

Training of family members and guardians for inclusion of ageing adults with disabilities



Parental education guidebook

Contents

The project	1
The partnership	2
Introduction.....	3
Chapter 1: How to recognize the limitations?.....	4
1.1 Accessibility for ageing people with disabilities	4
1.2 Physical limitations	5
1.3 Communication limitations	6
1.4 Plain language	8
1.5 Psychological limits of older people	9
1.6 Health limits for the elderly.....	11
1.7 Social limitations	14
Chapter 2: How to face and overcome challenges?.....	16
2.1 Challenges faced by elderly people with intellectual disabilities.....	16
2.2 Strategies to overcome challenges faced by elderly people with intellectual disabilities.....	17
2.2.1 Strategies to overcome physical and health limitations	17
2.2.2 Strategies to overcome social and communication limitations	18
2.2.3 Strategies to overcome self-care limitations.....	19
2.2.4 Strategies to overcome psychological limitations.....	21
2.3 Conclusion	22
Chapter 3: Tips for challenges and changes in cognitive capacities, physical abilities; social support networks; physical health of ageing adults with intellectual disabilities	26
3.1 Cognitive abilities	26
3.1.1 What is cognitive ability?	26
3.1.2 How can we increase cognitive ability?.....	30
3.2 Physical abilities.....	32
3.2.1 Health and well-being of ageing adults with intellectual disabilities.....	32
3.2.2 Enhancing physical activity for ageing with disabilities.....	33
3.2.3 The impact of aging on common physical changes	35
3.2.4 General recommendations for including exercise in daily life	37
3.3 Social support networks.....	39
3.3.1 Discrimination	40
3.3.2. How to face changes and challenges using the internet.....	41
3.3.3 How to face change and challenges with social events	43

3.4 An overview of physical health	48
3.4.1 Immune system	49
3.4.2 Physical health and ageing with disabilities	50
3.4.3 Promoting active lifestyles: Physical activities for individuals with intellectual disabilities and mild to moderate dementia	50
3.5 Ageing persons with intellectual disabilities and obesity	53
Chapter 4: How to emphasize healthy lifestyle habits?	59
4.1 Physical activity and people with intellectual disabilities	59
4.2 Importance of healthy lifestyle for people with intellectual disabilities.....	62
4.3 Promoting physical activity for adults with intellectual disabilities	63
4.4 Ten key tips for long and healthy life	65
Information about the partners	67

The project

Training of family members and guardians for inclusion of ageing adults with disabilities (Inclu-ageing) is a project which aims to promote a genuine inclusion of adults with disabilities. In fact, they can experience new needs and dynamics, which don't just influence their life, but also their social circles, such as those related to family and legal guardians. This is not connected to just the relationship with them, but to address the challenges and changes on both sides. Getting older is a complex part of life, not just ageing people can be disoriented, but also their caretakers. That's why this project wants to develop informal educational tools to support both to be included, providing concrete key actions and good practices.

This project will also create interactive material, like videos with advice about specific topics, with the objective to raise knowledge and awareness about responsibilities and roles of who takes care of ageing adults with disabilities.

In fact, the project aims to encourage attention to various ageing aspects, such as lifestyle, physical skills and health dimensions, stress challenges and limitations. A great amount of value is also given to the social support network, the implementation of socialization activities, and the relationship with their peer group.

For more information about the project you can visit its website:

<https://inluageing.infoproject.eu/>

The partnership

- The Maria Grzegorzewska University (APS)/Poland
- University Rehabilitation Institute (URI-Soča)/Slovenia
- ESTIA - Support and Social Care Centre for People with Intellectual Disability/Greece
- Croatian Association of Societies of Persons with Intellectual Disabilities (Savez OSIT)/Croatia
- Austrian Association of Inclusive Society (AIS)/Austria
- International Centre for the Promotion of Education and Development (CEIPES)/Italy

Authors

Vanda Canjuga (Savez OSIT),

Tija Osmanović (Savez OSIT),

Klaudia Majewska-Bielska (APS),

Katarzyna Kruś (APS),

Mariusz Fila (APS),

Zdenka Wltavsky (URI-Soča),

Jelena Ljubišić (URI-Soča),

Batuhan Alişoğlu (AIS),

Laura Calì (CEIPES),

Raquel Covelo (CEIPES),

Maria Zabertsi (ESTIA) &

Chrysa Nini (ESTIA).

Introduction

R2: Parental education guidebook

The goal of developing our parental education guidebook was to create a useful tool in the form of a guide, i.e. a manual to encourage and support parents, family members and legal guardians of ageing adults with intellectual disabilities, made by experts who are working with this population.

In the guidebook we covered four major topics:

- How to recognize limitations?
- How to face and overcome challenges?
- Tips for challenges and changes in cognitive capacities, physical abilities; social support networks; physical health of ageing adults with intellectual disabilities
- How to emphasize healthy lifestyle habits?

As a source of information, experts used professional literature and examples of good practice from their own expertise, which they combined into the guidebook with many tips and recommendations for everyday life with people with intellectual disabilities, emphasizing the difficulties and challenges that arise during aging.

Chapter 1: How to recognize the limitations?



