even aggressive; he may be negative and uncritical, unable to adequately respond to various situations and make the right decisions, he may have difficulties in performing everyday duties. Hence, personality changes may also appear. The patient may become apathetic, have depression, anxiety, irritability, suffer from nightmares, for example, that strangers have entered home, etc. In such a situation, Alzheimer's disease should be differentiated from psychiatric diseases, for example, schizophrenia, bipolar disorder, depression with manic episodes, etc. In this case, differential diagnosis helps, distinguishing between psychiatric diseases and cerebrovascular processes in the brain, for example, in connection with thalamus circulation disorders. Atrophy and/or dysfunction of limbic system structures reduces patients' ability to deal with their emotions, including fear and anxiety. As a result, the patient is under heightened stress and experiences an increased release of the stress hormone cortisol; as its level rises, hippocampal atrophy may develop [11, 14].

Gradually, the patients diagnosed with Alzheimer's disease continue to lose their ability to function until they become fully care-dependent on a 24-hour basis, usually in long-term care facilities [11]. At this stage, they also have serious self-care difficulties (such as difficulty eating, bathing, using the toilet, etc.), using everyday items (doing chores, cooking, using the phone, etc.). Being aware that in this case patients are not capable to be critical of themselves, it is very important to build and achieve mutual trust with the patient's relatives in a timely manner and to collect detailed medical history data about the patient [11].

In some cases, Alzheimer's patients may also have an atypical or unusual clinical picture, that is, they do not have a progressive amnestic dementia. Then diagnosing Alzheimer's is even more of a challenge. In such patients, atypical neuroanatomy and, above all, neurofibrillary meshes are observed in neuropathological examinations, which is associated with the most pronounced clinical picture. It has been concluded that such changes are more common in patients with Alzheimer's disease at an early age (persons under the age of 65), and this fact is the subject of current discussion [15, 16].

In persons with an atypical clinical picture of Alzheimer's disease, the first symptoms may be associated with a deterioration of vision called posterior cortical atrophy syndrome. Initially, these patients often see an ophthalmologist, for example, with complaints about spatial perception disorders, simultaneous agnosia, oculomotor apraxia, homonymous visual field disorders, apperceptive prosopagnosia, inability to differentiate right from left, difficulties in performing bimanual tasks, such as dressing, etc., but memory and speech disorders in this case are not pronounced [17].

In turn, primary progressive aphasia is attributed to a group of clinical and pathophysiological heterogeneous neurodegenerative diseases, which are characterized by progressive language disorders with relatively preserved memory and other cognitive functions. This is one of the atypical clinical variants of Alzheimer's disease [18].

Among Alzheimer's patients, one of the first symptoms may be executive dysfunction, which is basically related to damage to the frontal lobe of the brain. In this case, brain atrophy occurs in the frontotemporal cortical regions. In addition, a faster progression of the disease is also observed in such patients with an atypical clinical picture compared to patients with a typical clinical picture of Alzheimer's disease with memory impairment [19].

Alzheimer's disease may be associated with other processes, such as vascular damage, including vascular dementia, Lewy Body Dementia, and Parkinson's disease. Such combinations may affect the patient's clinical picture and pose even greater diagnostic and treatment challenges even for experienced professionals, however, according to literature, the most common combination for Alzheimer's disease is with vascular dementia [20].

3. Diagnostic challenges in Alzheimer's disease

Alzheimer's disease should be thought of when it comes to an elderly patient with progressive memory impairment, as well as manifestations of the disorder in at least one other cognitive domain, which negatively affects the patient's daily life.

As with any disease, the first step in Alzheimer's disease is to carefully collect the patient's medical history. Knowledge of the loss of the patient's physical and mental abilities, as well as their difficulties in everyday life, is one of the ways to establish, as soon as possible, whether and how well the patient's (independent) functioning abilities have been preserved [11, 12]. Most often, such medical history data is collected by interviewing the patient's family members.

The initial tool to use in direct communication with the patient is the Montreal Cognitive Impairment Assessment Scale (MoCA; norm: at least 26 points out of 30). This test is quick, short and simple, and when compared to other tests, such as the Mini-Mental State Examination, it has a higher sensitivity for determining executive function and language disorders. However, it should be noted that the diagnosis of dementia, including Alzheimer's disease, cannot be based solely on the evaluation of these tests. The collection of detailed medical history data on the patient is much more important [21].

A number of criteria for differential diagnosis in Alzheimer's disease have also been developed. Two sources are most commonly used for this purpose: The Diagnostic and Statistical Manual of Mental Disorders, and the criteria developed by the National Institute on Aging – Alzheimer's Association. Criteria for diagnosing Alzheimer's disease have been developed in each of these sources [3].

Neuropsychological testing may also be useful in assessing disease dynamics in patients with dementia and cognitive impairment. These tests, for example, help to determine the patient's baseline condition in order to follow the clinical picture and the patient's daily functioning in the future and to help differentiate different forms of neurodegenerative dementia from cognitive impairment of other aetiologies. They are used to find the actual level of functioning of the patient, to make appropriate recommendations, for example, when assessing the patient's ability to drive a vehicle, make financial decisions, etc., as well as to determine the compensatory mechanisms of the patient.

In addition to the above, if a patient is suspected of having Alzheimer's disease, imaging should be performed, primarily – magnetic resonance imaging (MRI) of the brain. This test also plays an important role in the differential diagnosis, which allows to exclude other diseases, including cerebrovascular diseases and structural changes in the brain, such as chronic subdural hematoma, brain tumour, normal pressure hydrocephalus, regional brain atrophy, or frontotemporal dementia and other neurodegenerative diseases [22].

Structural changes in the brain in patients with Alzheimer's disease, which the MRI can identify, include both generalized and focal atrophy, as well as damage to the brain's white matter, but in general these changes are non-specific. The most characteristic focal finding in patients with Alzheimer's disease is reduced hypothalamic volume and/or atrophy of the medial temporal lobes [23]. The decrease in hypothalamic volume is also a normal part of aging, so age-specific criteria are necessary in this case. Correlation of MRI findings with the patient's clinical picture is essential. Separate studies indicate that MRI findings may be useful in predicting deterioration in the functional status of Alzheimer's patients. Hippocampal volumetry using age-adjusted norms may aid in predicting the progression of mild cognitive deficits in dementia, however, these tools are currently not widely used, and the results obtained have not yet been validated in everyday clinical practice [24].

Functional brain imaging with 18-F fluorodeoxyglucose positron emission tomography (FDG-PET) or single proton emission computed tomography (SPECT) demonstrates different regions of the brain with hypometabolism (PET) and hypoperfusion (SPECT) in patients with Alzheimer's disease. These regions include the hippocampus, medial parietal lobes, lateral parietal and posterior temporal map [25]. It is important to mention that in practice FDG-PET may be the most useful test to differentiate and distinguish between Alzheimer's disease and frontotemporal dementia in patients with an atypical clinical picture, as well as to distinguish between neurodegenerative conditions such as depression. FDG-PET and SPECT are the only neuroradiological examination methods that are currently quite widely available in the world in daily clinical work.

Additionally, amyloid positron emission tomography (PET) imaging is possible by measuring the amount of amyloid in the brain. The examination is carried out in order to identify Alzheimer's disease in a targeted manner and to distinguish it from other causes of dementia [26]. At present, it is possible to perform amyloid PET imaging, so research is actively being conducted to search for markers appropriate for Alzheimer's disease tau proteinopathy, so that tau PET imaging can also be performed [27].

A novelty in the diagnosis of Alzheimer's disease patients are biomarkers. Based on data from the literature, there are currently some extensively studied biomarkers for the molecular and degenerative tracking process of Alzheimer's disease patients, which may be supportive in the diagnosis of the disease, but are not yet fully recommended in everyday clinical diagnostic practice. This testing helps to obtain additional confirmation in the diagnosis of Alzheimer's disease, and the results may be useful in a variety of other situations, such as for patients with early-onset dementia or an atypical clinical picture of Alzheimer's disease, in which the differential diagnosis also includes other non-amyloid neurodegenerative diseases, such as frontotemporal dementia [28].

Potential biomarkers include beta-amyloid deposition markers in the brain, so it is recommended to use only one specific marker when testing dementia patients under the age of 66. For example, low levels of cerebrospinal fluid or fluid beta-amyloid-42 support the diagnosis of Alzheimer's disease – elevated levels of a marker in amyloid PET images. Potential biomarkers also include neurodegeneration markers. For example, an increased tau protein in cerebrospinal fluid or cerebrospinal fluid (total or phosphorylated) supports the diagnosis of Alzheimer's disease – decreased metabolism of fluorodeoxyglucose in temporal and parietal cortex pet; temporal lobe (medial, basal and lateral) and parietal lobe medial cortical atrophy MRI. Regardless of whether clinical criteria for probable Alzheimer's disease are obtained: if both markers (beta-amyloid and neurodegeneration markers) are negative, then there is a low probability that dementia is associated with Alzheimer's disease pathology [9, 14, 29].

In general, topographic biomarkers are less specific than molecular biomarkers, but have a better correlation with the patient's clinical picture. Today, research on biomarkers continues actively, trying to include them in the definition of Alzheimer's disease in order to provide not only a clinical diagnosis, but also a biological basis for the diagnosis of Alzheimer's disease. In addition, neurodegeneration markers also provide information about the degree of the disease. Plasma biomarkers are not yet proven to play a role in clinical practice, so further research is needed in this area [30].

Although research on biomarkers is currently active, there is still a lack of optimized biomarkers. This limits the diagnosis, progression and treatment evaluation of the disease. Validated, minimally invasive biomarkers could detect the causes of dementia as soon as possible, allowing early and appropriate therapy in patients with dementia. Consequently, it would be possible to avoid treating neurodegenerative diseases with the same medications, which, logically, do not provide improvement. Increased use of biomarkers would open the door to much-needed personalized medicine [31, 32].

It should be noted that routine blood tests do not show indications specific to Alzheimer's disease, so they do not play such a big role in diagnostics. There is also the possibility of genetic testing, but it is usually not recommended for routine evaluation in patients with Alzheimer's disease. It is possible to detect specific mutations in chromosomes 21, 14 and 1 in patients suspected of having an early family form of Alzheimer's disease that is inherited by autosomal dominant individuals. It is known that approximately 50% of cases are caused by mutations in the APP, PSEN1 and PSEN2 genes [9]. Genetic testing is not recommended if there are asymptomatic family members in the family, and also if the patient has not been previously consulted by a geneticist [30].

Conclusions

Alzheimer's disease is the most common form of dementia, which in itself and/or in combination with other cognitive diseases places a serious burden on society. With advances in technology, it is now possible to diagnose Alzheimer's disease earlier, but in many cases, it still goes unnoticed, with only one in four cases confirmed. This chapter, therefore, emphasized not only the enormous socio-economic burden of Alzheimer's disease, but also described the variability of the clinical picture of the "chameleon type" disease, and outlined the challenges of diagnosing the disease in everyday clinical practice. At the same time, there is a hope that in the future the possibilities of diagnosing the disease at the earliest possible stage will be available in order to provide the patient with an optimal quality of living and the longest possible happy life.

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Frontotemporal Dementia and Amyotrophic Lateral Sclerosis Associated with *C9orf72* Gene Mutation: Case Report and Literature Review

Greta Pšemeneckienė, Justina Valinčiūtė, Miglė Viliušytė
Lithuanian University of Health Sciences

Timely differential diagnosis of neurodegenerative disorders remains a clinical challenge. The cognitive profile and other clinical symptoms are often nonspecific, overlapping, and may occur in various pathologies. Even advanced diagnostic methods (imaging and cerebrospinal fluid biomarkers) are sometimes not sufficient to differentiate frontotemporal degeneration from Alzheimer's disease. Genetic counselling and testing is becoming increasingly important in clinical practice, but is still limited due to cost and late results. The presented clinical case illustrates that the accurate description of clinical signs and symptoms, evaluation of anamnesis data, interpretation of the course of the disease, monitoring of the cognitive and neurological status, remains an important, perhaps even a key part of the diagnostic process of neurodegenerative dementias.

Keywords: cognitive impairment, differential diagnosis, C9orf72 gene mutation

Introduction

Despite improving diagnostic capabilities in Lithuania, diagnosing and treating cognitive disturbances remain a major challenge. Accurate identification of the first symptoms and their dynamics is crucial for timely diagnosis and treatment, preserving cognitive function and independence, while alleviating non-cognitive symptoms. However, patients often do not seek treatment at an early stage, and as the disease progresses, they can no longer identify the symptoms themselves. Relatives of the patients likewise do not seek help immediately after noticing the first signs and in most cases not until the patient's cognitive and behavioural changes begin to cause difficulties. On the other hand, establishing a diagnosis is a complex and time-consuming process, and the final diagnosis is often not made until the patient has been observed for months or even years. In recent years, the incidence of dementia has been increasing rapidly due to longer life expectancy. In 2019, the Alzheimer Europe organization presented data in the yearbook *Estimating the Prevalence of Dementia in Europe*, according to which the number of people with dementia will double by 2050 compared to 2019 [1]. This compels the search for new, simpler, more accessible options for early diagnosis of cognitive impairment, as well as creation and development of national dementia management strategies, increasing public and specialist awareness of dementia. When treating individual patients, it is crucial to assess the history critically and comprehensively, to evaluate the combination of symptoms, clinical signs, and diagnostic test results. It is also essential to follow the defined diagnostic criteria and revise the diagnosis dynamically as new data is discovered.

We present a clinical case investigated and observed at the Department of Neurology of the Hospital of Lithuanian University of Health Sciences (HLUHS) Kauno klinikos, which reveals the diverse symptoms of frontotemporal dementia (FTD), the complexity of its differential diagnosis and the challenges in the practical work of a neurologist.

1. Clinical case

At the beginning of 2021, a 69-year-old man, urged by his wife, came to the Outpatient Department of Neurology at HLUHS Kauno klinikos for a neurological consultation. The patient himself did not indicate any clear complaints. According to his wife, the patient's condition had been worsening for about 6 months: his memory had deteriorated (he kept forgetting the keys, and left the water running), it was often difficult for him to find the right words, he no longer knew how to use the TV remote control, and often confused dates. The patient's coordination, perception of space, and distance estimation were disturbed (the patient was no longer able to drive the car to the garage), he became irritable, found it difficult to assess his capabilities and risks (the patient walked on foot to a friend who lived 8 kilometres away). The wife emphasized that her husband's character had changed, his eating and hygiene habits had deteriorated, and the patient had become less independent in the household. The behavioural changes were more noticeable in the evening. At that time, the patient was taking ginkgo medication and Pramiracetam. The patient had type 2 diabetes mellitus and myocardial infarction. There was no history of neuro-infections, brain injuries, or mental disorders. The man had 8 years of education and worked as a brigade leader. The patient's maternal cousin had Alzheimer's disease (AD).

During the neurological examination, the patient was observed to have poor speech, had difficulty fixing his sight upon the object of observation, and did not immediately understand all commands. No other focal neurological or extrapyramidal symptoms were found. The patient was consulted by a psychiatrist. During the examination, the patient was conscious, correctly aware of himself, and partly in place and time. He was available for meaningful verbal contact but did not answer all questions correctly, frequently questions had to be repeated and simplified. The patient was a little tense during the interview. The mood was euthymic, emotions lacked adequacy. The thinking was slow, concentration and memory were impaired. Criticism regarding the condition was formal. Psychological assessment of cognitive functions with specialized tests showed reduced working memory capacity, impaired memory retention and ability to transfer to long-term memory (Mini-Mental State Examination (MMSE) score was 21 points, Blessed Dementia Scale score was 9 points). The condition was assessed as mild dementia syndrome. Tiapride was prescribed to correct mental and behavioural symptoms. Extended neuropsychological assessment of executive functions, verbal fluency, and other frontal functions was not possible at the time.

Laboratory test analysis of peripheral blood showed no significant abnormalities, chronic infections were also excluded. Carotid artery ultrasound revealed moderate atherosclerotic lesions without hemodynamically significant stenosis. An arachnoid cyst in the right front-temporal region, front-temporal hypoplasia/atrophy, asymmetric communicating hydrocephalus, asymmetric atrophy of the hippocampal heads, and a possible small cavernoma in the right parietal lobe was revealed by brain magnetic resonance imaging (MRI). No serum antibodies associated with paraneoplastic neurological syndromes were detected. ApoE ε 2/4 genotype was identified. Differentiating the causes of neurodegenerative dementia (Alzheimer's disease or FTD), a brain positron emission tomography (PET) was performed, but the data were not sufficient for classic AD. Areas of hypometabolism in the front-temporal lobes corresponded to cystic lesions and hypoplastic changes.

Diagnostics were performed on an outpatient basis and took about 3 months. At the follow-up visit, the patient's wife reported deterioration in the patient's condition: memory impairment was evident, the patient lost the ability to use tools he would previously use with ease, and, above all, behavioural changes progressed: he was getting irritated very easily, became aggressive at least once a week, could no longer eat properly (he would cram two eggs in his mouth and not chew), was not able to name objects and could not understand the meaning of words. The patient himself had no health complaints and disagreed with the information provided by his wife. Since the patient lived in another region of the country, he was hospitalized at the Department of Neurology in a planned manner for lumbar puncture and cerebrospinal fluid (CSF) examination. Cytological and biochemical examination of the CSF was non-pathological. Samples were taken for AD biomarkers (amyloid beta and tau protein). It is worth mentioning that when the patient was in the hospital, he became disoriented, gathered his belongings, and left the department arbitrarily. While waiting for the results of the AD biomarkers, Donepezil was prescribed to maintain cognitive function and Tiapride was continued at the doses recommended by the psychiatrists.

Five months after the first visit and neuropsychological evaluation, the patient has been consulted again on an outpatient basis. Rapid regression of cognitive functions and marked impairment of daily functions were observed (MMSE – 7 points, Blessed Dementia Scale – 23 points). Also, the brain MRI was repeated, in which the congenital arachnoid cyst and moderate hypoplasia of the adjacent parts of the brain were observed, which were unchanged compared to the previous examination. In addition, moderate atrophic lesions, more pronounced in the frontal lobes, were seen, which did not allow the exclusion of FTD diagnosis. However, the pronounced hippocampal atrophy also did not permit to exclude the diagnosis of AD. The CSF AD biomarker profile was ambiguous, with decreased (positive) Abeta42, a positive Abeta42 and Abeta40 ratio, negative pTau181, and tTau – at the upper range limit. The diagnosis of atypical AD was formed, and it was decided to investigate other genetic factors. Due to poor tolerance, agitation, and rapid cognitive decline, Donepezil was substituted with Memantine. Quetiapine was additionally prescribed for sleep induction, anxiety and behaviour control.

At the end of 2021, the patient's condition worsened: he became irritable, threatened to strangle his wife, lost control of urination, disregarded personal hygiene, did not wash himself, and did not brush his teeth. He was often at a loss for words, unable to carry out a sequence of actions – he would mix up the order of his clothes and could no longer cross himself. He had a strong craving for sweets – he would stuff his mouth full when eating, unable to chew or swallow, and had to be supervised to ensure that he would not choke. The wife noticed that his muscles twitched when he slept, and that he moved his leg involuntarily ("my husband sleeps and his muscles twitch"). During the examination, the patient smiled inadequately, his speech was marked by echolalia components and perseveration of movements. During the neurological examination, multiple fasciculations were observed in the shoulder strap and chest muscles, and the patient's toes and feet twitched. No extrapyramidal symptoms were noticed. The patient was poorly oriented in time and space. Difficulty in following instructions, markedly impaired concentration, and impaired calculation and copying skills were observed.

Considering frontotemporal dementia with concomitant amyotrophic lateral sclerosis (ALS), an electroneuromyography study was performed – signs of focal demyelination of the sensory and motor fibres of the right median nerve in the carpal tunnel were observed. The responses of the other tested peripheral nerves were within normal limits. Single fasciculations without symptoms of acute denervation were registered in the examined limb muscles. The patient was consulted by a geneticist, and it was agreed to test for the most common dementia-related gene mutations. Disappointingly, the results were obtained only a few months later – the new-generation sequencing method (CeGaT, Germany) identified the c.-45+163G_4C_2 repetitive sequence of the *C9orf72* gene. This confirmed the final clinical diagnosis of FTD + ALS, but the patient's condition was already too severe for an outpatient consultation. As the disease progressed, the patient died due to thromboembolic complications and progressive respiratory failure 22 months after the initial visit with a complaint of cognitive impairment to the neurologist.

2. Frontotemporal dementia and amyotrophic lateral sclerosis associated with *C9orf72* gene mutation

Frontotemporal dementia is a rare form of dementia caused by degeneration of the anterior temporal and frontal lobes. This disease usually manifests in a progressive decline in executive functions, behaviour, and language [2, 3]. There are several main clinical subtypes of FTD: behavioural variant, semantic dementia, and primary progressive aphasia. Behavioural type is the most common subtype, and it is characterized by behavioural and personality changes that occur in the early stages of the disease. Such changes can manifest in apathy, loss of empathy, impulsivity, and reduced judgment. Most patients are unaware of their behavioural changes. Delusions, hallucinations, psychotic and anxiety episodes are also characteristic of this illness [4, 5].

Symptoms of FTD often occur in association with motor neuron disease. About 15% of patients with frontotemporal dementia show symptoms of amyotrophic lateral sclerosis, and up to 50% of patients with ALS have varying degrees of cognitive deficits [6]. Worldwide, the *C9orf72* gene mutation is associated with FTD (especially the behavioural variant) and ALS [7]. Alterations in this gene are inherited in an autosomal dominant pattern, and ALS plus FTD patients have a multiple repeat sequence in G_4C_2 [5, 7].

FTD and ALS associated with the *C9orf72* gene mutation can occur at any age, most commonly around 50–60 years [8]. In these cases, the clinical symptoms of amyotrophic lateral sclerosis do not have significant differences from the classical variant of the disease. In *C9orf72*-related ALS, spinal onset (e.g. muscle weakness and changes in muscle tone, spasticity, fasciculations) are more common observed than bulbar onset (including speaking and swallowing functions) (54%>39%) [9]. Cognitive and behavioural impairment occurs more often in individuals with ALS, who have been diagnosed with a mutation in the *C9orf72* gene, than in the classic form of the disease without this gene [10].

In addition to the neurological examination, neuropsychological assessment of the patient, and genetic testing for the *C9orf72* gene and its number of G_4C_2 repeated sequences, various neuroimaging testing are also important for clinical diagnosis. In the *C9orf72*-FTD form of the disease, the atrophy observed on brain MRI is exceptionally symmetrical and generalized but develops slowly. Atrophy in the frontal and temporal cortex may be observed, as well as in the cerebellum and subcortical structures (e.g., the thalamus) [7, 11]. During the PET scan, the areas of hypometabolism match with the areas of atrophy detected on MRI, but it is important to note that the PET scan can detect abnormalities about 10 years before the symptoms may appear [11].

In FTD cases, in the cerebrospinal fluid (CSF) pathological aggregates of tau, TDP-43, or FET proteins are detected while in ALS superoxide dismutase-1 (SOD1), TDP-43, or FET proteins may be found in CSF. Abnormal TDP-43 aggregates are found in about 50% of FTD cases and 95% of ALS cases [12]. Moreover, TDP-43 has been found to be associated with the *C9orf72* gene mutation and its repeated sequence expansion in both frontotemporal dementia and amyotrophic lateral sclerosis [13].

C9orf72-FTD/ALS are typically rapidly progressive neurodegenerative diseases, and survival from the onset of symptoms often lasts only a few years (median 6.4 years) [14]. The treatment and follow-up of these patients require a multidisciplinary team consisting of a neurologist, nurses with special training, a pulmonologist, a physical therapist, a speech and language therapist, an occupational therapist, a psychologist, a nutritionist, a social worker, and a genetic consultant [5]. Treatment depends on the presenting clinical symptoms. However, therapeutic options are currently limited and there is no treatment that can fundamentally alter the course of ALS or FTD caused by changes in the *C9orf72* gene. The main treatment for ALS is riluzole and for FTD the medications for mental and behavioural symptom correction [15]. In 2017, the free radical-scavenger drug edaravone was approved by U.S. Food and Drug Administration (FDA) [16] for patients with ALS. Unfortunately, no single treatment can improve cognitive or motor impairment, but riluzole and edaravone can slightly slow the progression of ALS [15].

Conclusions

The literature shows that frontotemporal dementia and amyotrophic lateral sclerosis are often diagnosed together. This clinical case reveals that the combination of these pathologies is difficult to detect even with modern diagnostic methods, and it has to be differentiated from other neurodegenerative diseases. The ability of the patient and their relatives to communicate and accurately describe the symptoms and experienced difficulties, the doctor's professionalism in asking essential questions, and the time taken from the onset of symptoms to the time when the patient is referred to a diagnostic and treatment centre, is of a great importance. A standardized diagnostic and treatment protocol, interpreted and applied the same way throughout Lithuania, or even the whole Baltic region, would be an extremely valuable tool in the care of neurodegenerative diseases, and, as societies age, this should become a priority for health care system. Repeated neurological examinations and monitoring of cognitive function dynamics are necessary to provide comprehensive care as the disease progresses. Although there is no effective treatment for this disease, it is important to make the diagnosis as early as possible to be able to control the symptoms, maintain the patient's dignity and ensure the quality of life by all available means.

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II. Dementia from an Interdisciplinary Point of View

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Linguistics and Medicine: Linguistic and Interdisciplinary Research Insights and Potential

Dzintra Lele-Rozentāle
University of Latvia

In connection with the increase in the number of people affected by Alzheimer's dementia (AD) in many countries and their various languages around the world, intensive research is underway with the aim of early and more accurate diagnosis in order to positively influence or at least slow down the progress of the disease. The linguistic point of view in the study of this field has not yet been researched in Latvian linguistics, although the manifestations of the disease affect all levels of language and are related to different linguistic directions. The aim of this article is to provide an insight into the linguistic characteristics of AD manifestations acquired on the basis of different languages and thus to encourage bringing together fields of linguistics and medicine in Latvian linguistics research. Based on international linguistic experience, the question of the role of language-specific and language situation-based factors and the need for interdisciplinary research based on language oral and written corpus is raised.

Keywords: linguistic manifestations of Alzheimer's dementia, language in Alzheimer's dementia therapy, interdisciplinarity in research on linguistic manifestations of Alzheimer's dementia

Introduction

Language, its research and medicine are closely linked across a wide range of topics. In linguistics, there is a distinction between a diachronic and a synchronous view. The historical perspective is mainly related to the editions of ancient manuscripts and their linguistic comments. Thus, it is possible to supplement the systematic descriptions of the language aspects of different periods, the text and the history of the language of the field of science. The *Handbuch Sprache in der Medizin* [Handbook of Medical Language] [1], published in German, is one of the sources that allows to judge the diversity of topics in a diachronic view: the historical aspects of the medical language, the development of medical text types, the communication of the doctor and the patient at different stages of history. These topics characterize research that is largely based on modern linguistic knowledge, and their monodisciplinary focus is directed towards the study of language, which has the history of the medical sciences in the background.

A much broader panorama of topics relevant to linguistics and medicine opens in synchronous applied linguistics, which is characterized by an interdisciplinary view of linguistic phenomena. For example, psycholinguistics, neurolinguistics, *patholinguistics* (German *Patholinguistik*) [2] are closely related to the field of medicine, including clinical linguistics (English *Clinical Linguistics,* German *Klinische Linguistik*), in which the attribute “clinical” includes a number of different sub-disciplines of linguistics, such as clinical phonetics, phonology, prosody, morphology, syntax, semantics, pragmatics, discourse, sociolinguistics, as well as a number of other sub-disciplines of linguistics, the focus of which, using linguistic research methods, are medical-related issues. However, other branches of applied linguistics also deal with issues related to medicine. This is the case, for example, with the German Association of Applied Linguistics (German *Gesellschaft für Angewandte Linguistik*), see also in the 16 sections listed on the GAL page [3], there is an explicit reference to cooperation with medicine (and health sciences) in the field of interdisciplinary research is found in the section “Specialised Communication” (*Fachkommunikation*), where important research directions are focused on the language of the specific field (*Fachsprache*), for industry-specific thinking and communication styles (*Fachliche Denk- und Kommunikationsstile*), industry specific cognition and stereotypes (*Fachkognition und-stereotype*), discipline-specific discourse, including between professionals and amateurs (*Fachliche Diskurse/ zwischen Experten und Laien*), as well as plain/easy to use language research. The medical field tied to linguistic research is also emphasized in the Oral Language Section of the German Association of Applied Linguistics (*Gesprächsforschung*), and it is obvious that the list of research directions and thematic cooperation is potentially endless. For example, research also takes place in intercultural communication, which is particularly relevant in the context of migration (German *Migrationslinguistik*, English *Migration Linguistics*), in phonetics and speech science (*Sprechwissenschaft*), morphology, syntax, text linguistics, pragmatics, etc.

The study of a language related to the medical sciences means, first of all, the study of the language of the field itself, starting with the vocabulary. For example, in German, the collection of language for special use covers 170 000 units, including 80 000 names of various medications, 60 000 disease designations, 20 000 organ function designations, 10 000 body parts, organs and organ parts designations [4]. The onomasiological study of the lexicon, which is dominated by questions of origin and formation of terms (e.g., Latin and Greek terms), includes topics such as eponyms, acronyms and is complemented by didactics of terminology. Dictionaries, textbooks, applications are developed to learn terms (see, e.g., *MEMRiSE*) [5], word lists with references to vocabulary elements and translations (see, e.g., EHLION) [6], presentations (see, e.g., Locher) [4]. In Latvian and linguistics, the most attention is drawn to the level of lexis in the applied aspect (see, e.g., Viņķele, 2007; Sviķe et al. 2020, etc.) [7, 8].

Furthermore, a relatively wide field of interaction consists of translation, meaning not only its interlingual perspective, i.e. bilingual and multilingual translations, but also intralingual translation – from the language of the specialists of the field to the language of general use, changing the recipient of the text. This aspect forms an essential background for another research direction – the study of communication between the doctor and the patient. Among the reports included in the aforementioned guide are the questions about communication in medicine, which includes, for example, communication between doctors in professional environment, between doctor and patient, as well as in the media, forums, etc. (see Busch, Spranz-Fogasy 2015) [1].

Considering this broad topicality and its potential both in the research of texts and their constituent units and in the research of discourse, it is necessary to emphasize the very few opportunities used in Latvian linguistics to address these interdisciplinary themes. Terminology and research of easy language are exceptions (see e.g., *Vieglā valoda* –Easy Language) [9, 10]. The website of the Latvian Association of Applied Linguistics amongst the objectives of the organisation indicates – to "promote interdisciplinary research and cooperation", yet it does not contain information concerning the fields of linguistics and medical cooperation (see LLVA) [11].

This chapter will focus on Alzheimer's dementia (Lat. *Morbus Alzheimer* – hereinafter referred to as AD) research from a linguistic point of view, since it is this area that touches upon all levels of language and a large number of directions of its research. The media and professional association documents of different countries, as well as the specialist literature of the field contain information on the rise of the curve of dementia and the number of people most directly affected by AD, hence, it is not surprising that intensive research is taking place in many world languages and countries with the aim of enabling a quick and accurate diagnosis, in order to positively influence or at least slow down the course of AD development. The additional aim of this brief literature review, which will be described in greater detail in the final part of the article, is to bring to attention the convergence of the fields of linguistics and medicine in research involving Latvian linguistics.

1. Language and Alzheimer's dementia interactions in the public space

Discussion of medical topics, including dementia, is mainly carried out through the media. AD affects virtually all levels of language – from phonetic/phonological to discourse level. Dementia-related discourse involves different language variants – sociolects, – representing the societal strata. Depending on the language version chosen by the language user and the purpose of the discourse, both industry terms and neutral terms of the commonly used language are employed, as well as euphemisms or pejorative vocabulary.

Here, a brief consideration will be given to the ways how AD and its linguistic overview reach the public, i.e. non-specialist readers/listeners. Here, a distinction must be made between the general public and those directly involved with AD patients, such as family, caregivers and social workers. In the first case, problems with the language use are reported by the media, while in the second instance the sources mainly consist of various publications and materials on the websites of organizations or institutions related to patients and their support.

Information in the media is usually rather laconic and superficial on linguistic issues. The examples include the texts similar to these:

> *A person's memory deteriorates, especially in short term memory. The patient repeatedly returns to the same topic, although the specific question with the interlocutor has already been discussed several times […] It is becoming increasingly difficult to recognize the letters in the text, so reading and writing skills are getting worse [..] The vocabulary is becoming increasingly limited – the patient cannot find the right words.* [12]

Or:

> *You forget words and replace them more and more with expressions like 'Well, you get it'. The vocabulary is becoming increasingly scarce and the uttered sentences are becoming increasingly vague. Disturbances in brain function prevent thoughts from being formulated clearly and quickly.* [13]

The second strand related to the identification of AD in the wider society is public education with the aim of raising awareness of AD and preventing stigmatization of patients and the related persons. Publications dedicated to this issue are often compiled as linguistic guidance on the topic of dementia. For example, in German they *are Sprachleitfaden "Demenz"* [Conversation Guide on Dementia]. *Wie sprechen wir über Demenz in einer angemessener Weise?* [How do we properly talk about dementia?] is a brochure prepared by Alzheimer's and Dementia Organizations in seven German-speaking countries and regions (DADO) and published in 2020 with recommendations on the words and phrases to use or avoid when talking about dementia, symptoms, people with dementia at different ages, family members of patients, friends, co-workers and supporters (see *Sprachleitfaden*) [14]. These recommendations target a wide range of people – carers, media representatives, those involved in public discourse, education and politics, as well as any interested member of the public. The recommendations aim to promote quality of life by avoiding linguistic forms of stigmatization and discrimination. A similar brochure is also available in English, such as the *Language Dementia Guidelines* published by Dementia Australia in 2021, which describes the same aspects on an English-language basis (see Language Dementia Guidelines) [15].

This kind of brochure is based on linguistic studies of certain thematic orientations, considering the use of language in various sociolects, the semantics and connotations of words and sayings. Thinking about the possibilities in Latvian, this could be a much-needed research task of sociolinguistic orientation in the analysis of meaning, connotations and usage of words.

The information provided by professional organizations is of an in-depth character. For example, on the website of the Alzheimer's Society of the United Kingdom (see Alzheimer's Society), language is characterized as a process that enables a person to understand and communicate his thoughts and ideas using oral and written language, as well as non-verbal means of communication, such as gestures (including sign language). Communication, therefore, takes place by producing and prescribing what is heard, read and communicated in sign language. In this context, the most characteristic features of AD are mentioned, emphasizing that dementia interferes with the natural linguistic process, and it is possible that the patient understands the meaning of the word, but is sometimes unable to remember the correct word. Less frequently used or more recently learned words are usually lost first, but basic words learned at an earlier stage of life remain in memory for much longer. If a person speaks more than one language, he can return to the first language of communication learned in childhood.

The website of Alzheimer's Society [16] indicates characteristic manifestations of AD, including the following compensatory mechanism for word deficit, replacing the "lost words" with related ones, for example, by saying a *book* instead of a *newspaper*, or using generalized word substitutes, for example, not a *chair*, but a *thing that you sit on*. Sometimes a word is not found, and instead AD patients choose other different strategies – use words without meaning, confuse the order of words, fall back on the first language learned in childhood. Deviations are also observed in the course of the conversation, and they begin with problems in the reception of the text. Without understanding what has been said and not being able to maintain sustained attention, it is impossible to form an answer as a string of related words in the continuation of the conversation. The time factor in the reception is also important. Reflecting and deciding on how to respond to what has been said slows down the communication process. In dialogue, one can observe the transition from one topic to another without completing a sentence related to difficulty concentrating (see Alzheimer's Society) [16].

The information provided on the website of the *Deutsche Alzheimer Gesellschaft* (Alzheimer Society Germany – *DAG*) notes the difficulty of finding words as a linguistic deficit, but also, in the middle stage, the inability to form complete sentences that hinder the ability of AD sufferers to understand [17]. Hence, the restrictions of communication affect communication partners, as well as recipients.

Thus, these linguistic manifestations are described as explicit, prominent in communication, and mainly affect the language of patients who have already experienced AD symptoms. It should be noted that a number of these phenomena are not unfamiliar in the use of the language of cognitively healthy people, for example, the said general noun *thing*, which in German corresponds to *Ding, Dingsda* (similar to the English *thing, the thingy*) [18, p. 65], as a proforma is distributed in a particularly simplified spoken language. Some of these phenomena, such as unfinished sentences and switching from one topic to another, can often be observed as linguistic expressions in different sociolects. All these signs, characteristic of AD, require in-depth research into each case in order to avoid an overly hasty diagnosis, which may happen, for example, at the domestic level in a non-specialist environment.

2. General linguistic features of Alzheimer's dementia

Dementia is an overarching concept for various forms of its manifestation depending on the affected brain ranges. The appearance of language deficit at the initial stage of various dementia forms is described as different, linking it to dependence on the most severely affected regions of the brain [19,18]. Alzheimer's dementia is the most common form. Typical signs of AD include language and communication disorders, as well as limitations of memory, attention, orientation, logical thinking, judgment, and planned activities [20, p. 155].

The study of the role of language in relation to AD encompasses several directions:

1. Forms of linguistic expression in AD diagnostics and at different stages of AD development.
2. Language or linguistic competence in AD development, e.g., mono-lingualism, bilingualism.
3. The role of linguistic data in automated analysis.
4. Language in therapy.
5. Language in public education.

The problem of linguistic deficits, which pertains to a certain stage of the disease and the course of the disease, is an essential component of AD research. At the same time, this problem can be perceived as linguistic symptom universality versus language-specific issues. The following section considers select research issues, focusing on the linguistic symptoms recorded in the literature of this field, and the interdisciplinary nature of the research.

The role of language in AD is metaphorically characterized by Schmöe's comparison of brain cells with *hardware* and language with *software* [21, p. 205]. Language deficits in case of illness develop progressively, this process is characterized as gradual. According to Schecker, until the symptoms become definitive, for example, they match the from the *DSM IV* (American Psychiatric Association (Task Force) 1994 test, this hidden period (German *Vorlaufzeit)* could last as long as 10 to 30 years [22, p. 281]. At the initial stage of AD, the loss of words is usually recorded, – the individuals affected by the disease try to "hide" it by choosing substitution as a technique (e.g., by hypernym). Therefore, the time of onset of symptoms of the disease is not accounted for either by the individuals themselves or by their loved ones [21, p. 207]. It could be assumed that this is complicated by the fact that the use of hypernyms is not alien to the general language of healthy people, especially if, for example, there is a lack of specific knowledge of a term and, accordingly, a lack of the correct word in question.

Schecker draws attention to the reduction of linguistic expressions that appear before the loss of words is recorded [22, p. 283]. Such changes can only be detected in long-term studies and in appropriately sourced corpora (e.g., ILSE, see Weiner et al.) [23]. The language problems of an AD patient begin at the pragmatic level, with linguistic activity gradually becoming insufficient to ensure normally functioning communication [21, p. 208]. Reception and production of texts (oral and written) is a complex performance. The recording of language characteristics in the early AD stage is an important differential diagnostic aspect to distinguish it from depressive pseudodementia, and impaired communication abilities are a timely indication of the possible development of dementia. However, external factors such as the level of education and language skills, including foreign language competencies, should also be taken into account when assessing the linguistic manifestations of AD at an early stage [19, p. 126]. The results of the tests show that, as the disease develops, AD patients become deprived of the ability to understand the context and lose samples of everyday linguistic processes or scripts, text coherence disappears (see, e.g., Schecker) [18, p. 69].

The linguistic characteristics of AD according to the stages of the disease make it possible to highlight the following signs:

At an early stage: limitations of communication, loss of the conversation "thread", impaired ability to adapt to the conversation partner, blurred speech, word-finding problems, sometimes inaccurate word selection, incomplete sentences, repetitions, phrased formulations, in the case of idiomatic sayings preference is frequently given to direct meaning, sarcastic sayings are often perceived literally, difficulty in understanding compound sentences, simpler syntax, articulation without significant changes.

In the middle stage: coherence deficits, erroneous designations, loss of words (also of commonly used words), confabulation, echolalia, phonemic paraphasia, semantic paraphasia with initially slight deviations from the intended word (German *Zielwort*), repetition, prototype use, difficulty understanding words, limited linguistic understanding, frequent use of passages in sentences and use of verbs denoting speaking or thinking at the beginning of a sentence (German *Satzverschränkung*), loss of auxiliary statements, morphosyntactic errors, impaired reading and writing skills.

At a later stage: mutism, semantic repetitions of empty words and/or sounds, a lot of semantic paraphrases, use of sentence fragments and the use of verbs denoting speech or thinking at the beginning of a sentence, a limited vocabulary, simple phrases, neologisms, poor understanding of language, verbal communication virtually impossible [19, pp. 128; 24, pp. 91, 93].

3. Characteristics of Alzheimer's dementia at different levels of language

Based on a series of studies and emphasizing the gradual development of linguistic deficits, Schmöe [21, pp. 208–215] summarized the characteristic features of AD at various levels of language – pragmatic and communicative, syntactic, lexical, morphological, pronunciation and writing. A brief description of these levels will follow, supplemented by materials from several publications devoted to the topic.

3.1. Signs of communication

Linguistic deficits occur gradually, in proportion to the limitation of other cognitive abilities. For AD patients, language difficulties first occur in communication, when control over the situationally appropriate speech is lost. At an early stage, it has been observed that patients speak pragmatically inadequately [21, pp. 208–209]. Initially, as a result of communicative restrictions, patients avoid conversations, or use vague, meaningless phrases when talking. Patients can often conceal their mental state for years, and they are also indirectly supported by their loved ones, taking over the implementation of communication, most often without realizing it themselves. At the middle stage, communication abilities are already becoming noticeably limited, as patients lose scripts, no longer recognize and interpret implications. The use of general phrases in communication is mentioned as a limiting factor. Referring to the 1989 Blanken study, Schmöe notes that along with weakened receptive performance, the ability to form a coherent dialogue disappears, whereas the ability to form a monologue is still retained [21, p. 212]. Additional difficulties in communication arise when the ability to focus attention and plan is lost. Deficiencies in oral communication in German have also been detected in the use of connectors, which means restrictions on the formation of cohesive and coherent oral text [25].

Here, the question arises as to the role of education on a case-by-case basis and whether there are differences in relation to a person's education, lifestyle, hobbies and interests in the longer term. The criteria for the interpretation of results are usually age, gender, education, as well as its duration, but the use of language can be heterogeneous, taking into account belonging to certain sociolects and changing throughout the individual's course of life, depending on the dominant communication communities.

3.2. Signs in phonetics/phonology, prosody and morphology

These areas are considered to remain almost untouched at an early stage. Orthographic performance is often not tested at all, because patients refuse to write very early on. Purely linguistic problems can emerge in combination with apraxia and dysarthria. Longer-preserved intonation samples consist of short phrases, for example, expressing surprise [German *ach so*?] "Oh, so?" The patient's speech is fluent for a long time, likewise, the ability to read aloud remains intact for a relatively long time [21, p. 214].

There are publications which confirm that by using audio and automatic speech recognition technology, it is possible to detect AD at an early stage. Studies show that AD patients have a slower speech, and leave longer pauses between words (see e.g., Yang, et al.) [26].

3.3. Vocabulary and semantics

The loss of words is one of the frequently mentioned signs, and it is a much-researched phenomenon in various aspects. From the middle stage of AD, words are no longer understood or are already lost. The longest surviving are the words learned in childhood, such as the German word *Auto* instead of *Fahrzeug* "vehicle" or *Mercedes*, as well as prototypical words, e.g., *Hammer* "hammer" in generic *Werkzeug* "tool" [21, p. 211] or *Veilchen* "violet" instead of *Iris* "iris" or *Lilie* "lily" [22, p. 285]. Strategies used in the circumstances of word loss include semantic paraphasia – the use of a comparable level (hyperonymic, hyponymic) word such as "crane" instead of "excavator". Sometimes the choice of words is based on metonymic attitudes, such as "cup" instead of "excavator", or the choice is made in favour of a paraphrase, for example, "It's there for work". Therapists and patients' relatives sometimes do not know if the patient no longer recognizes the item or is unable to recall the word. Often patients allow the conversation partners to name the relevant subject or phenomenon and thus mask their deficits [21, p. 211]. The question of deliberate or unconscious strategy should be raised here.

Different tests are used to evaluate the lexical level. For example, Schecker has tested verbal abilities (German *verbale Flüssigkeit*) to recall and use lexical units in associative tests in two ways: 1) giving a main concept, for example, "animal", based on which a person should name the subordinate hyponyms, 2) making names that start with a certain sound, such as *s*-. As mentioned above, patients compensate for word loss with generalizations [18, p. 66], such as using proformas (such as "thing"), which is a multi-pronged strategy. The difficulty of finding words is checked, for example, by the Boston-Naming-Test and its modifications, which already at the beginning of AD show a correct designation in 61% of cases (ibid.). The question of the loss of the word and/or the semantic concept has been considered. For example, replacing monochrome drawings of different objects with colour drawings or even with descriptive terms improves the results of naming, and this is explained by the greater need to use temporary memory capacity in the first case than when looking at a colour image or realism. This does not exclude the possibility that after a while lexical concept will disappear [18, pp. 70–71].