According to the UN Convention on the Rights of Persons with Disabilities, disability is the confrontation of a person with a barrier existing in society that prevents or impedes him or her from exercising his or her freedoms and human rights. It is not a defect in hearing, sight or a neurological disorder that is most important in defining disability, but the way a person functions, the difficulties and barriers they face in the environment. A person with special needs is a person who, because of his or her external or internal characteristics, or because of the circumstances in which he or she finds him or herself, needs to take additional measures or apply additional resources to overcome a barrier in order to participate in various spheres of life on an equal basis with others. In this right-human character, a person becomes a person with special needs when confronted with a barrier. (Vargas et al., 2019).

1.1 Accessibility for ageing people with disabilities

Accessibility is a prerequisite for the enjoyment of all human freedoms and rights, whether social (e.g. accessible transport to a day support centre, accessible educational material), economic (e.g. accessible shop website), personal (e.g. accessible passport application form), political (e.g. access to a polling station, accessible ballot) and cultural (e.g. accessible theatre performance, accessible ticket purchasing service at the box office).

Emphasising the right of access to all spheres of life for people with disabilities, the Convention introduced specific tools to realise it: universal design and reasonable accommodation. Universal design refers to products, buildings, services, solutions that are usable by all people to the greatest extent possible, without the need for adaptations or specialised modifications. Reasonable accommodation is all necessary modifications or adaptations, not entailing disproportionate and unnecessary hardship (including financial), which are necessary in specific cases to ensure that persons with disabilities can benefit from goods and services. According to Article 5 of the Convention, the denial of reasonable accommodation to persons with disabilities is discrimination.

- We can divide the restrictions into:
- Physical limitations
- Communication limitations
- Psychological limitations
- Health limitations
- Social limitations
- Self-care limitations

1.2 Physical limitations

Physical limitations are barriers resulting from the lack of use or inadequacy, appropriate to the type of disability, of objects or devices. The elimination of this barrier should result in a person with a disability functioning more efficiently in society and enable him or her to function more effectively. For example:

- level differences, stairs, steps,
- no driveways,
- Narrow entrances and doors in buildings, corridors, high thresholds, stairs,
- No handrails, lifts or toilets for the disabled,
- unsuitable public transport (Baran, 2019).

It is important to plan and build accessible to all people among others:

- streets
- buildings
- walkways
- places common to the local community.

It is very important that offices and institutions are accessible to people with special needs.

In buildings:

- corridors, stairwells and lifts should be empty. Unobstructed.
- rooms and toilets should be adapted for people with special needs.

It is important that new buildings, pavements and streets are accessible to people with special needs. These people should see the plans for streets and buildings to say whether they are suitable for them.

1.3 Communication limitations

The most relevant element of accessibility in the context of the communication limitations of ageing people with intellectual disabilities is information and communication accessibility. "Communication" according to Article 1 of the Convention on the Rights of Persons with Disabilities includes languages, text display, Braille, communication by touch, large print, accessible multimedia, as well as ways, means and forms of communicating in writing, by hearing, simplified language, voiceover and assistive and alternative forms, including accessible information and communication technology.

Without access to information, a person cannot acquire knowledge and thus practice it. Without the possibility to communicate, a person is excluded and his or her will and decisions are often substituted by the will and decisions of others. According to the provisions of the Convention, this right is to be realised, inter alia, by:

- providing information for the general public to people with disabilities, in accessible forms and technologies appropriate to different types of disabilities,
- accepting and facilitating the use of sign languages, Braille, assistive and alternative communication and any other available means, ways and forms of communication by persons with disabilities in official matters,
- enabling the choice of the form of communication most appropriate to needs and abilities, including in a text that is easy to read and understand,
- urging private institutions that provide services to the general public, including via the Internet, to provide information and services in a form that is accessible and usable for people with disabilities,
- encouraging the media, including online information providers, to ensure that their services are accessible to people with disabilities.

Sign language, Braille and even screen readers are already commonplace in public discourse. Providing information and communication accessibility to people with intellectual disabilities and those with learning and memory difficulties, let alone those who cannot read or communicate verbally, is a particular challenge. Easy-to-read and easy-to-understand text and forms of assistive and alternative communication (AAC) are not widely used in education or in other spheres of life.

A text that is easy to read and understand is an information and communication accessibility tool and a reasonable accommodation to enable the exercise of freedoms and human rights. Accessibility is a right for everyone, but it is particularly relevant for people with disabilities. It means being able to

participate in all spheres of society and public life. It is the accessibility of information, communication, the physical environment, digital accessibility. It is the possibility to communicate, to be informed and to act autonomously.

Easy to read and understand - an easy to read and understand text (ETR text), addresses the information access needs of people with intellectual disabilities. Easy to read and understand text - a way of developing information for people with intellectual disabilities or reading and comprehension difficulties, including word choice, sentence formulation and text composition, the type and size of the font used, the use of appropriate illustrations or symbols, in accordance with European standards for the preparation of easy-to-read and understand text.

The normative obligation to ensure accessibility for persons with disabilities, including access to information, was first included in the UN Convention on the Rights of Persons with Disabilities (the Convention was enacted by the United Nations on 13 December 2006 as the Convention on the Right of Persons with Disabilities).

The discussion around the need for standardised easy-to-read and easy-to-understand text as a form of ensuring accessibility for people with intellectual disabilities was initiated by the umbrella organisation Inclusion Europe, which brings together 78 European NGOs working for people with intellectual disabilities from 39 countries. Within the framework of a project funded by the European Commission, entitled. "Pathways to adult education for people with intellectual disabilities", a document entitled "Information for all. "As part of a project funded by the European Commission entitled 'Pathways to adult education for people with intellectual disabilities', a document entitled 'Information for all. European standards for making information easy to read and understand' (Inclusion Europe, 2017). European standards for making information easy to read and understand'.