Schecker (2003, see also 2010) [22, p. 290; 18, p. 71] has included the compensatory action in one of his theses, pointing to a problem in therapy – replacing the lost elements of language, patients in fact themselves contribute to the loss of cognitive abilities, hence, this state can be characterized both from the point of view of AD patient and therapy as a vicious circle (German *Teufelskreis*).

As a linguistic feature, word correction is also to be considered. It is considered that the correction of an incorrectly pronounced word does not take place already in the early AD stage to the extent that it is carried out by healthy persons, since it requires the activation of a large-scale context for this purpose [21, p. 214].

The test of combining a certain meaning of a polysemic word with an image has concluded that recognition of meanings already in the early AD stage shows deficits that can be "concealed" in everyday life [18, p. 69].

3.4. Metaphors, idiomatic sayings, irony

In case of AD, problems arise when it is necessary to interpret metaphorical, idiomatic and ironic words or sayings. With figurative sayings, problems appear quite early. Figurativeness is understood only in the current context or by reconstructing it – this is the ability that disappears in the later stages of the disease. Idiomatic sayings, even if not understood literally, are interpreted in a rather blurred form or incorrectly. Language tests sometimes fail to find out whether the task itself was incomprehensible or whether the task could not be performed due to other reasons. The results of the tests suggest that the interpretation is rather erroneous than literal, and is described as the ability to maintain, at least during the initial and intermediate stages of the disease, a certain ability to use abstraction (generalize) [21, pp. 211–212]. For example, the tests conducted by using idiomatic sayings in which the patient had to choose the correct one from the explanations of meaning attached to the saying indicated that this choice was incidental (Schecker 2010; see also Schecker 2003) [22, p. 69; 18, pp. 2283–2285].

3.5. Usage and syntax of pronouns

Referring to the Gress-Heister study, Schmöe [21, p. 209] points to deficits in the use of pronouns, such as "he", "his","it" (gender-neutral pronoun), the content of which is not explicit, and AD patients have difficulty maintaining an up-to-date context of their use. In the middle stage of AD, the pronoun usage issues are particularly noticeable, especially for *Sie*, the formal form of "you" in German (this applies not only to the singular use of *Sie* but also to the plural form *Ihr* in the second person, if the conversation are approached with the informal form of "you" in German), this loss of formality creates the impression of lack of social distance and intentional rudeness. The use of nouns remains longer in the cohesion of the text.

The structure of the sentence gradually loses its complexity, which is associated with the loss of memory capacity. Progressively, the ability to form longer complex sentences with subordinate clauses is lost, and the linguistic deficit is caused not by syntactic (i.e. linguistic), but by cognitive limitations. In the middle stage, patients try to avoid longer sentence structures with supporting statements that implement different semantic attitudes [21, p. 210]. For example, AD patients in German also avoid the passive form, subordinate structures, preferring structures without connecting words and replace them in part with a simple enumeration [22, p. 286]. Multilevel subordination and compound subordinated sentences disappear. A repetition of the subject of the sentence is preferred, for example, the construction like "he stands by the window and he smokes" instead of the elliptical construction like "He stands by the window and smokes". As the disease progresses, single-word sentences and routine phrases remain, for example, "Nothing, it doesn't matter". Initially, formal syntax remains, but as content loss intensifies, it also becomes poor [21, p. 210].

So, for example, in Schecker's 2010 publication [18, p. 65] addressed to (German) language therapists (German *Sprachtherapeuten*), it is noted that the early and middle stages of AD are characterized by the following criteria: difficulty in finding words, impaired language skills, deviation in the use of certain pronouns for the same person that is mentioned multiple times. In addition, patients have difficulties with syntactic complex sentences and verbal polysemy, including metaphoric and figurative language. These deficits have long been considered heterogeneous. It is assumed that this case may be about cognitive slowing and, unlike the initial picture of a set of heterogeneous phenomena, these various phenomena are due to one cause: reduced capacity of temporary memory [18, p. 63]. Schecker [18, p. 68] recommends including not only compound subordinates, but also phased subordinate clauses in the test of syntax ability. In connection with the structure of sentences in German, constructions characterized by a certain order of words are also studied, for example, the location of the finite verb at the end of the auxiliary sentence, the order of words in sentences with continuous tenses or constructions with modal verbs, as well as with verbs with separable prefixes. The results show that there is no difference in the statistical assessment, whether it is auxiliary sentence, continuous tenses, use of modal verbs with infinitive, so the loss of certain types of structures in a shorter or longer period of time. This suggests that memory capacity should be discussed in these cases, and the frequency of errors is determined by the amount of text or sentence rather than the structure.

In this case, the question of the role of linguistic-specific factors in the research of AD linguistic manifestations could be raised again, since, for example, structures related to word order and certain linguistic-specific elements (e.g., separable prefixes) specific to the German language (German *Klammerkonstruktionen*) are mentioned in German-language publications. The question that arises, for example, in relation to the Latvian language, is about possible syntactic restrictions in the case of AD and their recognition. From a linguistic point of view, one may ask whether oral and written language differences in syntax, the field of education of the patient, as well as reading and information habits in the course of life should also be included as a criterion in the evaluation of results.

3.6. Text creation

There are errors of pronominalization in the text, for example, in the continuation of the text related to the German pronoun *ein/eine* in combination with the adjective and noun *ein junger Mann* "(a) young man' usually replaces the personal pronoun *er* 'he', which can be followed by a nominal group with the pronoun *der Mann* "young man". Such arrangements are conventional. The results of the tests show that in the case of AD, the pronoun is often preferred, abandoning the expected return to the nominal group with the established article [18, p. 67].

4. Language aspects in Alzheimer's dementia therapy and research

Accurate diagnosis plays an important role in finding out the further symptomatic development of the disease and planning how to preserve existing resources. This is a prerequisite for treatment that focuses on resources and maintaining the capacity that still exists. Maintaining communication skills on a daily basis, as well as educating the patient's loved ones, is equally important [20, p. 155]. Abel emphasizes the role of individually selected key everyday language words in speech therapy and other aphasia therapies (post-stroke, primary progressive aphasia diagnosis), as well as the potential of word activation techniques used in patients with AD symptoms (see Abel 2013) [27, pp. 28,32].

The role of language in communicating with an AD patient is also related to the patient's receptive abilities. When communicating with patients who have restrictions on communication, both the content side, prosody and style are affected – choice of words, formation of sentences and order of words. Following the recommendation of Krupp and Thode [19, p. 127], it is desirable to talk to the patient in order to ensure a successful communicative situation, focusing on the conversation partner and avoiding unimportant statements, use the principle of plain language, forming short, simple sentences, using keywords at the end of the sentence, excluding words that are not in the usual vocabulary of the conversation partner, reducing the speed of speech, talking with emphasized but not artificial sentence intonation, choosing the appropriate volume, avoiding background noises. When reading, attention should be paid to good readability of the text, such as the size of the letters, the space between the lines and the font, as well as good lighting. By flexibly adapting to the capabilities of the patient, doctors, therapists, carers, and relatives are able to support a positive course of communication. According to studies, the resulting deficits are also compensated for by the preservation of written skills, and this can be done, for example, by making to-do lists. According to Krupp and Thode, speech therapy could play an even greater role in symptom treatment [19, p. 128].

The study of the linguistic characteristics of AD is still an important task of applied linguistics in an interdisciplinary perspective. One of the essential prerequisites for research is the creation of a language corpora which, after qualitative analysis of the texts, could be prepared for automatic analysis and which could contribute to the early diagnosis of AD. Currently, active automated research is underway, exploring spontaneous speech (its transcripts) at the lexical, morphological and syntactic levels, including semantic and pragmatic features (for current research and Hungarian language research see Vincze, et al.) [28]. Automated speech analysis expands the potential of previous qualitative methods, in addition, it provides a detailed analysis and assessment of speech abilities, which does not depend on the time resources of medical staff. Therefore, therapy may be offered to patients at a time when the disease may still be affected by slowing down its development (about the ILSE corpus, see Weiner, et al.) [23, 29].

Research points to the correlation of acoustic and linguistic features and the role of their analysis [30, p. 181]. Speech corpora (e.g. with recordings of biographical interviews, with spontaneous speech) and subsequent analysis can help to recognize early signs of AD. The role of prosodic signs is important [31, p. 2]. For example, a Turkish-language analysis of prosody and lexical analysis – an examination of the frequency of words belonging to different word classes and the use of word elements – has been carried out interpreting the results in relation to extrinsic factors such as age, gender, education. The purpose of such an analysis is to conclude how the linguistic limitations are reflected in the patient's speech prosody and speech transcripts and whether there are markers that can be effectively detected using machine learning methods [31, p. 14].

However, researchers are still pointing to the insufficient amount of speech data in different languages that researchers have at their disposal, such as Agbavor and Liang (2023) [32], who explore the possibilities of artificial intelligence in early diagnosis of Alzheimer's disease by using voice material in analysis and extracting data from image descriptions produced by patients with AD and cognitive-healthy people. Also, in the review of the use of deep learning methods in the determination of AD based on speech data (see Yang et al.) [26] concluded that current dementia-related databases are generally small and mostly monolingual. They lack data from cohort studies, making it difficult to demonstrate the reliability of speech analysis results in individual retesting. To improve further research, there is a need for the development of an effective and accurate computer diagnostic method, which could shorten the time of AD screening [26, p. 13]. It is therefore important to establish research corpora according to certain criteria.

From a linguistic point of view, it is interesting to note the relatively frequent use of pronouns, which probably partially coincides with the use of personal pronouns observed in German [18, p. 65], thus allowing to raise the question of the universal versus the language specific nature of linguistic deficits. The nature of possible universal linguistic deficits is also pointed out by the authors of the study of the Turkish language, emphasizing the potential of multilingual studies [31, p. 31].

One research perspective is the identification of the role of bilingualism. Results of a study published in 2017 (see Perani et al.) [33] shows that bilingualism (in the study – German and Italian in Northern Italy) has a positive effect on the formation of brain reserve, and the symptoms of dementia in AD develop later than in monolingual individuals. When studying changes in the brain in bilingual and monolingual groups of subjects with mild AD, brain scans were performed and a questionnaire on the use of language(s) was completed. Bilingual test subjects had better results in memory and thinking tests. At the same time, bilingual individuals showed increased activation in other parts of the brain, which may indicate the ability of the brain to compensate for the damage caused by the disease. A prerequisite in this case was the regular use of both languages on a daily basis, and the positive results in terms of AD development are based on the observation that brain activity has a compensatory effect.

Conclusions

This brief look at the linguistic features of AD and their research, without claiming to be comprehensive overview of the issue, allows to draw a number of conclusions that could be useful for the development of interdisciplinary research of the Latvian language within the current research discourse. If the analysis of linguistic formulations with a view to making recommendations for correct use of language is possible as almost purely linguistic research, then the questions related to the role of linguistic factors in the diagnosis of AD, the definition of stages, therapy are possible only by interdisciplinary means, with the cooperation of representatives of linguistics, including computer linguistics, medical and health sciences. The first step in this direction could be the targeted formation of speech and writing corpora according to certain external factors. Firstly, by qualitative analysis of texts (oral and written), it is possible to prepare the basis for a systematic study with corpus linguistic and computer linguistic methods (for comparison, see, e.g., ALMED) [34]. Reliable results could be obtained from cohort studies. The question of the universal and linguistic specific nature of AD symptoms is key in this context. The results of studies based on different languages suggest that both options should be taken into account. In terms of the situation of languages in Latvia, the research potential can also be seen in the study of the role of bilingualism. Linguistic analysis of AD symptoms and interpretation of results in accordance with a detailed structured description of patients' linguistic experience, which would include linguistic competence and life experience – linguistic knowledge and use, belonging to a particular sociolect, field of education, oral and written experience, could be equally important.

To conclude this brief insight into research issues and opportunities, the need for an up-to-date, societal-relevant and science-based long-term research strategy should be highlighted.

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Sensitive Memory Work in Finland

Sven Claes, Ida Mitchell
The Alzheimer Society of Finland

Siiri Jaakson, Ann-Ly Palosaari
The Finnish Centre for Cultural Diversity and Memory

This part of the monograph explores sensitive memory work for minority ethnic groups in Finland. The Finnish social and healthcare system emphasizes the rights of individuals with dementia to dignified care. Still, assessing individuals with different linguistic backgrounds poses significant hurdles, such as delayed diagnoses and cultural taboos surrounding dementia. The Alzheimer Society of Finland and the Finnish Centre for Cultural Diversity and Memory MUKES elaborate the initiatives for supporting linguistic and cultural diversity in memory care. Their projects, the Memory Guide Project and the *Jututtaja* Project, strive to empower ethnic minorities by training volunteers as memory guides and phone companions, respectively. The importance of cultural competence and flexibility is highlighted. Continued development, training, and collaboration is needed to enhance societal understanding of the diverse aging population in Finland.

Keywords: sensitive memory work, minority ethnic groups, volunteers

Introduction

Finland has an estimated 193 000 people with dementia, of which 100 000 have mild dementia and 93 000 have moderate or severe dementia. Of these, 7000 are of working age, under 65 years old. Every year, 14 500 new individuals are diagnosed with dementia [1, 2].

This overview discusses the support for people with dementia and their families in Finland, focusing on sensitive memory work with minority ethnic groups. It highlights the importance of language when dealing with dementia and considers factors to be mindful of in finding effective operational models for people with different linguistic and cultural backgrounds. Two dementia organizations in Finland, The Alzheimer Society of Finland and The Finnish Centre for Cultural Diversity and Memory MUKES, are introduced, and their activities are described through development project goals and expected results. A common theme in these projects is recognizing the importance of receiving support in one's native language and the opportunities to reach individuals with different linguistic and cultural backgrounds through volunteers offering support.

1. People with dementia from ethnic minority groups

As of the end of 2022, there were 495 992 permanently resident individuals in Finland with a non-native language as their mother tongue. The proportion of non-native speakers in the total population is nine percent. The largest linguistic groups are those who speak Russian, Estonian, English, and Arabic. In Finland, there are 23 377 non-native speakers over the age of 65, with Russian, Estonian, English, and German being the most common language groups. This number increases by 4000 individuals annually [4]. The number of individuals with different linguistic and cultural backgrounds is growing continuously as dementia becomes more prevalent.

Language changes with dementia. The production and comprehension of language become difficult, and individuals with dementia may experience difficulties in finding words or understanding complex sentences. Therefore, it is essential to consider that good communication enhances the well-being of individuals with dementia. As dementia progresses, a language learned later in life may be forgotten, leaving only the native language, whose significance grows.

The initial assessment of dementia for individuals with a different linguistic or cultural background is often challenging because there are no adapted tests for those with weak literacy skills. Functioning as an interpreter in a memory test situation is a highly challenging and demanding task. It involves not only speaking two or more different languages but also requires considerable talent, skills, and training [3, 5].

2. Care and support services for people with dementia

Finland's social and healthcare system is publicly funded, with the responsibility for public services for people with dementia lying within the wellbeing services county. In addition to the public sector, services are provided by private companies. Finland also has a broad field of social and health organizations that provide both paid and unpaid services. The Funding Centre for Social Welfare and Health Organizations, operating under the Ministry of Social Affairs and Health, is a state aid authority that grants subsidies for activities promoting general well-being, health, and welfare. A significant portion of these subsidies goes to organizations supporting the well-being of people with dementia and their families [6].

Every person with dementia has the right to dignified and life-sustaining support and care. Support and assistance are available to help individuals with dementia and their families, such as various social security benefits and social and healthcare services. The care and rehabilitation of individuals with dementia is aimed at their well-being, meaningful life, slowing the progression of symptoms, and maintaining functionality. Medication is important, but non-pharmacological treatments and various forms of rehabilitation are often prioritized [1].

Working with individuals from different linguistic and cultural backgrounds, the importance of a sensitive approach is emphasized as clients come from increasingly diverse backgrounds. It is essential to be aware that each culture may perceive dementia and aging differently. The role of the family may also differ, likewise, the language and communication differences pose their own challenges.

A sensitive approach recognizes and respects these differences, seeking to understand the client's values and ways of life, and adapting the dementia care path accordingly. This requires openness, flexibility, and a willingness to learn from dementia care professionals. Asking, listening, and genuinely being present while interacting are crucial traits. This approach builds trust and fosters a shared understanding. Sensitivity in memory work improves the quality of memory services and customer satisfaction. It also promotes the participation and empowerment of clients [3, 5].

3. Working with people with dementia from ethnic minority groups

It is known that dementia occurs in both the majority population and minority groups. In the case of individuals with a different linguistic and cultural background, the diagnosis of dementia often gets delayed, posing a risk of them being left outside the service network. Lack of understanding or different perceptions of dementia, poor familiarity with the system, and a lack of proficiency in the Finnish language hinder initial assessments. Additionally, dementia is often considered a taboo in many cultures [3, 5].

Memory work with minority ethnic groups in Finland differs somewhat from other European countries and the Nordics due to the unique structure of immigration. The dissolution of the Soviet Union in 1991 significantly influenced this, leading to a new and large group of international immigrants from various Soviet countries in Europe. In Finland, it is primarily made up of Russian- and Estonian-speaking individuals, whose backgrounds are usually quite different compared to the immigrants from the countries outside Europe, such as those who speak Arabic or Somali.

The educational level of clients plays a crucial role in the initial assessment of dementia among ethnic minority groups. Immigrants from the former Soviet

Union are often highly educated compared to, for example, aging Somali speakers, where illiteracy is sometimes encountered. Literacy directly affects performance in memory tests.

People who have moved to Finland from various countries usually share the characteristic of having little information about dementia. Memory loss is not often interpreted as an illness, and discussions about it are avoided due to the fear of stigma [2].

4. Experiences of memory organizations in developing sensitive work

4.1 The Alzheimer Society of Finland and the Memory Guide Project

The Alzheimer Society of Finland serves as a public health, patient, and advocacy organization for people with dementia and their families. The organization aims to improve the quality of life and general well-being of this target group. The goal is to create a dementia-friendly society where people with dementia and their families can live a good life and receive the support and services they need. The Alzheimer Society of Finland is an industry pioneer that promotes brain health, supports those affected and their families, strengthens their voices, and defends their rights. Established in 1988, the Alzheimer Society of Finland has 42 local member associations throughout Finland, providing information, support, and activities for people with dementia and their families, as well as anyone interested in memory issues. Memory associations organize group activities for people with dementia and their families, hold lectures on dementia, and provide advice on memory issues [1].

The Alzheimer Society of Finland is developing new forms of activities to improve the well-being of people with dementia and their families. Currently, there are ongoing development projects related to the rehabilitation of people with dementia, mobility, support tools for communication, and support for people with different linguistic and cultural backgrounds. In the Memory Guide Project (2023–2025), the goal is to create a model that enables the support of people over 65 with different linguistic and cultural backgrounds and their families as part of their community's own activities. The target groups are German-, Russian-, and Estonian-speaking individuals.

The model involves training volunteers from ethnic minority groups as memory guides, acting as intermediaries of information about dementia and as contact persons in their own communities. The aim is for the memory guides' activities to strengthen the community's internal capabilities to discuss dementia and seek support for dementia-related challenges. It is essential that acting as a memory guide brings meaningful activity, new skills, and well-being to the volunteer. The project also focuses on developing collaboration between local memory associations and multicultural actors, supporting sensitive memory work through training and materials [1].

Preliminary results indicate that the interest and the need for information in different ethnic minority groups varies significantly. In the German-speaking community, there is a desire to learn more about dementia, voluntary work in one's native language is found inspiring, and peer support for caregivers is considered important in the emotional language. Utilizing various flexible approaches in communication and offering volunteer tasks is beneficial. Collaboration between organizations is key to continued operation in each target area. Investment in professional training and encouragement to engage with immigrants with dementia is crucial. The importance of materials in different languages in customer work has also been emphasized.

4.2 The Finnish Centre for Cultural Diversity and Memory MUKES and the *Jututtaja* Project

MUKES is an organization established in 2020, functioning as an expert entity in sensitive memory work. Its purpose is to promote collaboration among various stakeholders to enhance the well-being of aging individuals with different linguistic and cultural backgrounds in Finland. MUKES supports these aging individuals, living with memory disorders, by promoting timely initial assessments of dementia within minority ethnic groups in Finland. MUKES participated in the Alzheimer Europe working group, where recommendations were formulated for the initial assessment, diagnosis, and needs of individuals with dementia from minority ethnic groups. The Alzheimer Europe (2018) report supports sensitive memory work in Finland [2].

In recent years, Finland has developed several successful practices in sensitive memory work, exemplified by the ETNIMU-activity/Society for Memory Disorders Expertise (2015–2020) and the Memoni Project/Salon Muistiyhdistys ry (2016–2019). ETNIMU produced information on sensitive memory work for professionals and developed multilingual materials to increase awareness of memory health among both immigrants and Finnish Roma populations. ETNIMU worked with aging individuals who spoke Estonian, Russian, Somali, Arabic, and Chinese. The ETNIMU activity was unique, originating from a project that responded to practical needs, eventually evolving into a nationwide initiative [2,3].

The Memoni Project by Salon Muistiyhdistys was a significant step toward promoting brain and memory health amongst working-age individuals with different linguistic and cultural backgrounds in Finland. The project aimed to provide information on brain health, dementia, and the risk factors for ethnic minority groups. The project focused on sharing information in different languages, with emphasis on maintaining brain and memory health. It produced sensitive multilingual materials, such as flyers, videos, and conversation starter cards. This information empowered individuals to influence their brain health and prevent dementia [1]. All these experiences in the history of MUKES provided valuable tacit information about the diversity, needs, and knowledge of dementia in minority ethnic groups [2].

The *Jututtaja* Project is a developmental project by MUKES with the goal of creating guided phone companionship for individuals aged 55 and above with different linguistic and cultural backgrounds in their own native languages. In this project, volunteers, called *"Jututtajat"*, from the same linguistic and cultural background make weekly calls to elderly individuals to promote well-being, memory and brain health, as well as to reduce their loneliness and guide them to various services. The project particularly focuses on the largest non-Finnish-speaking groups: Arabic, English, Russian, and Estonian speakers. The necessity of the *Jututtaja* Project has arisen for various reasons, with recent challenges brought about by the pandemic further compromising the position of elderly individuals with different linguistic and cultural backgrounds in society. Language and cultural challenges have been significant barriers to participation, leading to social isolation, and services are often less accessible from the individual's perspective [2].

The *Jututtaja* Project, like many others, has faced various challenges. For instance, immigrants who have moved to Finland engage less in volunteer work, and commitment may be a foreign concept. Some elderly individuals may hesitate to participate in new projects or services, especially if they differ from the familiar, and using technology may be challenging if systems are not user-friendly. Ensuring that individual needs and differences between the elderly and communities are considered in the project's implementation and planning can be challenging. In some minority ethnic groups, everyone knows each other, and there may be family disputes. The expected outcome of the *Jututtaja* Project is an increase in societal understanding of the diversity of the aging population. Additionally, awareness of the importance of diverse memory work will rise, allowing for the provision of more suitable services to minority ethnic groups. It is crucial for society to address these challenges and create an inclusive and supportive environment for all elderly citizens, regardless of their language or culture [2].

The role offered to volunteers in the *Jututtaja* Project has, according to preliminary results, been an empowering experience. Volunteers feel that they are doing meaningful work, helping others, and providing companionship. Assisting and listening to others has enabled volunteers to feel a sense of community participation, and they have felt they are making an important contribution to the lives of the elderly. Sharing personal experiences and engaging in diverse and interesting conversations have helped maintain memory functions and brain health. Often, the calls have been long, discussing various aspects of life. One elderly participant noted in a concluding interview that the calls have helped sharpen and crystallize their past and envision their remaining future.

Conclusions. Through development, towards a good life for individuals with different linguistic and cultural backgrounds

The projects viewed above are expected to increase societal understanding of the diversity of the aging population and provide a model that can expand into other services. In further development, it is possible to extend a similar model to other age groups and backgrounds. Sensitive memory work and its promotion play a crucial role in a diversifying Finland. Meeting individuals from minority ethnic groups in dementia care requires sensitivity, flexibility, and the ability to empathize with the client. Understanding cultural backgrounds helps tailor services individually [3].

Good practices for sensitive memory work include using interpreter services, involving family members, utilizing visual and non-verbal communication methods, and providing training for professionals in the field [5]. Developmental needs include increasing training, considering diversity in recruitment, and fostering closer collaboration with the public sector, organizations, and communities. The Memory Guide Project and the *Jututtaja* Project are developmental initiatives supporting the understanding and consideration of diversity in memory work. It is essential to strive for new tools and work towards an equal and satisfying life for individuals with different linguistic and cultural backgrounds in Finland.

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Dementia in Focus: Interdisciplinary Research Tasks in Latvia

Ineta Balode
University of Latvia

Dementia is a characteristic symptom of several diseases, but mainly Alzheimer's disease. There are also characteristic manifestations of the disease in the affected person's use of language and communication with others. The social problems faced by people with dementia and their relatives are increasingly being highlighted in the Latvian public discourse. At the same time, the importance of this issue has been recognized in the fields of medicine and care. It can be concluded that a solution to dementia patient support requires cooperation between several disciplines of science at different levels, because individual institutional initiatives, although a positive endeavour, cannot fully contribute to the theoretical and practical solution of this complex problem in Latvia.

Keywords: dementia in public discourse, language and communication, dementia from a multidisciplinary perspective

Introduction. Alzheimer's disease and interdisciplinary research

Dementia has increasingly become a topic of concern in modern society. Dementia is a component of several conditions, primarily Alzheimer's disease, which damages the cerebral cortex and leads to brain atrophy. Sixty to eighty percent of all dementia cases are attributed to Alzheimer's disease [1]. In the online 2009 portal *www.alzheimerinfo.de*, Friederike Schmöe explains dementia, as follows:

> *Generic denomination for symptoms that are characterized by the loss of mental functions, such as thinking, remembering, orientation, linking of thought material; the result is that every day activities cannot be accomplished independently.*
>
> *Demenz ist der Oberbegriff für Erkrankungsbilder, die mit einem Verlust der geistigen Funktionen wie Denken, Erinnern, Orientierung und Verknüpfen von Denkinhalten einhergehen und die dazu führen, dass alltägliche Aktivitäten nicht mehr eigenständig durchgeführt werden können.* [2, p. 206]

This explanation corresponds to the definition of dementia published on the website of the Centre for Disease Prevention and Control of Latvia:

> *Disorders of brain functions that cause irreversible, increasing and diverse disorders of cognitive alias mental functions with result: changed capabilities of remembering, language, visual space perception, skills and ability to judge.* [3]

Developmental stages of Alzheimer's disease are marked by specific symptoms, among them patients' use of language und communication skills. Without specialized expertise, it can be difficult to detect these deficits. For example, early stages are mostly characterized by reduced vocabulary and some pragmalinguistic imperfection, such as inadequate judgment of a situation, followed by communication mistakes: inappropriate length of speech, weak topical focus, problems with clause linkage and other symptoms, which are not always associated with mental disorders [2, p. 208]. Language disorders increase gradually. Initially, patients often try to conceal them. Non-experts can recognize serious deficits at the level of syntax during the moderate phase of Alzheimer's dementia, when the affected person is no longer able to understand specific questions or complex sentence structure, and uses clichés as answers [2, p. 208].

Hence, adequate linguistic expertise is vital not only for a timely diagnosis of the disease, but also for further treatment of patients; it involves medical professionals and caregivers, including family members and relatives. In countries with more established practices of interdisciplinary research concerning (Alzheimer's) dementia than in Latvia, there are appropriate fields of research established, e.g. clinical linguistics/*Klinische Linguistik* [2, p. 205] and literature studies are available. General guidelines (e. g., *Dementia* 2016) stress the aspects of communication related to diagnosis as well as to caregiving. For diagnostics: interviews with relatives and other involved persons – "key informant(s)"; cognitive tests, "utilizing culturally adapted tools if available" [4, p. 95]; distinguishing between dementia and depression/"Pseudodementia" by cognitive assessment [4, p. 96]. For caregiving: "provide regular orientation information (e.g. day, date, time, names of people) so that the person can remain oriented"; using and providing media updates to keep patients informed of daily news; "use simple short sentences to make verbal communication clear" [4, p. 101]. Thus, special attention is paid to the support of caregivers [4, p. 102].

Research indicate that dementia is expressed in impaired language use and limited communication abilities. Issues of individuals with dementia are centred around language as the basis for communication. Practitioners, physicians, therapists, as well as caregivers have to deal with language issues in communicating appropriately with a patient at different stages of dementia. The aforementioned issues are not only concerns related to the medical field and caregivers but also areas of communication in society and in legal matters.

Observations and conclusions of international specialized literature (cf. the chapter by Lele-Rozentāle in this monograph) emphasize opportunities for close cooperation between different fields of research (primarily medicine and linguistics) in order to optimize the treatment of persons affected by dementia (primarily Alzheimer's dementia), providing them with the necessary support to maintain a sustainable quality of life. The following part? gives a brief overview of several areas in which linguistics can play a key role in improving treatment of Alzheimer's dementia. Development of public discourse is lacking in this area, as well as the participation of linguists; furthermore, based on analysis of several representative guidelines, the necessity of including linguistics in medical practice is stressed. Finally, linguistics should be a component in design of instructional materials (respectively, in medical curricula) and in medical education as well as in the education of other professionals and of care givers.

1. Focusing on (Alzheimer's) dementia in the public discourse

The topic "dementia" is a focal point of concern in Latvian society from different points of view. There are questions that affect everyone, for example: how to detect early symptoms of dementia. Together with guidance regarding maintaining a healthy lifestyle, attention to the learning process and mental activity are important factors in activating and building new links between nerve cells (synapses) in the brain. Regardless of a person's educational level, learning and mental training as a process fosters improved brain capacity and can support – even if only temporarily – quality of life in the face of disease. Of crucial importance are linguistic activities to strengthen brain capacity. Linguistically speaking, these exercises affect relevant parts of communication in terms of receiving information, processing of information and authoring information. The psychiatrist Ieva Everte offers this advice:

> *read books and belles lettres; do crossword puzzles […]; plan new routes for walks and excursions; learn foreign languages; […] do mental arithmetic; play mental games – […] such as Scrabble (formation of words using letters) and more* [5].

At the same time, broader social issues related to vital health care practices arise in connection with dementia: How to ensure the timely diagnosis of dementia? How to improve statistical analysis of patients? What kinds of support are available for patients and their relatives, who are often their caregivers? How to approach legal issues related to persons with dementia? Do we offer adequate education or training for medicine staff and caregivers? Since 2014, the journalist Imants Frederiks Ozols has been examining these complex questions. He has detected at least 30,000 persons with dementia in Latvia who have inadequate diagnoses. Important social issues have not been considered in their treatment [6].

In a 2021 broadcast of Latvian Radio (LR1) "*Atvērtie faili*" (Open files), series Nr. 38 on the topic of dementia, Ozols takes up the aforementioned questions, embedding them in reports and interviews with the neurologist Guntis Karelis and psychiatrist Jānis Bušs [7, 8]. Among their observations, the interviewees pointed out that sometimes, the wrong specialist is chosen by patient managers, e.g. cardiologists or endocrinologists. Often, exact diagnosis and detection of Alzheimer's disease is made too late. For this reason, (personal) legal decisions are delayed, which can potentially leave a person with dementia vulnerable to criminals who may take advantage of their impaired mental state. In general, neurodegenerative diseases are not comprehensively treated in Latvia. The facts speak for themselves: patients lack standard guidelines regarding where to get help, which kind of specialists to consult; care is poorly delivered via brief training of unemployed persons; relatives can encounter formal obstacles in being appointed official caregivers in order to receive financial support and help with other problems. Finally, and from a public point of view, patients with dementia are still stigmatized [7, 8].

In addition to the above-mentioned issues, which address social issues in Latvia, patients and their family members are confronted with emotional issues of developing empathy and fostering a better understanding of problems of dementia. A recent exhibition "Dairy Diaries" in the Medicine History Museum (April 8–June 5, 2022), addresses these issues. Created by Anna Priedola, media artist and research assistant in the Art Research Laboratory of the University of Liepaja, the exhibition depicts dementia from the perspective of relatives of patients. A symbolically visualised fermentation of milk transforming into curd refers in all probability to the popular idiomatic phrase "biezpiens galvā" (Eng. literal translation: *curd in the head*), depicting a person's inability to behave properly in a situation, primarily cognitively [9]. The time-lapse movie is complemented by documentary material describing a dementia patient's relationships with loved ones – husband, father, spouse's father and spouse's mother – as the patient's cognitive abilities decrease over time. These emotional stories often mirror questions, which are taken up by I. F. Ozols [cf. 6, 7, 8].

2. Focusing on (Alzheimer's) dementia in medical treatment and caregiving

While diagnosis and treatment of patients in dementia are managed within the medical field, appropriate measures of treatment at different stages involve aspects of language use and communication (e.g., language perception and performance connected with memory, orientation, speech and writing, visual and spatial perception, understanding of causal relationship, ability to judge, communicative skills, arithmetic), which typically require linguistic expertise, as well as changes in personality, which reduce the capability to perform daily activities (shopping, washing, dressing, cooking), etc. [10, p. 3]. Linguistic aspects of dementia are included in preventive advice, diagnostic tests, physician-patient communication, ergotherapy as well as in caregiving-patient interaction, etc. Linguistic aspects of treatment are reflected directly and indirectly in clinical treatment plans, specifically, in two guidelines — No. 28 of the Centre for Disease Prevention and Control of Latvia: "*Klīniskie algoritmi*" (Eng. Clinical Algorithms) [10], which deal with the topic of Alzheimer's dementia in general, as well as with potential solutions, and "*Klīniskie (pacientu) ceļi*" (Eng. Clinical Pathways) [11], which takes a closer look at social and medical management treatment plans. While both articles have a parallel content, in this article, attention is focused on language and communication aspects in connection with implementation of treatment protocols by general practitioners, medical specialists (e.g., neurologists, psychiatrists) and caregivers (currently – relatives). Upon a closer examination, the protocols reveal problematic situations in which linguistic expertise could potentially provide valuable assistance.

2.1. Linguistic and communicative competence by general practitioners

General practitioners have a crucial role to play in early diagnosis of dementia, for they evaluate the health status of the patient before sending them to a specialist. In accordance with treatment analysis "*Demences novērtēšana un diagnostika*" (Eng. Evaluation and diagnosis of dementia) [12] the general practitioner makes an initial examination using the MoCA test or elements of MMSE test. The MoCA test, the original version of which is in English, is free, and available in different languages, among them, in Latvian (the analysis of the Latvian translation cf. [13]). The MMSE alias Mini-Mental Status Examination is a timed test and it includes 12 different tasks, among them tasks with regard to language (e.g. No. 10). Related to the grading scale of maximum score (30), the results can indicate stages of dementia. For example, the score 0–9 by evaluating cognitive capacity corresponds to late dementia. However, it is pointed out that a low score cannot always be attributed solely to Alzheimer's dementia nor does it indicate dementia types [14]. These tests, as well as standardized tests of (mental) health with a Patient Health Questionnaire PHQ-2/PHQ-9, examine indications of dementia from a linguistic perspective, for example, by interpreting the patient's answers and determining the difference between depression (pseudodementia) and dementia:

Table No. 1. **Difference between pseudodementia and dementia, according to guidelines** [10, p. 10; 11, p. 8]

Pseudodementia	Dementia
Typical answers of the patient: "I don't know", "it is so difficult".	The patient answers, communicates, but the answers are faulty.

From a linguistic point of view, the interpretation of patient's answers must take into account situational and linguistic aspects of communication before ascertaining any distinctions. For example, "What was the question which had been asked by the general practitioner?" Attention must be paid to the wording of a question, as well as to the appropriate (linguistically reasoned) interpretation of the patient's answers. The term "faulty" is not universal and axiomatic. The neuropsychologist Elisabeth Stechl emphasizes that medical competence of general practitioners cannot easily be brought into line with their linguistic competence and communicative skills [15, cf. 13, p. 245]. It is plausible that diagnostic practice excludes linguistic factors, but currently, there are no data analyses in Latvia which could be used to determine the extent of linguistic elements in medical practice. Furthermore, as noted in specialized literature on the subject, analyses determining either dementia or depressive pseudodementia can be quite difficult, especially in older patients. Difficulties with concentration and memory disorder can be caused by depression:

> *The psychiatric examination is particularly important. Differentiation from "depressive pseudodementia" can be very difficult. Depressive disorders of elderly people often are associated with concentration and memory problems. Sometimes, it is hard to identify the depressive state of seniors – even under examination, as, the depression is often kept secret. Instead, it is expressed through laments of multiple physical ailments.*
>
> *Der psychiatrischen Untersuchung kommt besondere Bedeutung zu. Die Abgrenzung zu einer "depressiven Pseudodemenz" kann ausgesprochen schwierig sein. Depressive Störungen sind im Alter oft mit Konzentrations- und Gedächtnisstörungen assoziiert. Der depressive Affekt kann bei älteren Menschen schlecht erkennbar sein, auch bei Nachfrage werden depressive Verstimmungen oft nicht angegeben, sondern durch Klagen über multiple Körperbeschwerden ersetzt.* [16, p. 320]

For this reason, psychiatric examination, and additional general interviews with patients are recommended, e.g., using SIDAM (German Abbreviation for*:* ***S****trukturiertes* ***I****nterview für die* ***D****iagnose einer Demenz vom* ***A****lzheimer Typ, der* ***M****ultiinfarkt- (oder vaskulären) Demenz und Demenzen anderer Ätiologie*/English: structured interview for the diagnosis of dementia of the Alzheimer type, multi-infarct dementia and dementias of other aetiology), or other more comprehensive tests [16]. Linguistic evaluation is essential in both the examination and patient interviews

Arriving at an optimal solution for the patients, the general practitioner is involved in communication with them and with their relatives, even during later stages of dementia. Adequate language use und communication skills are essential to this process.

2.2. Linguistic and communication skills of specialized physicians

The next stage in treatment of dementia involves specialized physicians, such as neurologists and psychiatrists. Clinical practice includes connection with both patients and their contact persons. The specialist provides detailed information and formulates agreements regarding the responsibility of the contact person, etc. [10, p. 2]. Practices in both versions of the algorithm differentiate between mild, moderate or even late-stage dementia [10, 11]. Psychiatrists and neurologists need sophisticated skills to communicate with the patient and family members regarding progress of dementia, taking into account the highly differentiated range of the patient's ability to process information at different stages of dementia [cf. 17]. Thus, communication cannot be based solely on a specialists' facility with conventional language practices. The specialist needs additional input in performing language and communication function in order to examine the patient and convey to their contacts, the differences between dementia and pseudodementia as well as to request additional interviews with the patient. (Cf. 2.1. about determination of differences between dementia and pseudodementia, as well as regarding necessity of additional interviews with the patient).

2.3. Linguistic and communicative competence by relatives and (other) daily caregivers

Currently, family members and relatives dominate in caregiving of dementia patients in Latvia. Guidance, including customized communication with patients, is mainly focused on family members (cf. [10, p. 6; 11, p. 3]). Supportive suggestions for treatment of patients with dementia differ significantly from ordinary communication practices, in that (psycho)linguistic procedures must be used to communicate effectively with patients, and these procedures require special attention and training.

Without special instruction or training, individuals in this target group can only rely on their own communication skills, intuitive sense of language, empathy, etc. in talking with a patient with dementia, for example, verbally reminding the patient to use the toilet, and so forth. My personal experience verifies that a simple verbal instruction can be ineffective. For example, my mother, recovering after stroke, did not react to my suggestion to remove her dental prosthesis, which I wanted to clean. She was unpersuadable – she refused to open her mouth and take out her artificial teeth. I became angry and loud. My brother solved the situation by directing me out of the hospitals' bathroom. Obviously, he used more intuitive methods of communicating and convinced our mother to remove her false teeth. Most probably, he was calmer and patient and found a better way to communicate. Basically, discussion of ways and solutions regarding implementation of linguistic findings into practice and transforming them into instructions in layman's

Table No. 2. **Guidance for relatives and caregivers from linguistic point of view** [11, p. 3]

Guidance	Aspects of linguistic competence
Attempt to respect patient's desires and views as much as possible.	Processing/interpretation of content, as well as language performance through appropriate response to desires and views of the patient, etc.
Encourage the patient, offer positive motivation, do not argue with the patient or express anger.	Language performance related to appropriate speech and expression.
Remind the patient verbally about routines, e.g., about the necessity to use the toilet.	Adequate phrasing: instruction.
Speak slowly, facing the patient and be reassuring, regardless of whether or not the patient has understood the message; if necessary, ask the patient to repeat what he/she heard.	Requirements for complex communication and linguistic competence are: pace and quality of speaking; interpretation of how the message is received, as well as adequate verbal expression of the message.

terms, potentially using principles of "simple language" is recently discussed in Latvia in different contexts [cf. 18]. At the same time, psychoeducation, inclusive communication skills, is universally recommended, for both patients and caregivers, particularly, in cases of mild dementia and before distinctive signs of disturbance in behaviour and mental condition are observed ("Provide psychoeducation to person and carers" [cf. 4, pp. 100–101]).

3. Communication between the medical sector and the public; educational aspects

In every situation in which (Alzheimer's) dementia is involved, aspects of language use and communication are included; likewise, language issues are intrinsic to communication about dementia with the public and/or the medical community. Other than specialized issues of medical content concerning management, treatment and care of patients, special attention should be devoted to the elements of instructional design, as diagnostic texts influence moral and ethical aspects of healthcare. In design of treatment and healthcare management services, the current practice of administrative institutions under the authority of the Minister of Health is to use expressions with a negative connotation when referring to Alzheimer's dementia plans, such as *dispensable medical treatments* ("nevajadzīgas ārstniecības metodes"), *unnecessary costs* ("lieki tēriņi"), *useless and burdensome patient service* ("nelietderīga un pacientu apgrūtinoša pakalpojumu sniegšana"):

> *so that patients do not use the healthcare service ineffectively and in a futile manner, so that unnecessary medical treatments are avoided, which do not solve the patient's problems but rather create unnecessary costs*
>
> ("lai pacienti nemērķtiecīgi un lieki neizmantotu veselības aprūpes pakalpojumus, lai netiktu lietotas nevajadzīgas ārstniecības metodes, kas nerisina pacienta problēmas, bet rada liekus tēriņus") [10, p. 4];
>
> promote rational use of social services, so that useless and burdensome patient service can be reduced
>
> ("sekmēt sociālo pakalpojumu racionālu izmantošanu, lai mazinātu nelietderīgu un pacientam apgrūtinošu pakalpojumu sniegšanu") [10, p. 4].

Rather than emphasizing deficits in medical treatment and patient care, or focusing on economic factors, the main goal of health care should be positively reinforced, a forward-looking approach should be used, which promotes activities on behalf of patients through positive discussions of management, treatment and care of patients with (Alzheimer's) dementia, for example:

> [The healthcare services should be conducted goal-oriented]*, so that medical treatments are economically efficient and, primarily, as much as possible, all activities may solve the problems of the patient.*
>
> (lai veselības aprūpes pakalpojumi būtu mērķtiecīgi, lai izmantotās ārstniecības metodes būtu ekonomiski pamatotas un, pirmām kārtām, pēc iespējas efektīvāk risinātu pacienta problēmas).

Much of the time, materials contain empty phrases, poorly formulated terms of reference or colloquial phrases in Latvian. Some examples, which do not correspond to the proper use language for public communication include:

> *at best, a nurse of the general practitioner* (stylistically awkward reference to patient's contact person: *ģimenes ārsta māsa labākā gadījumā*) [11, p. 3],
>
> *specialists are available on site, to be involved as experts* (colloquial, without specifying the service institution: *speciālisti pieejami uz vietas, piesaistāmi kā konsultanti*) [11, p. 6],
>
> *Patients of Alzheimer-dementias* (groundless plural in Latvian: *Alcheimera demenču pacienti*) [11, p. 4],
>
> *Activities that promote cognitive abilities. Interventions to support patient's cognitive functions, independence and prosperity* (illogical semantics: *Kognitīvo spēju veicinošas aktivitātes. Intervences, lai veicinātu pacienta kognitīvās funkcijas, neatkarību un labklājību*) [11, p. 5]; cf. definition: *prosperity* 'living conditions, economic situation, characterised by good income and economic well-being' (*labklājība* 'dzīves apstākļi, materiālais stāvoklis, kam raksturīga pārticība, arī nodrošinātība' [9]).