Principles:

- Find out as much as possible about the audience of the information before you prepare the text. Always use appropriate language. For example, do not use language for children if the information is intended for adults.
- Write short and comprehensible sentences
- Use simple and easy to understand words
- Use the same words to describe the same things
- Do not use foreign words unless they are very well known
- Use bold to highlight important information or a difficult word
- Write in the present tense
- Address the addressee directly
- Use the active rather than the past tense of verbs
- Use bullets if you are writing about a longer number of things

1.4 Plain language

Even about the most difficult, complex matters we can and want to write in a way that is simple, clear and accessible to everyone. Offices and institutions should prepare documents in plain language or in a text that is easy to read and understand. This way, people with intellectual disabilities will understand the text. They will be able to get their affairs done.

Write in such a way that the content of your message can be understood by all. Avoid specialised terms and official jargon. Remember that online messages reach different audiences, including the digitally excluded. Create content that complies with web accessibility standards.

In written texts always:

- develop acronyms,
- avoid repetition, empty words, unnecessary details,
- One paragraph is one thought,
- quote only accurate and brief statements,
- in longer texts, use interheadings and bold,
- don't write in capital letters - on the internet it's a scream.

The plain language standard, developed in the USA, is contained in the Federal Plain Language Guidelines and published at

<http://www.plainlanguage.gov/howto/guidelines/FederalPLGuidelines/FederalPLGuidelines.pdf>. It sets US benchmarks for the use of plain language in the administration's communication with the public.

The principles of the plain language - plain language - promoted by the Laboratory are intended for public communication and, in particular, for the communication of institutions, offices and companies with the general public:

- Think about the audience of the text - be aware of their needs and linguistic competence
- Remember that one thought is one sentence
- Write short and comprehensible sentences
- Use natural sentence order (subject → predicate → complement)
- Use words that are commonly known
- Use simple equivalents (synonyms) for difficult words
- Avoid foreign words
- Explain the meaning of the specialist word
- Bold key phrases
- Avoid past tense
- Address the recipient of the text directly

- Take care of the structure of the letter - start with the most important information
- Use the active side of verbs
- Design the text graphically - use headings, divide longer text into paragraphs
- Use bullet points

So what are the differences between an easy-to-read and understand text and plain language?

- A text that is easy to read and understand must be subject to an accessibility consultation by at least one person with an intellectual disability
- A piece of text that is easy to read and understand - a paragraph - corresponds to an appropriate graphic form (illustration or photograph).
- Differences in graphic form (no justification, larger font, more interline etc.).

Another important aspect of communication is digital accessibility. Digital accessibility means that websites and mobile applications can be used comfortably by people with different disabilities, e.g. vision, hearing, movement, but also intellectual disabilities or cognitive impairments.

People with special needs have the right to receive information about their condition. The information must be accessible and understandable to them. Deaf people can receive an sms with this information. Customers of public offices should be able to contact an official by:

- e-mail
- sms and mms
- chat
- Skype.

1.5 Psychological limits of older people

Older people face many difficulties related to their age and the developmental challenges they face. On a day-to-day basis, we do not think about the mental health of older people, we focus more on the biological aspect. Unfortunately, in late adulthood, seniors face many crises typical of this period, such as :

- Loss of loved ones,
- Disease , loss of health, physical ageing,
- Leaving home by adult children,
- Loneliness and isolation (fading ties with loved ones, dying peers),
- Retirement,
- Loss of prestige and reduction of social status,

- Loss of sense of utility,
- Change of residence (for seniors who move to a nursing home or other care facility),
- Awareness of the approaching end of life. (Fabiś, 2015).

These psychological limits can often also apply to people with intellectual disabilities. In order to better understand the problem, it would be necessary to break down the crises into factors, and to look at them from a closer perspective.

The loss of loved ones for each of us is a great experience, or to some extent even a trauma. By loss of a loved one, I mean a wife or husband. Nowadays, in developing countries, women are living much longer and therefore lose their husbands in old age. This is particularly difficult because becoming a widow entails a loss of independence, self-reliance and material (money, housing) and non-material possessions. The senior citizen's life suddenly lacks the person with whom he or she shared a flat, space and many other things.

Illness, loss of health and physical ageing is an inevitable process, strongly linked to late adulthood. Loss of health, fitness and youthful complexion affects mental health. Biological changes and loss of reproductive capacity reduce the quality of life of older people. This affects their daily well-being.

When adult children leave home to become independent and start their own families, it is called the 'empty nest' crisis. (Fabiś, 2015). It is worth noting that adult children moving out is not always associated negatively. Sometimes it is associated with the relinquishment of a parent's caring responsibilities. It is usually associated negatively when parents are very close to their children and their upbringing is the most important thing in the life of a parent. It is worth mentioning that in Poland as well as in EU countries, a reverse trend has been observed recently, with young people often not moving out of the family home due to lack of means to live independently due to economic difficulties. In relation to older people and their mental health, this can have both positive and negative effects.