These random examples (on the par with the incomplete Latvian translation of the MoCA-test [cf. 13]) suggest that interdisciplinary cooperation between medicine and linguistics can improve the language and design of healthcare materials. The freely-accessible PHQ-9 test in the Latvian version is linguistically flawed and partially incomprehensible. An approximate translation of some examples verifies that these questions are nonsensical for Latvian speakers: “How often have you troubled some of these problems during the latest 2 weeks?” (“Cik bieži Jūs pēdējo 2 nedēļu laikā esat nomocījis kāda no šīm problēmām?”); “If you recognized some problems, how these problems changed you into a complicated person and enabled you to do your job, complete homework or come to an understanding with other people” (“Ja Jūs jutāt kādas problēmas, cik sarežģītas šīs problēmas ir padarījušas Jūs, lai Jūs varētu darīt savu darbu, kārtot lietas mājās vai sadzīvot ar citiem cilvēkiem?”), etc. [cf. 19]. One would hope this version is not in medical use.

Recognizing the important role of language and communication has motivated the Latvian Ministry of Health, along with institutions of higher education, to approach these functions with new goals for improvement in mind. Appropriate topics for courses of study have been incorporated into study programmes with the aim of preparing students or those pursuing further professional training to work with persons with dementia symptoms.

To improve the qualifications of medical professionals and medical support personnel, the Ministry of Health is collaborating with different medical institutions, for example, with the Vivendi Health Centre (SIA “Veselības centrs Vivendi”), where specialists offer several informal education programs for training, among them, specialized treatment and care of dementia patients: Diagnosis, Treatment and Care of Dementia (“Demences diagnostika, ārstēšana un aprūpe“) [20]. Likewise, the topics such as assessment, risk reduction and other relevant aspects of dementia include linguistic perspectives. However, the current description of the programme does not mention these linguistics elements.

At the Rīga Stradiņš University (RSU) a bachelor’s degree study programme Police Work (“Policijas darbs”) is offered [21]. Based on an inter-institutional agreement and after the successful recognition of credits, officers of the state police with first-degree specialized diplomas from the State Police College have an opportunity to continue their studies at the RSU in this programmw, starting with the third study year. According to the information provided by the director of this study programme, Assist. Prof. Valdis Voins, the programme includes a course Communications Strategy (“Komunikāciju stratēģija”, Course Code: JF_276) with the aim of improving the work of the state police. General tasks of this programme include development of the skills necessary to make decisions in complicated situations and the ability to solve problems [21, cf. 22]. The general course description shows that particular attention is paid to contacts and communication with particular groups in society, as well as to situations which involve communication barriers [22]. Whether or not these communicative aspects are based on linguistic knowledge and findings is not specified. The list of study literature is dominated by the keywords: “psychology” and “communication”.

Conclusions

Consequences of Alzheimer’s disease are serious for both patients and their families. Progressive degenerative brain disorders continuously affect a patient’s capacity to lead an independent life. As the disease progresses, supervision and care become more necessary, and for 70% of patients, care is in nursing homes. Based on sound evidence, Alzheimer’s disease has been classified as one of the most “expensive” diseases to treat, due to the economic burden on families and the health care system. While interests of patients are the main priority, in the case of Alzheimer’s patients, maximizing the standard of living and delivering high-quality care during advanced phases to accommodate serious restrictions of mental and physical capacity is a critical aspect of treatment.

Observations presented in this chapter recommend increased attention to dementia, primarily to dementia caused by Alzheimer’s disease, in the public sphere, as well as among medical experts in Latvia. Development of public discourse has advanced, due to information delivered in different media (press, radio, TV), as well as events, such as exhibitions, to educate the general public. Support for medical staff on all levels is provided through clinical treatment plans and pathways to guide patients with dementia, as well as by offering training/ education programmes which a focus on dementia.

Aspects of linguistics are evident in all these efforts and events, but currently the term “communication” dominates discourse, when “language (usage)” is the appropriate descriptor for the basis of communication: cf. the lexicographic definition in different languages – *komunikācija* “sazināšanās, informācijas pārraide, piem., valodiskā komunikācija” [23], *Kommunikation* “Verständigung untereinander; zwischenmenschlicher Verkehr besonders mithilfe von Sprache, Zeichen” [24], *communication* “a process by which information is exchanged between individuals through a common system of symbols, signs, or behaviour” [25].

Analyses of the situation indicate that language usage is not sufficiently recognized as a relevant factor in addressing dementia. The academic study of acquired linguistic skills, cognitive impairment and communicative difficulties of persons with dementia is required for sufficient language training. For example, the idea of encouraging an individual to learn a foreign language as a dementia-preventive action could be valuable. To undertake this effort, how to make the learning process effective? Furthermore, caregivers are advised to pay attention to patient’s desires and views etc., but this instruction does not specify how to verbally respond to the patient’s comments; while training programmes include aspects of communication, they still lack instruction in basic principles of linguistics. In Latvia, the value of Humanities' contributions from both theoretical and practical points of view needs to be recognized and incorporated in treatment of Alzheimer's dementia.

Inclusion of linguistic theory, research results and linguistic experience in designing procedures and care of patients with dementia would represent a qualitative leap in treatment of this condition. While exemplary precedent exists in international practice, similar interdisciplinary cooperation between the fields of medicine and linguistics must begin in Latvia. Initially, this cooperation would involve a focus on the patient's needs, the establishment of common research fields, as well as development of coordinated research methodology to develop efficient, long-term fundamental research projects. This chapter demonstrates the necessity of establishing joint fields of interest and common investigations for appropriate diagnosis of dementia, including communication between the general practitioner and patient during different stages of dementia, treatment and care, training/education of medical staff and of caregivers. At the same time, there are several areas of attention which are indirectly connected with medicine, yet remain a focal point of linguists, as patients with Alzheimer face relevant social and legal issues that involve appropriate language comprehension and communication.

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Verwendung der Bezeichnungen für Demenz in deutschen und litauischen Medien (Use of the Terms for Dementia in German and Lithuanian Media)

Ariana Burmistrova, Vaiva Žeimantienė
Vilnius University

The subject of this chapter concerns a syndrome called dementia, in which the cognitive function, i.e. the ability to think, is impaired. With the changing social and demographic situation in the world and the growing number of older people, dementia has become one of the most acute problems of our time. The aim of the study is to show how dementia-related terms are used in the German and Lithuanian media and to discuss what terms, used in reference to people having dementia, should be preferred to avoid negative emotions in communication. The empirical study is based on the lists of (non-)recommended dementia-related terms collected from German and Lithuanian language guidelines for communication on dementia topics. The use of these terms is analysed in a corpus of 110 media articles (55 in Lithuanian and 55 in German) on dementia published between 2016 and 2022. The following news portals were used to download the articles: delfi.lt, 15min.lt, lrytas.lt and alfa.lt for the Lithuanian material and FAZ.net, Sueddeutsche.de and Zeit.de for German. The articles cover a variety of texts and share the common theme of dementia. The analysis was carried out using the AntConc tool to retrieve frequencies of recommended and non-recommended words and word combinations on dementia. The results of the analysis are presented in the form of charts and tables. The analysis shows that both in Lithuanian and German articles, the most frequent words and phrases are those that are recommended for use in dementia-related communication, whereas not recommended expressions are very few.

Keywords: dementia-related terms, media texts, guidelines for the communication about dementia, German, Lithuanian

> *Gelingende Kommunikation ist für uns alle die unabdingbare Vorbedingung guter Lebensqualität.* [1, S. 10]

Einleitung

Die sich verändernde soziale und demografische Situation in der Welt, begleitet von einer Zunahme älterer Menschen, hat Demenz zu einem der drängendsten Probleme unserer Zeit gemacht. Demenz wird durch eine Vielzahl von Krankheiten und Verletzungen verursacht, die primär oder sekundär zu Hirnschäden führen, wie z. B. die Alzheimer-Krankheit. Die Weltbevölkerung altert, was dazu führt, dass die Zahl der Menschen, die an Demenz erkrankt sind, wächst [2]. Dieses Thema wird von Jahr zu Jahr relevanter, daher ist es für diejenigen Menschen, die von Menschen mit Demenz umgeben sind, sehr wichtig zu wissen, wie man sie richtig anspricht und über ihre Erkrankung spricht: „Die wichtigste Voraussetzung dafür, ‘ein Leben zu haben’, besteht für Demenzkranke in der Wahrung ihres Rechts auf eine ihrem Zustand angemessene Kommunikation“ [3, S. 170].

Die Aktualität des gewählten Themas steht in direktem Zusammenhang mit der Frage, wie man ethisch und ohne Stigmatisierung über Demenz und Menschen mit Demenz sprechen kann. Es ist in dieser Hinsicht wichtig, die derzeitige Situation zu zeigen und anhand von Texten aus deutschen und litauischen Medien herauszufinden, welche demenzbezogenen Wörter und Wendungen in aktuellen online-Artikeln zur Demenz verwendet werden. Das Forschungsobjekt des vorliegenden Beitrags ist die Untersuchung bestimmter Wörter und Wendungen, die in dem Sprachleitfaden Demenz (2020) [4] und einem entsprechenden Dokument in der litauischen Sprache „Kalbėjimo apie demenciją gairės“ [5] angeführt werden und in Bezug auf Personen mit Demenz verwendet oder nicht verwendet werden sollten. Die Analyse ihres Gebrauchs wird anhand von ausgewählten litauischen und deutschen Medienartikeln durchgeführt.

Der vorliegende Artikel stützt sich auf die Bachelor-Arbeit „Verwendung der Begriffe der Demenz in deutschen und litauischen Medien“, die im Frühjahrssemester 2022 am Lehrstuhl für Deutsche Philologie der Universität Vilnius von Ariana Burmistrova zur Verteidigung vorgelegt wurde.

1. Demenz, Kommunikation und Sprache

Laut der Mediziner Hager und Krause bezeichne Demenz ein Syndrom, bei dem es zu Einschränkungen der geistigen Leistungsfähigkeit und/oder der Persönlichkeit gekommen ist, sodass der Alltag nur noch mit Einschränkungen bewältigt werden kann [6, S. 45]. Nach Förstl und Lang ist Demenz „ein schwerwiegender Verlust der geistigen Leistungsfähigkeit aufgrund einer ausgeprägten und langanhaltenden Funktionsstörung des Gehirns“ [7, S. 4].

Demenz kann durch mehrere Krankheiten verursacht werden, die das Gehirn betreffen. Die häufigste Ursache sei nach Angaben der Deutschen Alzheimer Gesellschaft die Alzheimer-Krankheit. Die Alzheimer-Krankheit liege in etwa 60 bis 80 Prozent aller Fälle von Demenz vor; andere degenerative und/oder vaskuläre Erkrankungen können ebenfalls vorhanden sein, insbesondere wenn die Person altert. Demenz betreffe 5,4 Prozent Personen über 65 Jahren und die Prävalenz der Krankheit nehme mit zunehmendem Alter zu. Die europäische Demenzkooperation, die von der European Alzheimer's Foundation koordinierte Gruppe, stellte fest, dass mittlerweile 8,45 Millionen Menschen in Europa an der Alzheimer-Krankheit leiden [8].

Bei Demenz ist es wichtig zu wissen, wie man eine Person mit Demenz bezeichnen und mit ihr reden soll:

> *Voraussetzung für eine sinnvolle Betreuung, die den Bedürfnissen Demenzkranker weitgehend gerecht zu werden vermag, ist der Erwerb von Kompetenz in Kommunikation. Erst durch gelingende, empathische Kommunikation und den Aufbau tragfähiger Beziehungen wird es möglich, die Kranken so zu akzeptieren, wie sie sind, und sich einfühlsam auf ihren Gemütszustand einzustellen.* [9, S. 40]

Basierend auf Informationen, die von dem öffentlichen Gesundheitsportal Österreichs veröffentlicht wurden, können die wichtigsten Punkte zur Kommunikation mit den Menschen, die mit Demenzsymptomen leben, wie folgt erfasst werden:

> *Tatsächlich erfordert eine vernünftige und angenehme Kommunikation mit Menschen mit Demenz keine ungewöhnlichen Methoden. Die Bedeutung dieser Arbeit kann jedoch verringert werden, wenn die Menschen wissen, wie man Sprache richtig verwendet. Da Menschen mit Demenz eine erhöhte Sensibilität und Reaktionsfähigkeit haben und auch schmerzhaft auf kritische Meinungen reagieren, muss die Kommunikation mit ihnen mit erhöhter Aufmerksamkeit, aber auch mit Respekt behandelt werden. Es ist sehr wichtig, Kritik zu vermeiden und gleichzeitig lobende Worte zu finden. Daher ist es sehr wichtig, nicht nur bewusst sein, wie man richtig mit einer Person kommuniziert, sondern auch zu wissen, wie man richtig über Menschen spricht, bei denen Demenz diagnostiziert wurde. Die derzeitige Sprache, die in der Literatur, den Medien und in der Gesellschaft verwendet wird, führt zu irreführenden Beschreibungen von Menschen, die mit Demenzsymptomen leben, und schafft und verewigt breitere Stigma und Missverständnisse darüber, was das Leben mit Demenz wirklich ist.* [10]

Die Kommunikation erfolgt grundsätzlich durch Sprache. So wird in der Präambel des deutschen Sprachleitfadens Demenz die Wichtigkeit einer respektvollen Sprache hervorgehoben:

> *Wenn über das Thema Demenz und mit oder über Menschen mit Demenz gesprochen wird, ist es wichtig, eine angemessene Sprache zu verwenden. Sie soll nicht stigmatisieren, sondern das Verständnis, die Inklusion und die Teilhabe der Betroffenen fördern und letztlich zu einer guten Lebensqualität aller Beteiligten beitragen.* [4, S. 3]

Wörter und Wendungen, die wir verwenden, wenn wir über die Demenz sprechen, können einen großen Einfluss darauf haben, wie Menschen mit Demenz in der Gesellschaft gesehen und geschätzt werden und wie sie behandelt werden:

> *Die Worte, die wir wählen, beeinflussen Menschen mit Demenz und ihr engeres und weiteres soziales Umfeld sowie die gesamte Öffentlichkeit in einer entscheidenden Art und Weise. Sie beeinflussen die Stimmung, das Selbstwertgefühl und Gefühle wie Freude oder Niedergeschlagenheit der Einzelnen, und sie haben Einfluss darauf, was andere Menschen über Demenz denken. Natürlichkeit und Selbstverständlichkeit in alltäglichen Gesprächen tragen dazu bei, das Wohlergehen aller Beteiligten nachhaltig zu verbessern und das Bild von Menschen mit Demenz in der Gesellschaft zu korrigieren.* [4, S. 3]

Sprache ist ein wichtiges Instrument menschlicher Interaktion und Kommunikation. Dank der Sprache können wir unsere Gedanken in einer materiellen Sprachform ausdrücken. Es gibt eine Vielzahl unterschiedlicher Sprachen, wie z. B. Gebärdensprache, geschlechtersensible Sprache, Sprache in Bezug auf Menschen mit Demenz und andere. Die Rolle der Sprache kann wie folgt erfasst werden:

> *Die Sprache spielt eine zentrale Rolle in der menschlichen Kommunikation. Sie erlaubt es zum Beispiel, Auskünfte über sich oder die Welt zu geben oder andere Personen zu Aktivitäten zu veranlassen. Dabei findet in der Regel ein Wechsel von Sprachverstehen und Sprachproduktion statt.* [11, S. 5]

Das Verstehen von Sprache sei nach Beyer und Gerlach wissenschaftlich schon recht gut untersucht, denn es ist möglich, „das Ausgangsmaterial, z. B. Wörter, Sätze oder Texte sehr präzise in Experimenten zu variieren und in der Wirkung zu untersuchen“ [11, S. 5]. Bei der Sprachproduktion sei hingegen der Ausgangspunkt, z. B. ein flüchtiges Motiv zur Interaktion mit anderen Personen, viel schwerer greifbar [11, S. 5].

Zur Sensibilisierung der Sprachverwendung in Bezug auf Menschen mit Demenz hat die deutschsprachige Alzheimer- und Demenz-Organisation (DADO) unter Beteiligung von Menschen mit Demenz im Jahr 2020 den oben zitierten Sprachleitfaden entwickelt. Der Sprachleitfaden wendet sich laut DADO an professionell in der Behandlung, Betreuung und Pflege Tätige, an Medienschaffende, den öffentlichen Diskurs und die Politik [4, S. 3]. Wie die DADO in Deutschland hat auch der Verband für Demenz in Litauen („Demencija Lietuvoje“) in Zusammenarbeit mit den Partnern, darunter mit der litauischen

Universität für Gesundheitswissenschaften und mit den Spezialisten verschiedener Fachrichtungen, einen Sprachleitfaden zur Sprache der Demenz entwickelt [5]. Der litauische Sprachleitfaden „Kalbėjimo apie demenciją gairės“ (dt. „Der Sprachleitfaden – über Demenz in angemessener Weise sprechen“) wurde im Sommer 2021 erstellt und auf der Homepage des Verbandes für Demenz in Litauen veröffentlicht [5].

Sprachleitfaden ist ein methodologisches Material, das bestimmte Empfehlungen oder Regeln für die Verwendung der Sprache enthält. Das Duden Wörterbuch beschreibt den Leitfaden als „kurz gefasste Darstellung zur Einführung in ein Wissensgebiet“ oder „den Fortgang von etwas Leitendes, Bestimmendes“ [12]. Der Sprachleitfaden Demenz und das entsprechende Dokument in litauischer Sprache „Kalbėjimo apie demenciją gairės“ enthalten Empfehlungen, wie man ethisch, nicht stigmatisierend und inklusiv über Demenz und Menschen mit Demenz spricht, wie man richtig mit einer Person mit Demenz kommuniziert und welche Wörter man in Bezug auf diese Menschen verwenden und nicht verwenden sollte.

2. Sprachleitfaden und Bezeichnungen für Demenz

Wörter und Wendungen, die in den analysierten Sprachleitfäden genannt werden und deren Gebrauch kommentiert wird, bilden die Bezeichnungen für Demenz. Beide für die Unterstützung der vorliegenden empirischen Analyse herangezogenen Sprachleitfäden, sowohl der deutsche als auch der litauische, sind inhaltlich ähnlich. Wörter und Wendungen werden in den Sprachleitfäden zu konkreten Gruppen zusammengeschlossen (z. B., „über Demenz sprechen“, „über die Symptome einer Demenz sprechen“, „über Symptome im Zusammenhang mit Verhalten und Psyche sprechen“ usw.) und in empfohlene sowie nicht empfohlene unterteilt [4,5].

Vor der Analyse zur Verwendung konkreter Sprachmittel in den analysierten Medientexten sollen zuerst die relevanten Informationen aus den Sprachleitfäden in deutscher und in litauischer Sprache vorgestellt werden. Die Übersicht über die Bezeichnungen für Demenz enthält im deutschen Sprachleitfaden folgende Gruppen:

- über Demenz sprechen,
- Symptome einer Demenz,
- Symptome im Zusammenhang mit Verhalten und Psyche,
- Menschen am Beginn einer Demenzerkrankung unabhängig vom Alter,
- über Menschen mit Demenz sprechen,
- Menschen mit Demenz unter 65,
- über Familienangehörige, Freunde, Betreuende oder Pflegende von Menschen mit Demenz sprechen [4, S. 10–11].

Auch der litauische Sprachleitfaden zur Demenz enthält die genannten Gruppen, dazu werden noch die Gruppen „über Pflegetätigkeit in Bezug auf Pflegende selbst sprechen“ und „über Demenz in der wissenschaftlichen Forschung oder im medizinischen Kontext sprechen“ hinzugefügt [5, S. 6–8].

Im Folgenden wird in Anlehnung an den deutschen und den litauischen Sprachleitfaden zur Demenz eine Übersicht über die für die Analyse relevanten deutschen und litauischen Wörter und Wendungen gegeben. Zuerst wird jeweils die litauische Bezeichnung angeführt und in einfachen Anführungszeichen steht jeweils die Übersetzung in die deutsche Sprache. Für die als Übersetzung angeführten deutschen Bezeichnungen erfolgte eine Orientierung an den im deutschen Sprachleitfaden.

2.1. Verwendung von Bezeichnungen für Demenz

Bevorzugte Bezeichnungen

- *demencija* ‘Demenz’
- *Alzheimerio liga ir kitos demencijos formos* ‘die Alzheimer-Krankheit und andere Demenzformen’
- *demencijos ligos* ‘demenzielle Erkrankungen’
- *demencijos forma* ‘eine Form der Demenz’
- *demencijos tipas* ‘eine Art der Demenz’
- *demencijos priežastis* ‘Demenzursache’
- *kognityviniai apribojimai* ‘kognitive Einschränkungen’

Nicht verwenden

- *kančia* ‘Leiden’
- *senatvinis* ir *senatvinė demencija* ‘senil’ und ‘senile Demenz’
- *dementikas* ir *demenciškas* ‘Dementer’ und ‘dement’
- *demencijos paveiktas* ‘demenziell verändert’
- *sklerotikas* ‘verkalkt’

2.2. Verwendung von Bezeichnungen für die Symptome einer Demenz

Wenn man über die Symptome einer Demenz spricht, ist Folgendes zu bevorzugen: *atminties sutrikimai* ‘Gedächtnisstörungen’, *nuotaikos ar elgesio pokyčiai* ‘Veränderungen der Stimmung oder des Verhaltens’, *žodžių parinkimo sutrikimai* ‘Wortfindungsstörungen’, *dezorientacija* ‘Orientierungsstörungen’, *užmaršumas* ‘Vergesslichkeit’ usw. Es ist auch notwendig, die Auswirkungen, die Symptome verursachen, genau zu beschreiben. Beispielsweise führt das Symptom *bendravimo sunkumai* ‘Schwierigkeiten in der Kommunikation’ dazu, dass eine demenzerkrankte Person eine Frage nicht mehr versteht, dasjenige von *orientacijos sunkumai* ‘Schwierigkeiten in der Orientierung’, dass sie den Weg nach Hause nicht mehr findet, usw. [4, S. 6].

2.3. Verwendung von Bezeichnungen für die Symptome im Zusammenhang mit Verhalten und Psyche

Bevorzugte Bezeichnungen

- *pasikeitęs elgesys* ‘verändertes Verhalten’
- *nepatenkintų poreikių išraiška* ‘Ausdruck unerfüllter Bedürfnisse’
- *agresyvi, netinkama reakcija* ‘aggressive, unangemessene Reaktion’
- *elgesio ir psichologiniai demencijos simptomai* (medicinos kontekste) ‘verhaltensbezogene und psychische Symptome einer Demenz’ (im medizinischen Kontext)
- *su demencija susijęs elgesys* ‘demenzbedingtes Verhalten’

Nicht verwenden

- *sunkus elgesys* ‘schwierige Verhaltensweisen’
- *agresyvus* (kaip bendras elgesys, neatsižvelgiant į situaciją ir be tolesnio aprašymo) ‘aggressiv’ (als allgemeines Verhalten ohne Bezug auf die Situation und ohne nähere Beschreibung)
- *probleminis elgesys* ‘problematische Verhaltensweisen’

2.4. Verwendung von Bezeichnungen im Gespräch über Menschen mit Demenz

Bevorzugte Bezeichnungen

- *žmogus/asmuo, kuriam diagnozuota demencija* ‘ein Mensch/eine Person mit der Diagnose Demenz’
- *asmuo su demencija* ‘ein Mensch mit (einer) Demenz’
- *asmuo, gyvenantis su demencija* ‘ein Mensch, der mit (einer) Demenz lebt’
- *žmogus su demencija* ‘ein von Demenz Betroffener’

Nicht verwenden

- *kenčiantis/i* ‘Leidende/r’
- *auka* ‘Opfer’
- *silpnaprotis asmuo* ‘dementer Mensch’
- *dementikas/ė* ‘Demente/r’, *ligonis/ė* ‘Kranke/r’
- *tuščias atvejis* ‘leere Hülle’
- *kažkas be proto/be dvasios* ‘jemand ohne Verstand/ohne Geist’
- *kalinys* (kai kalbama apie socialinės globos įstaigose gyvenantį asmenį) ‘Insasse’ (als Bewohner/in einer Pflegeeinrichtung)
- *pacientas/ė* (ne sveikatos priežiūros kontekste) ‘Patient/in’ (außerhalb des medizinischen Kontextes)

Bevorzugte Bezeichnungen

In medizinischen Zusammenhängen:

- *demencijos sindromu sergantis asmuo* ‘Demenzkranke/r’ oder ‘Demenzerkrankte/r’
- *pacientas/ė, serganti/s demencijos sindromu* ‘Demenzpatient/in’
- *pažinimo sutrikimų turintis žmogus* ‘ein Mensch mit kognitiven Einschränkungen’

Nicht verwenden

Abwertende umgangssprachliche Ausdrücke:

- *jam ne visi namie* ‘er hat nicht alle Tassen im Schrank’
- *keistokas* ‘schrullig’
- *beprotis* ‘krank im Kopf’
- *važiuojantis stogas* ‘Dachschaden’
- *kvailas* ‘verblödet’
- *kvailas/pamišęs* ‘bescheuert’
- *kvaištelėjęs* ‘plemplem’
- *vaikiškas* ‘kindlich’
- *vaikiška reakcija* ‘kindische Reaktion’
- *tampa vaiku* ‘wie Kinder werden’

2.5. Verwendung von Bezeichnungen für Menschen mit Demenz unter 65 Jahren

Wenn es um Demenz unter 65 geht, wird manchmal „Frühe Demenz“ verwendet. Die Bezeichnung wird aber unabhängig vom Alter auch für Menschen mit einer Demenz im frühen Stadium verwendet. Um Verwirrung zu vermeiden, sollte man deshalb bei Menschen unter 65 von Demenz im jüngeren Lebensalter sprechen [vgl. 4, S. 8].

Bevorzugte Bezeichnungen

- *demenciją turintis asmuo iki 65 metų amžiaus* ‘Menschen mit Demenz unter 65 Jahren’
- *jauni žmonės su demencija* ‘jungerkrankte Menschen mit Demenz’
- *jaunesnio amžiaus žmonės, turintys demenciją* ‘jüngere Menschen mit Demenz’
- *demencija jauname amžiuje* ‘Demenz im jüngeren Lebensalter’

Nicht verwenden

- *presenilinė demencija* ‘präsenile Demenz’ (veraltete Bezeichnung)
- *ankstyvoji demencij*a ‘frühe Demenz’

2.6. Verwendung von Bezeichnungen für Familienangehörige, Freunde, Betreuende oder Pflegende

Über An- und Zugehörige, Betreuende sowie Pflegende soll bevorzugt mit folgenden Bezeichnungen gesprochen werden: *jis/ji gyvena su asmeniu, turinčiu demenciją* ‘er/sie lebt mit jemandem, der eine Demenz hat’; *jis/ji lydi/ rūpinasi/ slaugo/ palaiko demenciją turintį asmenį* ‘er/sie begleitet/ kümmert sich um/ sorgt für/ unterstützt einen Menschen mit Demenz’; *jis/ji lydi/ rūpinasi/ prižiūri/ palaiko asmenį, kuriam diagnozuota demencija* ‘er/sie begleitet/ kümmert sich um/ sorgt für/ unterstützt einen Menschen mit einer Demenzdiagnose/ Demenzerkrankung’. Zu den Bezeichnungen *Betreuende* sowie *Pflegende* wird im deutschen Sprachleitfaden eine folgende Bemerkung hinzugefügt: „Nicht jede/r möchte als Betreuende/r / Pflegende/r bezeichnet werden. Fragen Sie nach, ob die Person mit dieser Bezeichnung einverstanden ist.“ [4, S. 11, vgl. auch 5, S. 7] Laut dem Sprachleitfaden Demenz bevorzugen es Menschen mit Demenz „in der Regel, wenn Wendungen wie ‘mit Demenz leben’ bezogen auf sie selbst verwendet werden und nicht bezogen auf ihre An- und Zugehörigen“ [4, S. 9].

Obwohl die Gruppen der empfohlenen und nicht empfohlenen Wörter im deutschen und im litauischen Leitfaden ähnlich sind, enthalten sie auch unterschiedliche Wörter und Wendungen, die in einem der analysierten Sprachleitfäden angegeben sind, in dem anderen aber nicht. Es ist wichtig zu beachten, dass die Liste des deutschen Sprachleitfadens drei Gruppen, die in der litauischen Version angegeben sind, nicht enthält. Diese Gruppen sind: wenn über die Beziehung zwischen der Pflegekraft und der Pflege selbst gesprochen wird, wenn über die Auswirkungen der Demenz auf die Person mit Demenz gesprochen wird und wenn in wissenschaftlichen Arbeiten und im medizinischen Kontext über Demenz gesprochen wird. In den Listen des litauischen Leitfadens gibt es keine Gruppe von Wörtern und Wendungen, die man verwendet bzw. nicht verwendet, wenn es um Menschen zu Beginn einer Demenzerkrankung geht, unabhängig vom Alter.

3. Medientextanalyse zur Verwendung von Bezeichnungen für Demenz

Für die Analyse wurden aus litauischen und deutschen Medien 110 Artikel (55 litauische und 55 deutsche Texte) zum Thema Demenz und Alzheimer-Krankheit ausgewählt. Die Textsammlung litauischer Artikel beträgt 307.796 Zeichen und die Textsammlung deutscher Artikel entsprechend 201.389 Zeichen. Die litauische Textsammlung enthält Texte aus den Nachrichtenportalen delfi.lt, lrytas.lt, alfa.lt, 15min.lt und die deutsche Textsammlung besteht aus den Artikeln, die in den Nachrichtenportalen wie www.faz.net/aktuell/, www.zeit.de/index und sueddeutsche.de veröffentlicht wurden. Bei der Auswahl der Artikel für die Erstellung der Textsammlungen waren drei Aspekte wichtig:

a) Thematik der Artikel: Es wurde vor allem darauf geachtet, dass sich die Beiträge auf die Erkrankung namens Demenz beziehen. In die Suchzeile von Online-Portalen wurden die Stichwörter ‘Demenz’ bzw. ‘Alzheimer-Krankheit’ eingegeben und durch Sortierung die geeigneten Artikel ausgesucht. In die Textsammlungen wurden die Artikel nicht aufgenommen, in denen die Bezeichnung Demenz nur einmal vorkommt. Es wurde versucht, Artikel zu finden, deren Titel sich auf Demenz beziehen, denn solche Texte behandeln erwartungsgemäß das relevante Thema.

b) Veröffentlichungsdatum des Artikels: Es wurde auch auf das Veröffentlichungsdatum des Artikels geachtet. In die Textsammlung wurden die Artikel aufgenommen, die zwischen 2016 und 2022 veröffentlicht wurden.

Diagramm 1. **Textsorten der analysierten litauischen Medientexte**

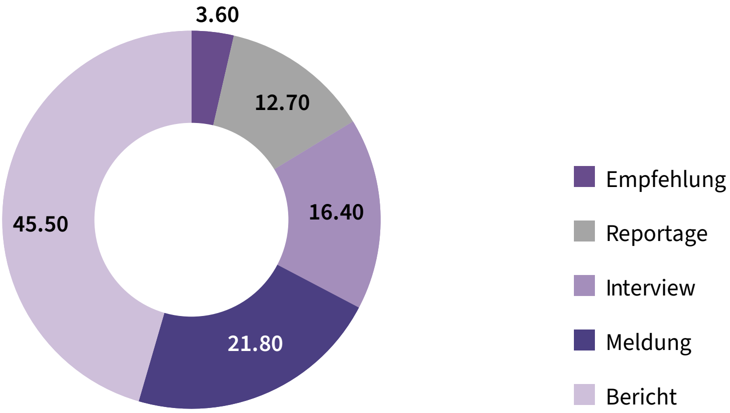
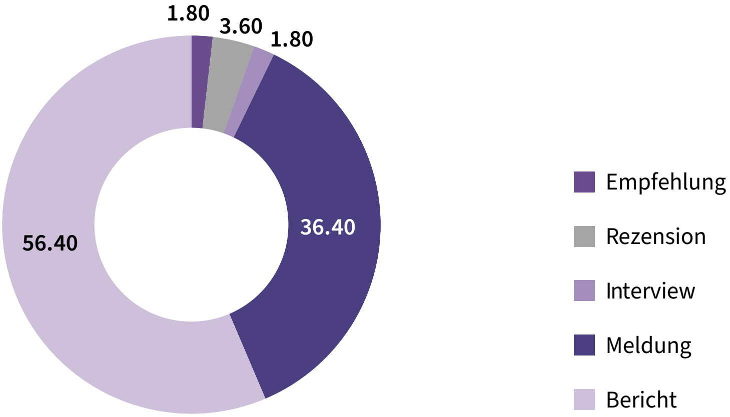


Diagramm 2. **Textsorten der analysierten deutschen Medientexte**



c) Textsorten der Artikel: Die Klassifizierung des relevanten Textmaterials hat ergeben, dass der Großteil der Textsammlung aus den Textsorten Meldung, Bericht und Interview besteht. Die Diagramme 1 und 2 bieten einen Überblick über die Verteilung der analysierten Artikel hinsichtlich der Textsorten.

Aus den Diagrammen 1 und 2 geht hervor, dass unter den analysierten Texten sowohl im Deutschen als auch im Litauischen die Textsorten Bericht und Meldung dominieren. Die tatsachenbetonten Textsorten Bericht und Meldung machen zusammen entsprechend 92,8 Prozent unter den deutschen analysierten Texten aus. Die Textsorten Bericht und Meldung machen unter den litauischen Texten entsprechend 67,3 Prozent aus. 29,1 Prozent entfallen in der litauischen Textsammlung auf die Textsorten Interview und Reportage. Im deutschen Teil machen die Interviews nur 1,8 Prozent aus. Die zwei letzteren Textsorten sind gewöhnlich umfangreicher als die dominierenden tatsachenbetonten, so lässt sich erklären, warum die litauische Textsammlung zeichenmäßig um ein Drittel größer als die deutsche ist. Die Zahl der analysierten Texte ist jedoch in beiden Sprachen gleich, je 55 Artikel.

4. Verwendung der Bezeichnungen für Demenz in deutschen und litauischen Medientexten

In diesem Kapitel werden die Ergebnisse der Analyse, die sich mit der Verwendung der Bezeichnungen für Demenz in Medientexten befasst, vorgestellt. Die verwendeten Bezeichnungen wurden mittels der Software AntConc – ein von Laurence Anthony an der Waseda Universität in Tokio entwickeltes Tool zur Korpusanalyse [13] – ermittelt. Bei der Analyse wurde überprüft, ob die in der jeweiligen Gruppe der Leitfäden genannten empfohlenen und nicht empfohlenen Bezeichnungen in den untersuchten Medientexten vorkommen und in welchem Kontext sie gebraucht werden. Die Belege aus Medientexten werden dabei in die Gruppen eingeteilt, wie sie in den eingeführten Sprachleitfäden erfasst sind. Die Ergebnisse werden teilweise in Form von Tabellen präsentiert, die jeweils absolute Daten zur Verwendungshäufigkeit von empfohlenen und nicht empfohlenen Wörtern und Wendungen in den analysierten Medientexten darstellen.

4.1. Ergebnisse der Analyse der sprachlichen Mittel in den deutschen Artikeln

Die Grundlage für die Analyse von deutschen Medientexten bilden die Artikel, die im Quellenverzeichnis unter DE 55–DE 110 aufgelistet sind. Die Tabelle 1 veranschaulicht, welche Wörter und Wendungen in den deutschen analysierten Artikeln verwendet werden, wenn über Demenz gesprochen wird.

Tabelle 1. **Über Demenz sprechen**

empfohlene Wörter	nicht empfohlene Wörter
Demenz – 308	*dement* – 20
Alzheimer, die Alzheimer-Krankheit – 125	*leiden* – 18
Demenzerkrankung – 21	*Leiden* – 1
eine Form der Demenz – 12	
kognitive Einschränkungen – 1	
eine demenzielle Erkrankung – 1	

Aus den Ergebnissen der Tabelle 1 kann man schließen, dass in den analysierten deutschen Artikeln in dieser Gruppe viel mehr empfohlene Wörter und Wendungen als nicht Empfohlene verwendet werden. In den untersuchten deutschen Artikeln wurden jedoch auch nicht empfohlene Wörter und Wendungen verwendet. So wird das nicht empfohlene Wort *dement* 20-mal in den analysierten Artikeln verwendet, z. B.:

(1) *Mein Vater wurde* ***dement****... Dabei war er erst 54 Jahre alt.* (DE 73)

(2) *Mit 30 oder 40 Jahren* ***dement*** *werden – damit rechnet niemand.* (DE 106)

(3) *Stefans Großmutter ist* ***dement****.* (DE 63)

Beispiel (4) illustriert die Verwendung des nicht empfohlenen Worts *Leiden*, z. B.:

(4) *Vor allem für Menschen, die an Demenz erkranken, müssen noch Wege gefunden werden, wie Altern nicht zu* ***Leiden*** *wird.* (DE 90)

Die Ergebnisse der Tabelle 2 zeigen, welche empfohlenen Bezeichnungen in den analysierten deutschen Texten in Bezug auf Demenzsymptome verwendet werden. Es gibt keine nicht empfohlenen Wörter, denn der deutsche Sprachleitfaden nennt in dieser Gruppe nur bevorzugte Bezeichnungen.

Tabelle 2. **Über Demenzsymptome sprechen**

empfohlene Wörter	nicht empfohlene Wörter
Gedächtnisstörungen – 6	
Orientierungsstörungen – 2	
Vergesslichkeit – 12	

Aus der Tabelle 2 geht hervor, dass in Bezug auf Demenzsymptome in den untersuchten Artikeln das Wort *Gedächtnisstörungen* 6 Male verwendet wurde, z. B.:

(5) *„Eine Vorstellung beim Arzt ist generell geboten, wenn die* ***Gedächtnisstörungen*** *neu auftreten und anhalten oder wenn für den Betroffenen wichtige Dinge vergessen werden“, erklärt Prof. Janine Diehl-Schmid, Leiterin des Zentrums für kognitive Störungen am Klinikum rechts der Isar in München.* (DE 82)

In den analysierten deutschen Medientexten konnte nur ein Wort (*aggressiv*) aus der Gruppe zu den Symptomen im Zusammenhang mit Verhalten und Psyche beobachtet werden, es gehört zu den nicht empfohlenen Wörtern, z. B.:

(6) *Wenn Betroffene auf ihre Probleme oder Missgeschicke angesprochen werden, reagieren sie oft ablehnend oder* ***aggressiv****.* (DE 59)

Wörter, mit denen man Menschen mit Demenz bezeichnet, werden in den analysierten Medientexten oft verwendet, die meisten von ihnen, wie die Daten in der Tabelle 3 zeigen, gehören zu den empfohlenen Wörtern.

Tabelle 3. **Über Menschen mit Demenz sprechen**

empfohlene Wörter	nicht empfohlene Wörter
Betroffene/r – 86	*Demente/r* – 6
ein Mensch mit Demenz – 41	*dementer Vater* – 3
Demenzkranke/r – 33	*dementer Mensch* – 2
Demenzpatient/in – 4	*dementer Mann* – 1
ein Mensch, der mit (einer) Demenz lebt – 3	
ein Mensch mit kognitiven Einschränkungen – 3	
ein Mensch mit Alzheimer-Demenz – 2	

Beispiele (7) und (8) illustrieren die Verwendung nicht empfohlener Wörter aus dieser Gruppe, z. B. *dementer Mensch* und *Demente/r*:

(7) *Dies lässt auch die Zahl* ***dementer Menschen*** *stark ansteigen.* (DE 67)

(8) *Bayern versucht auf mehrfache Weise,* ***Demente*** *und Alzheimer-Erkrankte am gesellschaftlichen Leben teilhaben zu lassen.* (DE 97)

In den analysierten deutschen Texten werden jeweils einmal auch die zu den nicht empfohlenen zählenden Wörter *Leidende/r, Opfer* und *senil* verwendet, aber es lässt sich aus dem Verwendungskontext erkennen, dass sie als sprachliche Beispiele angeführt werden, und sie wurden deshalb nicht in die Analyse von empfohlenen und nicht empfohlenen Wörtern einbezogen, vgl.:

(9) *Statt Wörter wie* ***Leidende/r, Opfer*** *oder* ***senil*** *sollten eher Begriffe wie Mensch mit Demenz verwendet werden, die das betonen, was noch möglich ist.* (DE 63)

Aus der Gruppe der Wörter, die verwendet werden, wenn es um Menschen zu Beginn einer Demenzerkrankung unabhängig vom Alter geht, konnte in den analysierten Texten nur eine Wendung *Menschen mit beginnender Demenz,* die zu den empfohlenen gehört, festgestellt werden, vgl.:

(10) *Dabei handele es sich um Bewegungsgruppen für Menschen mit und ohne Demenz, digitale Kontakt- und Übungsstationen für* ***Menschen mit beginnender Demenz****, eine Seniorenrikscha und ein Patenprojekt für Kultur.* (DE 97)

In der Gruppe deutscher Sprachmittel, die empfohlen werden, wenn man über Familienangehörige, Freunde, Betreuende oder Pflegende von Menschen mit Demenz spricht, werden die Wendungen wie *er/sie begleitet einen Menschen mit Demenz / kümmert sich um einen Menschen mit Demenz* genannt. In dem analysierten Material wurden fünf Verwendungsfälle aus dieser Gruppe beobachtet, das Beispiel (11) illustriert die Verwendung von *begleiten*, z. B.:

(11) *Sie **begleitet** ihn – und arbeitet währenddessen in der Cafeteria.* (DE 91)

Im deutschen Sprachleitfaden werden nicht empfohlene Wörter und Wendungen in dieser Gruppe nicht genannt, aber es wird darauf hingewiesen, dass nicht jede/r als *Betreuende/r*, *Pflegende/r* bzw. *betreuende/r* oder *pflegende/r Angehörige/r* bezeichnet werden möchte, und es wird deshalb empfohlen, nach Möglichkeit nachzufragen, ob man mit einer von diesen Bezeichnungen einverstanden ist [4, S. 9]. In den analysierten deutschen Medientexten wurden sechs Verwendungsfälle von Wörtern und Wendungen wie *Pflegende/r* und *pflegende/r Angehörige/r* beobachtet, z. B.:

(12) *Ziel ist es, **die Pflegenden** zu entlasten und so die häusliche Pflege so lange wie möglich zu gewährleisten.* (DE 78)

Bei der Analyse der aus 55 deutschsprachigen Artikeln bestehenden Textsammlung zeigte sich, dass in Artikeln zum Thema Demenz in deutschen Nachrichtenportalen um deutlich mehr empfohlene Wörter und Wendungen verwendet werden als nicht empfohlene.

4.2. Ergebnisse der Analyse der sprachlichen Mittel in den litauischen Artikeln

Als nächstes werden die Ergebnisse der Analyse litauischer Medientexte zum Thema Demenz vorgestellt. Die Grundlage bilden Artikel, die im Quellenverzeichnis unter LT 1–LT 55 aufgelistet sind.

Tabelle 4. **Über Demenz sprechen**

empfohlene Wörter	nicht empfohlene Wörter
demencija ‘Demenz’ – 366	*senatvinė demencija* ‘Altersdemenz’ – 20
Alzheimerio liga ‘Alzheimer-Krankheit’ – 219	*senatvinė silpnaprotystė* ‘Altersschwachsinn’ – 17
demencijos simptomai ‘Symptome einer Demenz’ – 12	*demencijos liga* ‘Demenzkrankheit’ – 4
demencijos forma ‘Form der Demenz’ – 12	
demencijos tipas ‘Art der Demenz’ – 5	
demencijos sindromas ‘Demenz-Syndrom’ – 4	

Die Ergebnisse dieser Tabelle sind vielfältig. Es ist ersichtlich, dass viel mehr empfohlene Wörter und Wendungen als nicht Empfohlene festgestellt wurden, aber es werden in den analysierten litauischen Texten auch nicht empfohlene Wörter wie *senatvinė demencija* ‘Altersdemenz’ und *senatvinė silpnaprotystė* ‘Altersschwachsinn’ verwendet, z. B.:

(13) ***Senatvinės silpnaprotystės*** *kamuojami žmonės nesugeba pasirūpinti savimi – jie nesirūpina higiena ar mityba.* (LT 26)
‘Menschen, die vom **Altersschwachsinn** gequält werden, sind nicht in der Lage, sich selbst zu versorgen – sie kümmern sich nicht um ihre Hygiene oder ihre Ernährung.’

(14) *„Nėra absoliučiai patvirtintų jo demencijos faktų, tačiau galima beveik patikimai tvirtinti, kad tai buvo* ***senatvinė silpnaprotystė****“, – tikina psichiatras.* (LT 32)
‘„Es gibt keine absolute Bestätigung für seine Demenz, aber es ist fast sicher, dass es sich um **Altersschwachsinn** handelte“, sagt der Psychiater.’

(15) ***Senatvinė demencija*** *– tai dėl įvairių ligų prasidedantis intelekto kritimas, kai kartu pažeidžiamos ir kitos psichinės funkcijos, ryškėja suvokimo, elgesio pokyčiai.* (LT 41)
‘**Altersdemenz** ist ein Rückgang der Intelligenz aufgrund verschiedener Krankheiten, wenn andere geistige Funktionen beeinträchtigt sind und Veränderungen in der Wahrnehmung und im Verhalten aus.’