Loneliness and isolation of older people and people with intellectual disabilities are phenomena that we mostly associate together, but occur separately. Loneliness has more physical overtones, related to the absence of a physical person (for example, the death of a spouse or children moving away from home). (Fabiś, 2015). It is worth noting that the self-esteem of lonely people is much lower (as in the case of widowhood) than that of people with a family. Loneliness can also have positive overtones for people who consciously take advantage of their loneliness through self-realisation, professional activity, etc. Loneliness is always considered in a negative aspect, it cannot be consciously chosen. (Fabiś, 2015).

Retirement is a strongly crisis phenomenon. It is associated with the end of gainful employment and the prestige associated with it, the loss of responsibilities as well as the benefits of going to work, of being active. It is worth noting that in industrialised countries, pensioners are mostly relegated to the margins of society. Pensions in many EU countries are still so low that it is difficult for a pensioner to make a living from it, and thus their social and material status is reduced. This situation is not comfortable for senior citizens. The intangible value of work should be emphasised. For a long period in one's life, one has performed some specific tasks in a rather routine manner. Suddenly, there comes a point when one no longer performs any tasks and thus has a lot of free time that one does not know how to use. In connection with retirement, seniors also experience a crisis of losing their sense of

usefulness. This is related to the end of work and the feeling of not being needed in society. The older person may feel that since they are no longer fit for work they are no longer needed in society either

A loss of prestige and a reduction in social status is closely associated with retirement. The change in a person's social position is caused primarily by a significant narrowing of the range of roles made available by society. (Fabiś, 2015). An occupational role is a significant role in society and retirement automatically reduces social status, especially for those seniors who have begun to fall ill as a result of their age.

A change of residence is a big change in the life of an older person or people with intellectual disabilities. On the one hand, we leave home with many memories, and on the other we move to a strange, unfamiliar place where everyone takes care of us. Being cared for in such a home can make a senior citizen feel helpless. Such a move also runs the risk of reducing contact with family and friends. In an old people's home, the senior citizen has to adapt to the prevailing conditions, such as meal times, curfew and sharing a room with a stranger. Such a move can also be positive for people who are struggling with loneliness, illness, neglect or abandonment.

The awareness of the approaching end is one of the most crisis-ridden situations. The senior citizen is aware that he or she is about to leave this world, taking stock of what he or she has or has not achieved in life. This can cause feelings of depression, of abandoned dreams, of unrealised life goals. On the other hand, there can be a fear of inevitable death.

1.6 Health limits for the elderly

From the first breath the ageing process begins, cells in our body die and are replaced by new ones. The older we get, the slower is the process of new cell formation in the body. When we are young, the process of cell formation happens quickly and runs smoothly. With time, the process slows down, a greater risk of errors in cell division arises, the ability to compensate for division errors decreases and the body loses efficiency.

The handy health encyclopaedia gives us the 'signs of ageing' that occur in the body:

- "As a result of arterial calcification, the vasculature can narrow, the pumping power of the heart decreases.
- The lungs have a reduced capacity. Due to calcification of the rib cartilages, the chest loses elasticity. Respiratory movements are impaired.
- The condition of the mucous membrane and muscularisation of the stomach and intestines is altered; digestion is slower, drugs take longer to be absorbed.
- Liver steatosis increases. Slower metabolism of harmful substances occurs. The liver, as a highly circulated organ, suffers from reduced cardiac function and thus reduced blood supply.
- The kidneys also have a weaker blood supply and become smaller. They excrete residues of harmful substances, including drugs, more slowly.

- Musculoskeletal tissues lose water, thus depositing more fat. Bone tissue wears out more than it reproduces. Muscle mass decreases, and signs of wear and tear appear in joints, vertebrae and intervertebral discs.
- From around the age of 40, the eyes lose their ability to see sharply and close-up reading glasses are needed. Light sensitivity also decreases - older people need more light than younger people.
- Changes in the ears occur. The external auditory canal narrows, parts of the ear ossify and the number of auditory neurons decreases.
- The skin is less well supplied with blood. It loses its ability to bind water, the tissue becomes less elastic, drier and more wrinkled.
- The water content of the human body drops from 62% to 54%. This results in a decrease in organs and their efficiency." (Corazza, 2002).

Vasoconstriction causes disruption to many organs, including the brain. The effects that brain disruption can have are as follows:

- Weakening of memory and reduced ability to concentrate,
- Deterioration of orientation,
- Mood volatility (Corazza, 2002).

In addition to organ-related changes, older people often have sleep problems. Deep sleep is less frequent in late adulthood. The distribution of sleep time also changes. Older people usually go to bed early and also get up early. This sleep is usually shallow and restless due to the lack of a 'deep' phase. It is worth noting that a sixty-year-old, compared to a twenty-year-old, will get up rested and sleepy, but after a few hours of activity will again feel the need to rest.

Health status is a major determinant of quality of life for older people and people with intellectual disabilities. As we age, our body becomes less efficient and less resistant to disease. The most common age-specific conditions are:

- Circulatory failure,
- Cancer diseases,
- Musculoskeletal conditions,
- Chronic obstructive pulmonary disease ,
- Osteoporosis,
- Arthritis,
- Stroke, Parkinson's disease, dementia,
- Cataracts,
- Malnutrition, anorexia nervosa,
- Chronic wounds. (Worach-Kardas, 2015).

We are currently seeing a pattern of an ageing population in Europe. This is due to medicine, which seeks to extend human lifespan and a declining birth rate. In today's world, most diseases are manageable, but it all depends on how quickly they are diagnosed.