Die analysierten Medientexte zeigen, dass in den Artikeln auch die Wichtigkeit einer respektvollen Sprache hervorgehoben wird, wie dies durch das Beispiel (16) für die litauische Sprache und das Beispiel (9) für die deutsche Sprache illustriert werden kann, z. B.:

(16) *Pasak jos, nereikėtų silpstančios atminties ar blogėjančių kitų pažinimo funkcijų vadinti suvaikėjimu ar* ***senavine silpnaprotyste****.* (LT 40)
‘Sie sagt, dass man das Nachlassen des Gedächtnisses oder anderer kognitiver Funktionen nicht als Kindlichwerden oder **Altersschwachsinn** bezeichnen sollte.’

Die Tabelle 5 gibt eine Übersicht über die Verwendung der Sprachmittel in den analysierten Texten, mit denen über Menschen mit Demenz gesprochen wird.

Tabelle 5. **Über Menschen mit Demenz sprechen**

empfohlene Wörter	nicht empfohlene Wörter
asmuo, turintis demenciją / demenciją turintis asmuo ‘eine Person mit Demenz’ – 17	*demenciškas asmuo* ‘dementer Mensch’ – 1
	kenčiantis nuo demencijos ‘an Demenz Leidende/r’ – 2
	pacientas (ne sveikatos priežiūros kontekste) ‘Patient (nicht im Zusammenhang mit dem Gesundheitswesen)’ – 9

Basierend auf den Ergebnissen der Analyse dieser Gruppe kann geschlussfolgert werden, dass in den analysierten litauischen Artikeln sehr häufig die empfohlenen Wendungen wie *asmuo, turintis demenciją / demenciją turintis asmuo* ‘eine Person mit Demenz’ verwendet werden, z. B.:

(17) *Jos esmė – sukurti aplinką, kurioje* ***demenciją turintys asmenys*** *galėtų patirti meną.* (LT 18)

‘Die Idee ist, ein Umfeld zu schaffen, in dem **Menschen mit Demenz** Kunst erleben können.’

Beispiel (18) enthält die Wendung *kenčiantis nuo demencijos* ‘an Demenz Leidende/r’ und dient zur Illustrierung der Verwendung von nicht empfohlenen Wörtern und Wendungen dieser Gruppe, z. B.:

(18) *Vidutinio amžiaus žmonėms,* ***kenčiantiems nuo demencijos****, gydytojai klaidingai diagnozuoja menopauzę, vidutinio amžiaus krizę ar teigia, kad žmogaus pojūčius sukelia šeimyninės problemos, nors iš tiesų tai yra demencijos požymiai.* (LT 42)

‘Bei Menschen mittleren Alters, die **unter Demenz leiden**, stellen Ärzte die Menopause, eine Alterskrise falsch fest oder behaupten, dass die Symptome bei einer Person durch die Familienprobleme hervorgerufen werden, obwohl dies tatsächlich Anzeichen einer Demenz sind.’

Tabelle 6 zeigt, welche Wörter und Wendungen in den analysierten litauischen Medientexten in Bezug auf Familienangehörige, Freunde, Betreuende sowie Pflegende verwendet werden. Im litauischen Sprachleitfaden werden nicht empfohlene Wörter in dieser Gruppe nicht genannt.

Tabelle 6. **Über Familienangehörige, Freunde, Betreuende oder Pflegende von Menschen mit Demenz sprechen**

empfohlene Wörter	nicht empfohlene Wörter
artimieji ‘Angehörige’ – 65	
globėjas/a ‘Pflegende/r’ – 15	
žmona / sutuoktinis ‘Ehefrau / Ehemann’ – 2	
sergančiojo šeimos nariai ‘Familienangehörige des Erkrankten’ – 2	
ligonio šeimos nariai ‘Familienangehörige des Kranken’ – 1	

Die Ergebnisse der Tabelle 6 zeigen, dass die Wörter *artimieji* ‘Angehörige’ und *globėjas/a* ‘Pflegende/r’ ziemlich oft verwendet werden, z. B.:

(19) ***Artimieji*** *privalo žinoti, kaip elgtis su šį sutrikimą turinčiais žmonėmis.* (LT 25)

‘**Angehörige** müssen wissen, wie sie mit Menschen mit dieser Störung umgehen können.’

(20) *Muziejai iš Italijos, Airijos, Vokietijos bei VšĮ „Socialiniai meno projektai“ iš Lietuvos parengė programas, kuriomis siekiama per meninę veiklą muziejuje (pokalbį, lytėjimą, šokį ir judesį) teigiamai veikti bendravimą tarp demenciją turinčių asmenų, jų* ***globėjų*** *bei* ***šeimos narių****.* (LT 18)

‘Museen aus Italien, Irland, Deutschland und die öffentliche Institution „Social Art Projects“ aus Litauen haben Programme entwickelt, die darauf abzielen, die Kommunikation zwischen Menschen mit Demenz, ihren **Betreuern** und **Familienangehörigen** durch künstlerische Aktivitäten im Museum (Gespräch, Berührung, Tanz und Bewegung) positiv zu beeinflussen).’

Es kann beobachtet werden, dass sich das Wort *artimieji* ‘Angehörige’ sowohl auf Pflegende (19) als auch auf Menschen mit Demenz (21) beziehen kann, z. B.:

(21) *Jiems pagalbos reikia ne mažiau nei demencijos varginamiems* ***artimiesiems****.* (LT 18)

‘Sie brauchen nicht weniger Hilfe als ihre an Demenz erkrankten **Angehörigen**.’

In der Tabelle 6 zu dieser Gruppe werden die Verwendungsfälle aufgefasst, mit denen Familienangehörige von Menschen mit Demenz gemeint werden.

Tabelle 7 enthält Wörter und Wendungen, die verwendet werden, wenn es um die Auswirkungen von Demenz auf Menschen mit Demenz geht. In den analysierten litauischen Medientexten sind einige Wörter aus dieser Gruppe belegt.

Tabelle 7. **Über Auswirkungen von Demenz auf Menschen mit Demenz sprechen**

empfohlene Wörter	nicht empfohlene Wörter
iššūkis ‘Herausforderung’ – 4	*beviltiškumas* ‘Hoffnungslosigkeit’ – 1
sukelia stresą ‘verursacht Stress’ – 1	*neįmanoma* ‘unmöglich’ – 1
	skaudu ‘schmerzhaft’ – 2

Die Verwendung der Sprachmittel dieser Gruppe illustrieren die Beispiele (22) und (23). In (22) wird das empfohlene Wort *iššūkis* ‘Herausforderung’ und in (23) das nicht empfohlene Wort *skaudu* ‘schmerzhaft’ verwendet, z. B.:

(22) *Iniciatyva „Kalbėkime apie demenciją“ siekiama paskatinti įvairias visuomenės grupes daugiau sužinoti apie demenciją ir su ja susijusius sveikatos ir socialinius* ***iššūkius****.* (LT 39)

‘Die Initiative „Let’s Talk About Dementia“ soll verschiedene gesellschaftliche Gruppen ermutigen, mehr über Demenz und die damit verbundenen gesundheitlichen und sozialen **Herausforderungen** zu erfahren.’

(23) *Ir labai* ***skaudu*** *matyti, kaip savarankiškas, protingas, mąstantis žmogus tampa nuo aplinkinių priklausomu dideliu vaiku, nebesiorientuojančiu erdvėje, laike, nebegalinčiu pasirūpinti savimi.* (LT 27)

‘Und es ist sehr **schmerzhaft** zu sehen, wie aus einem unabhängigen, intelligenten, nachdenklichen Menschen ein großes Kind wird, das von anderen abhängig ist, sich nicht mehr in Raum und Zeit orientieren und nicht mehr für sich selbst sorgen kann.’

Aus der Gruppe der Wörter und Wendungen, mit denen Demenzsymptome genannt werden, werden in den analysierten litauischen Texten nur die empfohlenen Wörter wie *atminties praradimas* ‘Gedächtnisverlust’ (3 Verwendungsfälle) und *nuotaikos* ar *elgesio pokyčiai* ‘Stimmungs- bzw. Verhaltensänderungen’ (5 Verwendungsfälle) beobachtet. Beispiel (24) illustriert die Verwendung von *atminties praradimas* ‘Gedächtnisverlust’, z. B.:

(24) *Visi mokymų dalyviai sutiko su teiginiu, kad įprastai žmonės demencijos sutrikimą sieja tik su* ***atminties praradimu*** *ir dažnai nežino, kokie yra kiti demencijos požymiai ir iš jų kylantys sudėtingesni sutrikimai.* (LT 16)

‘Alle Teilnehmer waren sich einig, dass Menschen Demenz normalerweise nur mit **Gedächtnisverlust** in Verbindung bringen und sich der anderen Anzeichen von Demenz und der daraus resultierenden komplexeren Störungen oft nicht bewusst sind.’

Wenn über Symptome im Zusammenhang mit Verhalten und Psyche gesprochen wird, sollten die Wörter und Wendungen wie *pasikeitęs elgesys* ‘verändertes Verhalten’, *nepatenkintų poreikių reiškimas* ‘Ausdruck unerfüllter Bedürfnisse’ verwendet und entsprechend *sunkus elgesys* ‘schwierige Verhaltensweisen’, *nerimą keliantis elgesys* ‘beunruhigendes Verhalten’, *iššūkį keliantis elgesys* ‘herausforderndes Verhalten’ vermieden werden. In den analysierten litauischen Medientexten zu Demenz wurde aus dieser Gruppe nur die Wendung *pasikeitęs elgesys* ‘verändertes Verhalten’ (10 Verwendungsfälle) beobachtet, z. B.:

(25) *Pasak pašnekovės, šeimos, pastebėjusios* ***pakitusį*** *artimojo* ***elgesį****, turėti nebijoti kuo skubiau ieškoti pagalbos.* (LT 25)

‘Familien, die **eine Veränderung im Verhalten** ihres Angehörigen feststellen, sollten sich nicht scheuen, so bald wie möglich Hilfe zu suchen, sagt sie.’

Im litauischen Sprachleitfaden zur Demenz werden auch Wörter und Wendungen eingeführt, die verwendet werden, wenn in der wissenschaftlichen Forschung oder im medizinischen Kontext über Demenz gesprochen wird. Eine charakteristische Bezeichnung dieser Gruppe ist *tyrimo* (*mokslinio tyrimo*) *dalyvis* ‘Proband’ mit 14 Verwendungsfällen in den analysierten Artikel, auch ist in

8 Fällen die Bezeichnung (*demencijos*) *sindromas* '(Demenz-)Syndrom' belegt. Beide genannten Bezeichnungen gehören zu den empfohlenen Wörtern, z. B.:

(26) *Kursas truko vieną savaitę ir jau po tokio trumpo laiko pastebėta, kad pagerėjo* ***tyrimo dalyvių*** *smegenų gebėjimas persijungti, apie kurį jau kalbėjome.* (LT 20)

'Der Kurs dauerte eine Woche und schon nach so kurzer Zeit merkte man, dass sich die bereits angesprochene Schaltfähigkeit des Gehirns der **Probanden** verbessert hatte.'

(27) [...] *mokslininkai padarė išvadą, kad vitamino E vartojimas siejamas su ketvirtadaliu mažesne tikimybe, jog išsivystys* ***demencijos sindromas****.* (LT 20)

'[...] Forscher sind zu dem Schluss gekommen, dass die Einnahme von Vitamin E mit einem um ein Viertel geringeren Risiko für die Entwicklung **des Demenzsyndroms** einhergeht.'

Im litauischen Sprachleitfaden zur Demenz wird angegeben, dass das Wort *liga* 'Krankheit' nicht in Bezug auf Demenz verwendet sollte, es sei denn, man redet über konkrete Demenzerkrankungen wie Alzheimer-Krankheit [5, S. 8]. In den analysierten litauischen Medientexten wird das Wort *liga* 'Krankheit' oft verwendet, am häufigsten wirklich in der Wendung *Alzheimerio liga* 'Alzheimer-Krankheit', aber in 15 Verwendungsfällen wird das Wort auch auf die Demenz bezogen, z. B.:

(28) *Pasak jos, didelė gyventojų dalis nė nežino, kad* ***serga demencija****, arba jiems ši* ***liga*** *diagnozuojama per vėlai.* (LT 1)

'Sie sagt, dass ein großer Teil der Bevölkerung nicht weiß, dass er **an Demenz erkrankt ist**, oder dass diese **Krankheit** ihnen zu spät diagnostiziert wird.'

(29) [...] *tai tikriausiai reiškia, kad sūris nesaugo nuo demencijos, jei* ***ši liga*** *yra užprogramuota genetiškai.* (LT 5)

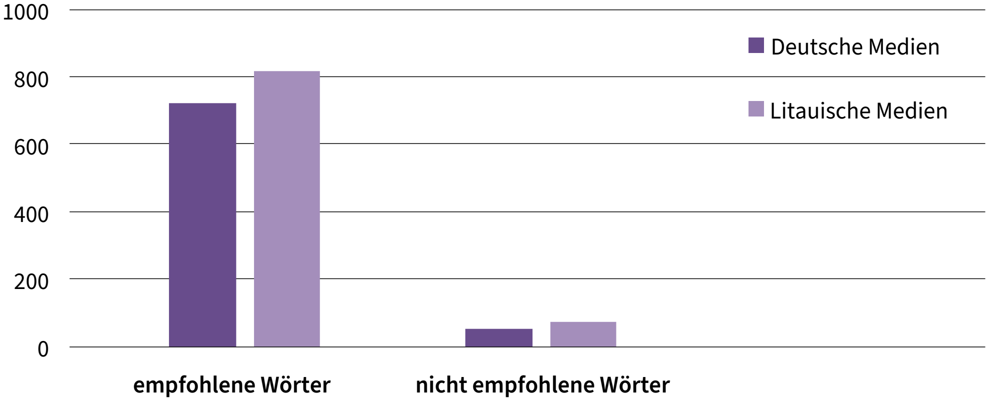
'[...] das bedeutet wahrscheinlich, dass Käse nicht vor Demenz schützt, wenn **diese Krankheit** genetisch vorprogrammiert ist.'

Basierend auf der Analyse der Textsammlung konnten die verwendeten Wörter und Wendungen zur Demenz ermittelt werden. Auch in den 55 analysierten litauischen Artikeln werden viel häufiger empfohlene Wörter und Wendungen verwendet als nicht Empfohlene.

4.3. Vergleich der Ergebnisse der Analyse von litauischen und deutschen sprachlichen Mitteln zur Demenz

In den Unterkapiteln 4.1 und 4.2 wurden die Ergebnisse der Analyse von litauischen und deutschen Artikeln getrennt beschrieben und in diesem Kapitel werden die Ergebnisse kontrastiv zusammengeführt. Diagramm 3 gibt die Summe jeweils empfohlener und nicht empfohlener Wörter und Wendungen in den analysierten litauischen und deutschen Artikeln und liefert somit einen Überblick über die allgemeinen Ergebnisse der Analyse.

Diagramm 3. **Ergebnisse der Analyse zur Verwendungshäufigkeit empfohlener und nicht empfohlener Wörter und Wendungen in deutschen und litauischen Medientexten zur Demenz**



Vergleicht man die Ergebnisse der Analyse der deutschen und der litauischen Artikel, so fällt auf, dass in den analysierten litauischen Artikeln insgesamt etwas mehr Wörter und Wendungen zum Thema Demenz verwendet werden als in den analysierten deutschen Artikeln. An dieser Stelle sollte noch einmal darauf hinweisen werden, dass für die Analyse die gleiche Anzahl von Artikeln, jeweils 55 deutsche und 55 litauische Artikel, ausgewählt wurde, aber die Artikel der litauischen und der deutschen Nachrichtenportale unterschiedliche Medientextsorten abdecken, die sich in Länge und Umfang voneinander unterscheiden. So umfasst die litauische Textsammlung auch solche längeren Textsorten wie Reportage (12,7 % der analysierten litauischen Texte) und Interview (16,4 %), während in der analysierten deutschen Textsammlung keine Reportagen und nur einzelne Interviews (1,8 %) vorkommen. Trotzdem sind aus dem Diagramm bestimmte Tendenzen zu erkennen. In allen untersuchten deutschen Artikeln kommen 672 empfohlene und 52 nicht empfohlene Wörter und Wendungen vor. In der analysierten litauischen Textsammlung werden 816 empfohlene und 72 nicht empfohlene Wörter und Wendungen verwendet. Wenn man diese Ergebnisse in Prozent umrechnet, beträgt die Anzahl der empfohlenen Wörter und Wendungen in deutschen Artikeln 92,8 % und entsprechend in den analysierten litauischen Artikeln 91,9 %. Nicht empfohlene Wörter und Wendungen machen in den untersuchten Artikeln deutscher Nachrichtenportale 7,2 % und in den litauischen

8,1 % aus. Die Resultate beider verglichenen Sprachen sind beinahe gleich und unterscheiden sich nur wenig.

Zusammenfassung und Ausblick

Zusammenfassend ist festzuhalten, dass das Thema der Demenz aus linguistischer Sicht insofern relevant ist, als es relativ neu und unerforscht ist. Demenz sollte heutzutage durch eine andere Linse – als Objekt interdisziplinärer Forschung – betrachtet werden, zumal dem Thema mehr Relevanz als je zuvor beigemessen wird.

Das Ziel der Untersuchung war es, anhand von deutschen und litauischen Medientexten zur Demenz die darin verwendeten Bezeichnungen kontrastiv zu analysieren und hinsichtlich der Kriterien einer angemessenen Sprache zu überprüfen. Als Orientierung dienten dazu zwei Sprachleitfäden zur Demenz, der deutsche und der litauische, in denen Informationen zur Verwendung bestimmter Wörter und Wendungen dargeboten und die Listen mit empfohlenen und nicht empfohlenen Wörtern und Wendungen zur Demenz vorgelegt werden. Aufgrund der Textsammlungen mit ausgewählten Artikeln zur Demenz in deutschen und litauischen Nachrichtenportalen wurde untersucht, wie in den analysierten Medien über Menschen mit Demenz gesprochen wird und welche Sprachmittel in Bezug auf Demenz verwendet werden. Basierend auf den Ergebnissen der Analyse von litauischen und deutschen Artikeln konnte festgestellt werden, dass sowohl die deutschen als auch die litauischen Medien das Thema Demenz ungefähr gleich wahrnehmen und prozentuell gesehen fast im gleichen Umfang empfohlene und nicht empfohlene Wörter und Wendungen verwenden. Nicht empfohlene Wörter und Wendungen wie *demencijos liga* ‘Demenzkrankheit’, *demenciškas asmuo* ‘dementer Mensch’ oder *kenčiantis nuo demencijos* ‘an Demenz Leidende/r’ werden in den analysierten Artikeln nur in geringem Maße verwendet. Es ist trotzdem wichtig, die Relevanz und Entwicklung des Themas Demenz weiter zu verfolgen und die Öffentlichkeit darüber aufzuklären, wie man richtig über Demenz spricht und schreibt. Die Medien sowie Journalisten haben einen relativ großen Einfluss auf die Leser von Nachrichtenportalen. Es kann argumentiert werden, dass Medien und Leser miteinander verbunden sind, daher ist es sehr wichtig, dass Journalisten wissen, wie man richtig über Demenz schreibt, denn sie sind die Begründer der Meinung, Wahrnehmung und des Verständnisses der Leser.

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Aspekte des Gesundheitswesens in Lehrbüchern für Deutsch als Fremdsprache (Topic "Illness/Disease" in Textbooks of German as a Foreign Language)

Ieva Blumberga
University of Latvia

Today, more and more people, including medical professionals, want to learn German. The desire of medical professionals and students is often linked to future career plans in Germany, Austria or Switzerland.

This chapter briefly addresses the question whether the textbooks widely used in DaF (German as a foreign language) and DaZ (German as a second language) teaching adequately deal with a topic of interest to this group of interviewees and to society as a whole: health and healthcare.

The analysis of the textbooks shows that the topic of health, which is important today, is not developed and is currently dealt with in an oblique way. Given the changes in the structure of society, in the practices of everyday life and in the priorities of values, it can be concluded that the thematic focus also needs to be updated in German textbooks, with a greater focus on the topics that are relevant to the interests of society and German language learners.

Keywords: *DaF* (*Deutsch als Fremdsprache*/ German as a Foreign Language); *DaZ* (*Deutsch als Zweitsprache*/ German as a Second Language); German Textbooks

Einleitung: Der Aktualisierungsbedarf des Themas „Medizin“ beim Erwerb von Deutsch als Fremdsprache

Fragen zur Gesundheit und auch zur Krankheit sind für jeden Menschen von Bedeutung. Auch beim Erlernen einer Fremdsprache darf dieses Thema nicht ignoriert werden. Im Themenbereich Gesundheit und Krankheiten finden im Laufe der Zeit auf verschiedenen Ebenen durchgehend dynamische Prozesse statt. Gerade die letzten Pandemiejahre haben deutlich gezeigt, dass das Erlernen dieses Themas in einer Fremdsprache eine Ergänzung mit einem neuen Vokabular und neuen Begriffen erfordert. Es erscheint daher durchwegs begründet, die Behandlung des Themas in Fremdsprachenlehrbüchern zu aktualisieren.

Beim Erlernen von Deutsch sind medizinische Aspekte sowohl im allgemeinen Sprachunterricht als auch in der berufsorientierten Bildung relevant. Die Erfahrung mit dem Unterrichten von Sprachkursen am Goethe-Institut Riga seit 2005 zeigt, dass es in fast jeder Erwachsenengruppe einen Teilnehmer mit medizinischem Bezug gibt, der aus persönlichen oder beruflichen Gründen, z.B. für eine Karriere in Deutschland, Österreich oder der Schweiz, Deutsch lernen möchte.

Ziel dieses Artikels ist es, kurz in einer ersten explorativen Analyse den aktuellen Stand der Umsetzung der genannten Themen zu skizzieren und ein Fazit zu ziehen, ob die aktuellen DaF- (Deutsch als Fremdsprache) und DaZ-Lehrwerke (Deutsch als Zweitsprache) Gesundheitsthemen entsprechend behandeln. Um eine Vorstellung davon zu bekommen, wie häufig und in welchem Kontext Aspekte des Gesundheitswesens in Deutsch als Fremdsprache-Lehrbüchern auftauchen, werden Lehrbücher für die Niveaustufen A1–C2, die häufig in Sprachkursen und in der universitären Studienpraxis eingesetzt werden, näher betrachtet:

„Schritte international neu“ (Niveaustufen A1–B1) [1–6];

„Sicher!“ (Niveaustufen B2–C1) [7–8];

„Erkundungen“ (Niveau C2) [9].