We would like to discuss the diseases that are most associated with old age. It is worth starting with the disease of senile dementia, or Alzheimer's Disease, which affects 1 to 32.0% of the population in Europe. There are two forms of dementia. One begins early, between the ages of 40 and 65, and the other above this age (Corazza, 2002). In the course of these diseases, affected people gradually lose their memory, logical thinking, knowledge and skills. In the advanced stage of the disease, they lose the ability to perform simple tasks, do not recognise loved ones and lose control of bodily functions (incontinence, for example, may occur).

Another disease is osteoporosis, or bone thinning. It involves a loss of bone mass. Osteoporosis is more common in women than in men. The risk of developing osteoporosis is higher in women who:

- are hereditarily burdened,
- underwent surgery to remove their ovaries before the age of 40.,
- played excessive sport, which led to menstrual retention,
- take in little calcium in their food,
- smoke a lot,
- abuse alcohol,
- did not give birth to children,
- are very slim (Corazza, 2002).

Bone fractures and especially vertebral fractures and fractures of the neck of the femur can occur if osteoporosis develops.

The last disease we would like to focus on is Parkinson's disease. It usually starts with a slight tremor at rest and disappears with movement. With time, problems with movement start, it slows down and becomes restricted, the face stiffens and there is an increasing stiffening of the muscles. The disease occurs only in people over 50 years of age and can also be drug-induced. The disease cannot be cured or stopped, in the same way as Alzheimer's disease.

The ageing process is inevitable in our lives. In old age, our bodies slow down. Older people and people with intellectual disabilities are exposed to many serious illnesses, sometimes fatal ones. These illnesses make daily life more difficult and reduce the quality of life of older people. In late adulthood, it is important to remember to have regular checkups. Only early detection of a disease can improve the quality of life of older people.

1.7 Social limitations

Social barriers usually make it very difficult for people with disabilities to function actively in society. Indeed, disability can be perceived in very different ways: as a punishment, as a social stigma or as a challenge. It is usually a distinctive mark, characterising a person in a particular way. A person's outward image often determines acceptance, confidence in their abilities and in their ability to participate actively and fully in social and working life. People with disabilities can be accompanied by a sense of exclusion.

Social barriers are all kinds of obstacles, certain restrictions - prohibitions, norms of behaviour, customs - that reduce the accessibility and possibility of non-members to join a given social group. These barriers mainly affect the low participation rate of people with disabilities, significantly reducing their active participation in social, cultural and educational life. For example, there are no social activities for elderly persons in the local community.

Prejudices and stereotypes tend to play a negative role in society's attitudes towards people with disabilities.

Prejudice is not only a widespread phenomenon, present in all societies of the world, but also a dangerous one. Social psychologists define prejudice as a hostile or negative attitude towards people in a particular group. The ease and speed with which such behaviour and psychological damage can be adopted can cause great harm to others.

Prejudice and stereotypes undoubtedly give rise to the phenomenon of discrimination and the resulting indifference, which significantly slows down the process of creating a universal society. Discrimination is a form of unjustified social exclusion. It manifests itself by treating one person less favourably than another in a comparable situation because of some characteristic.

In the case of a stereotype, on the other hand, we use a ready-made formula. We assimilate views without thinking about and confronting them with reality. They are easy-to-use cognitive schemas, enabling a quick, albeit superficial, and assessment in various situations. They provide cues that are widespread in a given environment, suggesting in advance a way of seeing certain facts and social phenomena. Stereotypes are very resistant to change. They are assimilated as early as childhood and are strongly associated with membership of a particular group. Among other things, they cause psychological barriers and mental barriers.

Unfortunately, it is people with intellectual disabilities who are most at risk of discrimination and exclusion. Their social image is still based on stereotypes of a person who does not understand, is difficult to deal with, unpredictable, aggressive, antisocial. These people are most often seen as users of institutions, residents of social welfare homes, rather than active citizens, family members, clients of institutions. In addition, these people are most often supported by parents and other so-called carers, which often deprives them of the possibility of self-determination. Authors and editors must therefore take great care in preparing easy texts with a view to promoting a modern vision of independent living for every person with a disability.

Recent years have seen many changes in attitudes to disability, which also result in the use of new forms of support, enabling people with disabilities to participate more and more fully in the life of both the community and society, on an equal basis with others.

The modern dimension of disability concerns the subjectivity of these people, their right to self-determination, to exercise decision-making autonomy in any matter concerning them. Of course, this may require a number of support measures, such as supported decision-making, but it is essential to respect human dignity

The Convention vision of life for a person with a disability is one of independent living, encompassing all freedoms and rights, spheres of life and enjoyment. A natural consequence of this vision is, of course, the modern language and terminology of disability. For example, the term 'care' has been superseded, particularly in relation to adults, by the term support, and 'client', has been replaced in recent years by 'person receiving support', 'person receiving services'.

References:

- Baran, J. (2019). *Bariery architektoniczne i społeczne w dostępie osób z niepełnosprawnościami do dóbr kultury*. Kraków: Rocznik Biblioteki.
- Corazza, V., Daimler, R., Ens, A., Federspiel, K., Herbst, V., Langbein, K., Martin, H-P., Weiss, H. (2002). *Handy encyclopaedia of health. Ailments and symptoms. Diseases. Research and treatment. How to help yourself*. Poznań: Zys i S-ka.
- Fabiś, A., Wawrzyniak, J. K., Chabior, A (2015). *Ludzka Starość. Selected issues of social gerontology*. Kraków: Impuls Publishing House.
- Inclusion Europe. (2017). *Information for all. European standards for making information easy to read and understand*.
- Vargas, S., Szarota, M., Mazur-Rafał, M. (2019). *O osobach z niepełnosprawnościami*. Warszawa: Fundacja Humanity in Action
- Worach-Kardas, H. (2015). *Old age in the life cycle. Social and health facets of later adulthood*, Katowice: Scientific Publishing House "Silesia".

Websites:

<http://www.plainlanguage.gov/howto/guidelines/FederalPLGuidelines/FederalPLGuidelines>.

Chapter 2: How to face and overcome challenges?

People with intellectual disabilities face unique challenges throughout their lives, and these challenges often become more severe as they age. Aging family members who take care of persons with intellectual disabilities may decrease family support, and there is a high risk of mental illness, increased risk of various medical problems, living with chronic illness, and increased stress leading to anxiety and depression.

This chapter discusses the challenges that elderly people with intellectual disabilities face and the strategies that can help them overcome those challenges. According to Article 5 of the Convention, the denial of reasonable accommodation to persons with disabilities is discrimination.

We can divide the restrictions into:

- Physical limitations
- Communication limitations
- Psychological limitations
- Health limitations
- Social limitations
- Self-care limitations

2.1 Challenges faced by elderly people with intellectual disabilities

As people with intellectual disabilities age, their families, who provide care for them, also age, leading to a decrease in family support. Family members who have been providing care for decades may become unable to continue their responsibilities due to their age or health status. This may lead to institutionalization, which can be traumatic and expensive for both the person with intellectual disabilities and their family members.

People with intellectual disabilities have a higher risk of mental illness than the general population, which may be due to the lack of communication, social interaction, and community involvement. Studies have shown that elderly people with intellectual disabilities are at higher risk of depression, anxiety, and behavioral problems (Bhaumik et al., 2008; El Mrayyan, 2020).

Multimorbidity occurs, not only regarding psychological problems, as elderly people with intellectual disabilities are also at increased risk of various medical problems (Hermans & Evenhuis, 2014). Some of these problems are linked to chronic health conditions, such as diabetes, obesity, and heart disease, while others are linked with the aging process, such as Alzheimer's disease, dementia, and Parkinson's disease.

People with intellectual disabilities are likely to experience chronic illnesses (van dem Bemd et al., 2022). They may also face challenges in managing their illness due to communication barriers and lack of access to healthcare services. Chronic illnesses such as arthritis, hypertension, and diabetes can have a significant impact on their quality of life (Flygare Wallén et al., 2018).

Elderly people with intellectual disabilities may experience increased stress due to various factors such as changes in their routine, lack of social support, and chronic illness. This can lead to anxiety, depression, and other mental health problems.

2.2 Strategies to overcome challenges faced by elderly people with intellectual disabilities

2.2.1 Strategies to overcome physical and health limitations

Access to medical and other institutions

Access to medical and other institutions is critical for the well-being of elderly people with intellectual disabilities as well as a strategy to overcome physical limitations. Healthcare providers should be trained to recognize and address their unique needs. It is essential to create accessible healthcare environments that provide accommodations for communication and mobility needs (Morris et al., 2021).

Medical professionals should receive training on how to cater to the needs of elderly people with intellectual disabilities. This can include training on how to communicate effectively, how to identify and address the unique needs of elderly people with intellectual disabilities, and how to provide appropriate care (Truong et al., 2021).

Collaboration between organizations that cater to elderly people with intellectual disabilities and medical and other institutions can go a long way in improving access. This collaboration can involve sharing resources, expertise, and information to ensure that elderly people with intellectual disabilities receive adequate medical care but also taking care of providing large print materials, wheelchair accessibility, and sign language interpreters.

Communication with medical staff

Improving communication with medical staff is crucial to ensure that elderly people with intellectual disabilities receive the care they need (Truong et al., 2021). Healthcare providers should use plain language, visual aids, and other communication strategies to ensure that people with intellectual disabilities understand their health condition and treatment options. Family members and caregivers should be involved in the healthcare decision-making process and provide support and advocacy for people with intellectual disabilities.

Medical jargon can be confusing for anyone, but especially for someone with an intellectual disability. Medical staff should communicate in clear and simple language that the patient can understand. Visual aids such as pictures, diagrams, and videos can help elderly people with intellectual disabilities understand medical information better. Medical staff can use visual aids to explain, for example

procedures, treatments, and other medical information. They should also speak slowly, repeat information when necessary and give the patient time to process information and ask questions. There is a possibility that someone has severe intellectual disabilities, so it would be helpful to use sign language, pictures, or a communication device. Health centers could provide their patients with written information such as brochures or handouts which can be helpful.

Access to social services and caregivers

Improving access to social services and caregivers is essential to provide support for elderly people with intellectual disabilities. Social services such as day programs, respite care, and group homes can provide opportunities for social interaction, community involvement, and structured activities. Caregivers can provide assistance with daily living activities, such as bathing, dressing, and grooming, which can help elderly people with intellectual disabilities maintain their independence (Siegler et al., 2015).

It is important to do good research about community resources that offer social services and support to elderly people with intellectual disabilities. This could include various centers like local advocacy groups, senior centers, and disability organizations. Connecting with these groups would be an important step to learn more about the services they offer and how to access them.