Diese Bücher sind weit verbreitet, z. B. in den Deutschkursen des Goethe-Instituts, die, wie bereits erwähnt, häufig von medizinischen Fachkräften besucht werden.

1. Ausgangsüberlegungen auf Basis theoretischer Ansätze zum Erlernen von Deutsch als Fremdsprache

Auf die Frage, was Aspekte des Gesundheitswesens mit dem Erlernen von Deutsch als Fremdsprache zu tun haben, geben die Erkenntnisse der konstruktivistischen Didaktik Hinweise. Die konstruktivistische Didaktik versucht systematisch, neue Haltungen im Lernprozess und in der Wissensentwicklung der Sprachlernenden zu definieren und haben so auch für Lernprozesse der Sprachlernenden hohe Relevanz:

> *Didaktik ist nicht mehr eine sichere Theorie der Aufklärung, der Emanzipation, die zu verkünden weiß, wer wie zu emanzipieren und mit welchen Inhalten aufzuklären ist, weil die konstruktiven Akte des Aufklärens und der Reflexion selbst an jene Konstruktionen in Selbständigkeit und Selbstbestimmung zirkulär zurückgebunden sein müssen, mit denen Schüler bzw. Teilnehmer als auch Lehrer bzw. Pädagogen ihre je eigenen Wege finden* [10, S. 266].

Eine zentrale Frage für positive Lernprozesse bezieht sich auf die Motivation der Lernenden. Davon ausgehend wird aus einer konstruktivistischen, didaktischen

Perspektive dem Prozess der Inhaltsauswahl besondere Aufmerksamkeit geschenkt [11, S. 52]. Werden Inhalte von Lernenden ausgewählt, steigert dies massiv die Lernmotivation. Die konstruktivistische Didaktik, in der Selbstbestimmung eine zentrale Position einnimmt, die auf demokratischen Prinzipien beruht, schenkt ebenso der Auseinandersetzung mit dem Stoff große Aufmerksamkeit. Sie basiert auf der Idee, dass der Lernprozess durch das individuelle und persönliche Engagement der Lernenden bestimmt wird.

Diese Ausgangsüberlegungen fließen in die hier vorliegende Untersuchung ein.

Eine Begründung für die Aufnahme medizinischer Themen und Begriffe in Lehrbüchern ist, dass Menschen, die eine neue Sprache lernen, sich meist für Gesundheit und Medizin interessieren. Obwohl manchmal ein allgemeines Interesse an der Sprache im Allgemeinen vorherrscht, kann der Wunsch, sich in einem neuen sozialen und sprachlichen Umfeld zu verständigen, auch ganz praktische persönliche Gründe haben, wie den Kauf von Medikamenten, gesundheitliche Probleme, Arztbesuche usw. Wie bereits erwähnt, kann es sich auch um ein berufliches Interesse handeln, z. B. im Falle von medizinischem Personal. Aus konstruktivistischer Sicht sind gerade diese Aspekte, d. h. die Möglichkeiten, die Sprache im realen Leben entsprechend den Interessen der Lernenden zu verwenden, sehr wichtig.

Erwähnenswert ist auch der neurodidaktische Ansatz zum Lehren und Lernen [12], der beschreibt, dass Lernen ein komplexer Prozess ist, was beim Erlernen der Sprache zweifellos der Fall ist. Beim Lernen verbindet sich das neuronale Netz zu komplexen Netzwerken und Systemen. Je mehr synaptische Verbindungen im Gehirn durch die Wiederholung des Lernstoffs gebildet und gestärkt werden, desto besser kann das Gelernte in das vorhandene Wissen integriert werden. Das Lernen bzw. die Generierung von neuem Wissen wird auch von unbewussten Faktoren bestimmt, die eine zentrale Rolle bei der Sinn- und Wissenskonstruktion spielen und weitgehend im limbischen System verarbeitet werden:

> *Dieses System vermittelt Affekte, Gefühle und Motivation und ist auf diese Weise der eigentliche Kontrolleur des Lernerfolgs* [12, S. 498].

Da Gesundheit häufig für Personen auch emotionale Dynamiken einschließt, ist dieser Aspekt der Emotionen ebenso mitzudenken.

Der Inhalt von Fremdsprachenlehrbüchern, die Unterrichtsdidaktik und andere Aspekte des Sprachenlernens sind eng mit dem Gemeinsamen Europäischen Referenzrahmen für Sprachen verbunden [13, S. 69]. Diese Richtlinien bilden eine gemeinsame Grundlage für die Entwicklung von Sprachlehrprogrammen, Richtlinien, Tests, Lehrbüchern usw. in ganz Europa. Die Leitlinien beschreiben in umfassender Weise, was Sprachenlernende lernen müssen, um die Sprache in der Kommunikation verwenden zu können, welche Kenntnisse erforderlich sind und welche Fähigkeiten entwickelt werden müssen, damit die Kommunikation erfolgreich verläuft. Der kulturelle Kontext, in dem die Sprache funktioniert, wird ebenfalls dargestellt, und es werden Niveaus der Sprachbeherrschung definiert, die es ermöglichen, die Fortschritte des Lernenden in jeder Lernphase und längerfristig während des gesamten Lebens zu bewerten [14].

Themen zu gesundheitlichen Aspekten werden beim Erlernen einer Fremdsprache in den Leitlinien für das Niveau B1+ ausdrücklich erwähnt: „Beim Arzt Symptome beschreiben" [13, S. 38]. Auf den anderen Sprachniveaus werden die gesundheitlichen Aspekte nicht erwähnt.

2. Übersicht der Lehrbücher für Deutsch als Fremdsprache

Im Folgenden werden die bereits erwähnten DaF-Lehrwerke, die alle Niveaustufen des Sprachenlernens abdecken, näher betrachtet. Die Tabellen 1 bis 6 geben einen kurzen Überblick über die Themen, die thematisch verwandten Texte und die kommunikativen Aufgaben, die der Entwicklung der Fremdsprachenkenntnisse dienen. Die Tabellen zeigen auch den notwendigen Wortschatz, der in den Lektionen über medizinische und gesundheitliche Aspekte enthalten ist.

Auf dem A1-Niveau, das insgesamt 112 Unterrichtsstunden umfasst (56 Stunden auf A1.1-Niveau und ebenso viel auf A1.2-Niveau), bietet das Buch „Schritte international neu" 14 Lektionen. Medizinische Aspekte werden in drei Lektionen (Lektionen 1, 5 und 10) behandelt [1,2]. Positiv ist, dass bereits auf dem Anfänger- bzw. A1-Niveau wichtige Vokabeln rund um Medizin und Gesundheit erlernt werden – Teile des menschlichen Körpers und Bezeichnungen von Krankheiten wie Schnupfen, Husten, Fieber etc., sowie grundlegende mündliche Kommunikationsfähigkeiten, z. B. wie man in einem deutschsprachigen Land einen Termin bei einem Arzt vereinbart (Lektion 10) [2].

Es kann festgestellt werden, dass der Schwerpunkt Medizin und Gesundheit im Deutschunterricht im Wesentlichen auf dem Niveau A1.2 liegt. Die einzelnen bisher gelernten lexikalischen Elemente wie Arzt, Klinik, Psychologie und die Aufgabe „Visitenkarte ausfüllen" dienen anderen Zwecken: sich grundsätzlich vorzustellen (Lektion 1) und über Ausbildung und Beruf zu sprechen (Lektion 5) [1].

Tabelle 1. **Medizinisches Thema auf A1-Niveau** [1,2]

Niveau	Lektion Nr.	Thema der Lektion	Texte	Wortschatz	Aufgaben
A1.1	1	*Guten Tag. Mein Name ist …*			Visitenkarte eines Arztes/ einer Ärztin ausfüllen
	5	*Mein Tag*	*Fokus Beruf: Über Studium und Beruf sprechen*	*der Arzt, die Klinik, die Psychologie*	

Niveau	Lektion Nr.	Thema der Lektion	Texte	Wortschatz	Aufgaben
A1.2	10	*Gesundheit und Krankheit*		Körperteile, *die Notaufnahme,* *die Schmerztablette,* *der Unfall,* *wehtun,* *das Krankenhaus*	Terminvereinbarung mit dem Arzt, Telefongespräch (Arztpraxis)

Die Grundstufe (A2) umfasst ebenfalls 112 Unterrichtsstunden [3, 4], wobei die Verteilung ähnlich ist wie bei A1. Von den 14 Lektionen kommt das Thema Medizin und Gesundheit in vier Lektionen vor (4, 5, 6 und 10). Hier geht es um das Gesundheitssystem und die Organisation des Gesundheitswesens, wie z. B. die Krankenversicherung und die Krankenkasse. Die Erhaltung der Gesundheit wird auch mit einem aktiven Lebensstil und Sport in Verbindung gebracht. Allerdings fehlt es auf A2-Niveau an wünschenswerten Aufgaben, die zur Entwicklung kommunikativer Fähigkeiten beitragen würden. Thematischer Wortschatz wird nur durch die Entwicklung des Lesens und des Leseverständnisses erworben.

Tabelle 2. **Medizinisches Thema auf A2-Niveau** [3,4]

Niveau	Lektion Nr.	Thema der Lektion	Texte	Wortschatz	Aufgaben
A2.1	4	*Arbeitswelt*	*Arbeitsrecht: Arbeitszeit, Krankheit und Urlaub*	*krank, die Krankenkasse, Krankenversicherungen, Krankmeldung*	
	5	*Sport und Fitness*	*Wie halten Sie sich gesund und fit?*	*Krankheiten, Augenuntersuchungen, Kopf- oder Rückenschmerzen*	
	6	*Ausbildung und Karriere*	Liedtext „*Super gestresst*“		
A2.2	10	*Kommunikation*		die Grippe, die Impfung, das Pflaster, impfen	

Das Lehrwerk „Schritte international neu“ bietet ein Lehrwerk auf A1- und A2-Niveau, das den potenziellen Patienten bei alltäglichen und recht häufigen Gesundheitsproblemen (Schnupfen, Grippe, etc.) und deren Behandlung in den Mittelpunkt stellt. Gleichzeitig mit der Vermittlung der Fremdsprache auf grundlegendem Niveau werden Informationen über die Krankenversicherung und die Möglichkeiten der Inanspruchnahme einer medizinischen Dienstleistung (Arztbesuch) vermittelt.

Insgesamt 168 Unterrichtsstunden (56 Unterrichtsstunden auf B1.1-, B1.2- und B1.3-Niveau) sind vorgesehen, um das B1-Niveau in Deutsch zu erreichen [5, 6]. Im Sprachkurs des Goethe-Instituts Riga werden die 14 Lektionen des Lehrwerkes *Schritte international neu* 5 und 6 in drei Niveaustufen unterteilt – B1.1 (Lektionen 1–5), B1.2 (Lektionen 6–10) und B1.3 (Lektionen 11–14). Medizinische Aspekte sind nur in zwei Lektionen (Lektion 3 und 11) enthalten [5, 6]. Im Vergleich zum Anfängerniveau ist die Darstellung des Themas sehr gering. Positiv sind die Hörtexte, wie z.B. die Radiosendung. Es werden kommunikative Methoden eingesetzt, um zu vermitteln, wie man bei gesundheitlichen Problemen um Rat fragt und ihn erteilt.

Tabelle 3. **Medizinisches Thema auf B1-Niveau** [5, 6]

Niveau	Lektion Nr.	Thema der Lektion	Texte	Wortschatz	Aufgaben
B1.1	3	*Gesund bleiben*	*Radiosendung: Gesundheitssprechstunde* *Radiosendung: Rückenschmerzen*	*Stress, Wunde, Verband, Insektenstich*	einen Rat suchen, einen Ratschlag geben
B1.2	11	*Miteinander*		die Erkältung	

Ein Blick auf die Daten in der Tabelle lässt den Schluss zu, dass gesundheitlichen Aspekten auf B1-Niveau keine große Bedeutung beigemessen wird. Viel mehr Bedeutung wird Themen wie Arbeit, Sprachen, Werbung, Politik usw. beigemessen.

Auch auf dem Niveau B2 werden wie auf B1 168 Unterrichtsstunden angeboten (56 Stunden auf B2.1, B2.2 und B2.3) [7]. Und auch hier sind die 12 Lektionen des Lehrbuchs in drei Niveaustufen unterteilt – B2.1 (Lektionen 1–4), B2.2 (Lektionen 5–8 Vorlesungen) und B2.3 (Lektionen 9–12). Medizinische Aspekte werden in 3 behandelt. Hör-, Lese- und Sprechfertigkeit werden geübt. Auch Themen wie das Burnout-Syndrom und alternative Behandlungsmethoden werden auf dieser Stufe behandelt. Der Einsatz von audiovisuellem Material und Medien ist ebenfalls positiv zu bewerten.

Tabelle 4. **Medizinisches Thema auf B2-Niveau** [7]

Niveau	Lektion Nr.	Thema der Lektion	Texte	Wortschatz	Aufgaben
B2.1	2	*In der Firma*	*Reportage: Entspannen am Arbeitsplatz* *Reportage: Rückenschmerzen*	*der Burn-out*	

Niveau	Lektion Nr.	Thema der Lektion	Texte	Wortschatz	Aufgaben
	5	*Körperbewusstsein*		Redewendungen zum Thema „Körper“	
B2.2	11	*Gesundheit*	*Fachartikel: Alternative Heilmethoden* *Film: Pflege tut gut*	die Reiseapotheke	ein Arztgespräch führen

Auf der höchsten Stufe C1, die 168 Unterrichtsstunden umfasst (56 Unterrichtsstunden auf C1.1 (Lektionen 1–4), C1.2 (Lektionen 5–8) und C1.3 (Lektionen 9–12)), kommen medizinische Aspekte in 2 der 12 Lektionen vor [8]. Sozial relevante Themen wie emotionale Intelligenz und Psychologie werden behandelt; auch Psychosomatik, Depression und Alzheimer-Krankheit werden erwähnt. Der Wissensstand der Studierenden ist ausreichend hoch, um über diese Themen zu diskutieren und ihre Meinung zu äußern. Die Alzheimer-Krankheit wird in einer Aufgabe erwähnt, die sich mit wissenschaftlichen Erkenntnissen befasst. Ein Beispiel ist eine Zeitungsschlagzeile: „Koffein reduziert die Symptome von Alzheimer“. Die Lernenden werden gebeten, ihre Meinung in Gruppen zu äußern.

Tabelle 5. **Medizinisches Thema auf C1-Niveau** [8]

Niveau	Lektion Nr.	Thema der Lektion	Texte	Wortschatz	Aufgaben
C1.1	3	*Intelligenz und Wissen*	*Wissenschaft und ihre Grenzen;* *Radioberichte „Neue Erkenntnisse“*	*der Computertomograf,* *das Gehirn,* *der Alzheimer*	
C1.2	8	*Psychologie*	*Freudsche Begriffe*	*emotionale Intelligenz, Empathie,* *Psychosomatik,* *Depression,* *Psychotherapie*	Begriffe aus der Psychologie erklären

Auf der Expertenstufe C2, die 168 Unterrichtsstunden umfasst, werden die entsprechenden Aspekte nur in einem einzigen großen Kapitel behandelt [9]. Gerade auf dieser Stufe, auf der die Teilnehmer ihre Meinung frei äußern, eine Vielzahl von Texten lesen und sich problemlos an Diskussionen beteiligen können, wird dieses Thema von öffentlichem Interesse unentschuldbar zu wenig behandelt.

Tabelle 6. **Medizinisches Thema auf C2-Niveau** [9]

Niveau	Lektion Nr.	Thema der Lektion	Texte	Wortschatz	Aufgaben
C2	5	*Forschung und Technik*	*Altes und Neues aus der Medizin, Kennen Sie Ihren inneren Arzt?*	*Krankheiten, menschlicher Körper, Wissenschaft und medizinische Behandlung*	*Gesundheitsversorgung* Grafik beschreiben: *Welche Möglichkeiten nutzen Sie, um Krankheiten vorzubeugen?*

Fazit

Die Gesundheit eines Menschen ist einer der grundlegenden Werte für seine Lebensqualität. Die Gesundheit spielt im Leben eines jeden Menschen eine wichtige Rolle. Eine Analyse der im Sprachunterricht weit verbreiteten Lehrbücher zeigt jedoch, dass Gesundheitsthemen relativ wenig behandelt werden. Das Themenspektrum reicht von Kuren und sportlichen Aktivitäten bis hin zu Krankheit und Psychologie. Alzheimer und Demenz werden erst auf C1.2-Niveau problematisiert. Der meist bei den Lernenden vorhandene persönliche Bezug zu diesen Themen kann somit einen spezifischen Kontext für den individuellen Sprachlernprozess darstellen. Der Unterrichtsprozess sollte einen pädagogisch-didaktischen Ansatz beinhalten, der persönliche Prozesse fördert und die persönliche Identität berücksichtigt. Themen zur Gesundheit eignen sich damit gerade aus der Sicht aktueller pädagogischer und lernpsychologischer Erkenntnisse in besonderer Weise für Lernprozesse beim Erwerb einer Sprache.

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Adresses of Authors

Ineta Balode Professor, *Dr. philol.*	University of Latvia, Department of German Studies, Visvalža iela 4a, Riga, LV-1050, Latvia ineta.balode@lu.lv
Ieva Blumberga Lecturer, Master of Philology	University of Latvia, Department of German Studies, Visvalža iela 4a, Riga, LV-1050, Latvia ieva.blumberga@lu.lv
Ariana Burmistrova Bachelor of Humanities	Vilnius University, Faculty of Philology, Institute for the Languages and Cultures of the Baltic, Department of German Philology, 5 Universiteto g., Vilnius, LT-01131, Lithuania ariana.burmistrova@flf.stud.vu.lt
Sven Claes Bachelor of Social Services, project specialist of Memory Guide Project	The Alzheimer Society of Finland, Pasilanraitio 9B, FI-00240 Helsinki, Finland sven.claes@muistiliitto.fi
Katrin Gross-Paju MD, PhD, Head of Neurology and Psychiatry Clinic	West-Tallinn Central Hospital, Tallinn, Estonia; Digital Health Department of Health Technologies, Tallinn University of Technology, Akadeemia tee 15A, Tallinn, Estonia katrin.gross-paju@taltech.ee
Siiri Jaakson MA of Social Services, CEO, specialist in cultural-sensitive memory work	The Finnish Centre for Cultural Diversity and Memory, Kumpulantie 1, 00520 Helsinki, Finland siiri.jaakson@mukes.fi
Dzintra Lele-Rozentāle Acting Associate Professor, *Dr. philol.*	University of Latvia, Department of German Studies, Visvalža iela 4a, Riga, LV-1050, Latvia dzintra.lele-rozentale@lu.lv

Ida Mitchell
Bachelor of Social Services, project coordinator of Memory Guide Project

The Alzheimer Society of Finland,
Pasilanraitio 9B, FI-00240 Helsinki, Finland
ida.mitchell@muistiliitto.fi

Ann-Ly Palosaari
Bachelor of Social Services, project manager of *Jututtaja* Project

The Finnish Centre for Cultural Diversity and Memory`s, Kumpulantie 1, FI-00240, Helsinki, Finland
ann-ly.palosaari@mukes.fi

Zanda Priede
Associate Professor

Rīga Stradiņš University, Department of Neurology and Neurosurgery, Dzirciema iela 16, Riga, LV-1007, Latvia;
Pauls Stradiņš Clinical University Hospital, Neurology Clinic, Pilsoņu iela 13, Riga, LV-1002, Latvia
zanda.priede@rsu.lv

Greta Pšemeneckienė
MD, PhD

Lithuanian University of Health Sciences, Department of Neurology;
Hospital of Lithuanian University of Health Sciences Kauno klinikos, Department of Neurology, Eivenių g. 2, Kaunas, LT-50161, Lithuania
greta.psemeneckiene@lsmuni.lt

Sintija Strautmane
Dr.

Rīga Stradiņš University, Faculty of Residency, Dzirciema iela 16, Riga, LV-1007, Latvia;
Pauls Stradiņš Clinical University Hospital, Neurology Clinic, Pilsoņu iela 13, Riga, LV-1002, Latvia
sintija.strautmane@stradini.lv

Justina Valinčiūtė
medical resident

Lithuanian University of Health Sciences, Department of Neurology;
Hospital of Lithuanian University of Health Sciences Kauno klinikos, Department of Neurology, Eivenių g. 2, Kaunas, LT-50161, Lithuania
justina.valinciute@stud.lsmu.lt

Miglė Viliušytė
student

Lithuanian University of Health Sciences,
Faculty of Medicine, Mickevičiaus g. 9,
Kaunas, LT-44307, Lithuania
migle.viliusyte@stud.lsmu.lt

Vaiva Žeimantienė
Associate Professor, *Dr. philol.*

Vilnius University, Faculty of Philology,
Institute for the Languages and Cultures of
the Baltic, Department of German Philology,
Universiteto g. 5, Vilnius, LT-01131, Lithuania
vaiva.zeimantiene@flf.vu.lt

Linguistic and Medical Aspects in Health Care.
Focus on Dementia

Ineta Balode, Dzintra Lele-Rozentāle, Zanda Priede
compilers and scientific editors of collective monograph

University of Latvia Press
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At the national level, the health care system is primarily focused on diseases affecting a significant part of the population of working age, aiming to ensure a healthy regeneration of society. One of the ensuing benefits is an increase in people's lifespan, which gradually changes the population's age structure, simultaneously drawing an increasing attention to health and quality of life in later years.

This global trend is associated with a special challenge – Alzheimer's, an illness for which no medical solution has yet been found, but the patient's situation depends on the influence and actions of the social environment – doctors, carers, relatives, and others. It irreversibly reduces patient's cognitive abilities, leading to dementia. At present, it is not possible to cure Alzheimer's and dementia, thus, the main emphasis is on its prevention, timely diagnosis and the quality of social care.

In these processes, of essential importance is not only the medical aspects, but also communication with the patient, – its foundation is formed by language and its use. Likewise, the necessity to develop interdisciplinary cooperation is revealed to deepen the theoretical understanding of linguistic processes and conditions in physician-patient communication, caregiver-patient communication, and other issues.

In global practice, interdisciplinary cooperation in dementia research has been established several decades ago, however, it is still at a fledgling stage in the Baltic states. This collective monograph is the first volume in Latvia, Lithuania and Estonia to address Alzheimer's dementia from the perspective of public discourse and linguistics, whilst also considering important aspects of dementia from a medical point of view, as well as outlining social solutions in neighbouring Finland.