Clear communication between the elderly person, their caregivers, and service providers is necessary. This includes making sure that everyone is on the same page when it comes to scheduling appointments, medication management, and other important details.

Caregivers should receive appropriate training and support to care for elderly people with intellectual disabilities. This includes training in communication techniques, disability awareness, and medication management. Social services are encouraging caregivers to attend workshops and conferences to expand their knowledge and skills.

It is suggested to develop an individualized care plan for the elderly person that addresses their specific needs and preferences. This should include input from the person, their caregivers, and service providers. These plans should be regularly reviewed and updated.

Technology can be a helpful tool for improving access to social services and caregivers. For example, telemedicine can allow for remote consultations with healthcare providers, while assistive technology can help elderly people with intellectual disabilities live more independently (Krysta et al., 2021).

2.2.2 Strategies to overcome social and communication limitations

Activities in the community

Involvement in various activities in the community can enhance the quality of life for elderly people with intellectual disabilities. Community-based activities such as volunteering, leisure activities, and employment opportunities can help them build social connections, develop new skills, and promote independence. It is essential to create inclusive communities that recognize the value of diversity and provide opportunities for people with intellectual disabilities to participate in various activities (Schepens et al., 2018).

It is important to understand the specific needs and interests of elderly people with intellectual disabilities and identify activities that are suitable for them. Activities such as arts and crafts, music, gardening, and gentle exercise can be beneficial. Before engaging in these activities, it is important to ensure that the chosen activities are accessible and tailored to the individual's abilities, like considering mobility aids, transportation, and sensory needs. Also, providers should discuss with family members and caregivers in identifying suitable activities and providing ongoing support. This can help to ensure that activities are tailored to the individual's needs and preferences.

Elderly people with intellectual disabilities may need support to participate in community activities. This can be managed by providing assistance with transportation, communication, and social skills, and considering partnering with volunteers or local organizations to provide additional support. Community organizations are creating a welcoming environment that is inclusive of elderly people with intellectual disabilities. This can include training staff in disability awareness and making physical accommodations to facilities. Community activities provide opportunities for people with intellectual disabilities to socialize and build relationships (Hankle et al., 2021).

We recommend involving family members and caregivers in identifying suitable activities and providing ongoing support. This can help to ensure that activities are tailored to the individual's needs and preferences.

2.2.3 Strategies to overcome self-care limitations

Nutritional habits

Eating habits are essential for the health of elderly people (Zaragoza-Martí et al., 2020). Healthcare providers should provide guidance on healthy eating habits, including portion control and meal planning. Caregivers should provide healthy meal options and promote physical activity to maintain a healthy weight and prevent chronic health conditions.

One of the main challenges faced by elderly people with intellectual disabilities is establishing a regular routine for their meals. Also, being illiterate can make it difficult to stick with recommended intake of some nutrients (Zaragoza-Martí et al., 2020). To overcome this challenge, it is important to establish a daily routine for meals, including breakfast, lunch, and dinner, and stick to it as closely as possible. They also may have limited food preferences or aversions to certain types of food. Providing a variety of foods that are nutrient-rich can help ensure that they are getting the necessary nutrients to maintain their health. A dietitian can help design a meal plan that is tailored to the specific nutritional needs and ensure that they are getting the necessary nutrients to maintain their health.

Elderly people with intellectual disabilities may have difficulty with complex tasks, including meal preparation. Simplifying the process by using pre-cut fruits and vegetables or pre-cooked meals can make meal preparation easier and more manageable. Offering alternative methods of food presentation, such as pureed or blended food, can make it easier for them to consume the necessary nutrients. Some of them need support, such as physical assistance with eating or offering verbal cues during the meal.

Muscle relaxation

Muscle relaxation techniques such as deep breathing, progressive muscle relaxation, and guided imagery can help to achieve psychological relaxation (Toussaint et al., 2021) and thus manage stress and anxiety. These techniques can also improve sleep quality, which can have a significant impact on their overall health and well-being.

People with intellectual disabilities might find it difficult to understand how muscle relaxation works, but using pictures, diagrams, and other visual aids it is easier to explain the concept. Progressive muscle relaxation involves tensing and tightening and then relaxing different muscle groups in the body, one at a time (Stöppler, 2005). This can help the individual become more aware of their body and learn how to consciously relax their muscles. In combination with standard treatments, it is used to relieve the symptoms of conditions, like headaches, diseases caused by cancer, high blood pressure and indigestion (Stöppler, 2005). Also breathing exercises, massage and music therapy can be used as a way to calm the body and relax muscles.

If the person is experiencing significant challenges with muscle relaxation, it is recommended to seek the help of a professional, such as a therapist or occupational therapist, who can provide additional guidance and support.

Yoga or other exercise classes

Yoga or other exercise classes can provide opportunities to reduce stress, anxiety, depression and chronic pain, promote physical activity and relaxation, improve sleep, overall health and well-being (Woodyard, 2011). It is essential to provide modifications and adaptations to accommodate physical disabilities and cognitive impairments

One of the major challenges faced by elderly people is their limited physical abilities. To overcome this, it's important to modify the exercises to meet their abilities. A qualified yoga instructor or fitness trainer can help to create customized modifications for each participant, taking into account their individual physical capabilities and limitations. Many people with intellectual disabilities may struggle with complex verbal instructions. Using visual aids and simplified instructions can help to improve their understanding of the exercises. For example, using pictures or diagrams to demonstrate the correct posture or movement can be very helpful.

It's important to use a gentle approach when working with elderly people with intellectual disabilities. Slow and gentle movements can help to reduce the risk of injury and discomfort, while also allowing participants to fully engage in the exercises.

Encouraging social interaction before and after the exercise class can help to promote a sense of community and belonging, which can enhance their overall well-being. Providing positive feedback, recognition and praise for their efforts can help to boost their motivation and confidence.

Walking

Walking can provide opportunities for physical activity, exposure to sunlight, and connection with nature. It can also promote relaxation, reduce stress, and improve cognitive functioning. It is essential to provide adaptive equipment and modifications to accommodate physical disabilities. Regular

physical activity can help improve gait, balance, and muscle strength, reducing the risk of falls and other injuries (Shrerrington et al., 2019).

Modifying the environment can make it easier for elderly people with intellectual disabilities to walk safely. This may include removing obstacles or tripping hazards, installing grab bars or handrails, and ensuring good lighting. Mobility aids such as walking frames or canes can help improve stability and balance, making it easier for elderly people with intellectual disabilities to walk. These aids should be properly fitted and regularly maintained to ensure safety and effectiveness. Wearing properly fitting and supportive footwear is essential for safe and comfortable walking.

Regular monitoring and assessment can help identify any changes or challenges that arise, allowing for early intervention and treatment. This may include monitoring gait, balance, and other physical indicators to ensure that the individual is walking safely and comfortably.

2.2.4 Strategies to overcome psychological limitations

Board games or card games

Board games can promote cognitive stimulation for elderly people (Ching-Teng, 2019). You can also use card games, mind games, or similar games that require following the rules and encourage socializing. These activities can improve memory, concentration, and problem-solving skills. It is essential to choose games that are appropriate for their cognitive level and provide adaptations, such as large print cards, to accommodate visual impairments. They can be complicated, so it may be helpful to simplify the rules to make them easier to understand. The best would be to use adaptive equipment, such as larger cards or game pieces, to make it easier for them to participate in the game.

We highly recommend to establish a consistent routine for playing games to help individuals with intellectual disabilities feel more comfortable and familiar with the game. These types of games are a great way to encourage elderly individuals with intellectual disabilities to socialize and interact with others. Using positive reinforcement, such as verbal praise or rewards, would be a great way to encourage and motivate elderly individuals to participate in the game and build confidence. But the most important thing is to make the game fun for them.

Creative activities

Creative activities such as art therapy, music therapy, and dance therapy can help elderly people with intellectual disabilities express themselves and promote emotional well-being. These activities can also promote social interaction and enhance self-esteem and confidence. For example, art therapy stimulates socialization and thus reduces loneliness and depressive symptoms (Galassi et al., 2022). It can improve cognitive performance and proprioception (Galassi et al., 2022).

Elderly people with intellectual disabilities may need extra support to participate in creative activities. This can include providing physical support such as holding brushes or pencils or offering verbal guidance to help them understand instructions. There are also many adaptive equipment options available that can help them to participate in creative activities. For example, there are specialized scissors with larger handles that can make cutting easier, or paintbrushes with grips that are easier to hold.

Incorporating familiar objects into creative activities can help them to feel more comfortable and engaged. For example, using a favorite color or incorporating a familiar object into a painting can help make the activity more meaningful.

Rather than focusing solely on the outcome of the creative activity, it can be helpful to focus on the process itself by providing positive feedback to make them feel successful and motivated to continue engaging in creative activities.

Gardening

Gardening and the very exposure to plants and greenery can have a beneficial effect on mental and physical health (Thompson, 2018). It can provide opportunities for physical activity, exposure to sunlight, and connection with nature. Such activities can also promote relaxation and thus reduce stress.

Elderly people may have difficulty using traditional gardening tools, so they should be given modifying tools to make them easier to handle, such as using tools with larger handles, or adding padding to tool handles for better grip. Garden layout should be accessible for elderly individuals with disabilities by minimizing obstacles and creating clear pathways. Raised garden beds can also be helpful, as they can reduce the amount of bending required. There are many adaptive gardening techniques that can be used, such as container gardening or vertical gardening. These techniques can make gardening easier for individuals with mobility or balance issues.

Providing support and assistance can help elderly individuals with intellectual disabilities feel more confident and safer when gardening. This could include providing guidance on how to plant and care for plants, or physical support when moving heavy objects. Gardening can also provide an opportunity for social interaction, like creating a gardening group or community garden where elderly individuals with intellectual disabilities can work together and support each other.

2.3 Conclusion

In conclusion, the challenges faced by elderly people with intellectual disabilities can be daunting, but there are strategies that can be employed to overcome them. These strategies involve improving access to social services and caregivers, improving access to medical and other institutions, improving communication with medical staff, improving nutritional habits, promoting muscle relaxation, engaging in board games or card games, participating in creative activities, gardening, and engaging in yoga or other exercise classes. By employing these strategies, elderly people with intellectual disabilities can improve their overall health and well-being and lead fulfilling lives.

References:

- Alzheimer's Disease International (1999). *Planning and design guide for community-based day care centres* 21 pp.
- Antonangeli, J.M. (1995). The Alzheimer project: formulating a model of care for persons with Alzheimer's disease and mental retardation. *American Journal of Alzheimer's Disease*, 10(4), 13-16.
- Bevens, S., Dawes, S., Kenshole, A., & Gaussen, K. (2015). Staff views of a music therapy group for people with intellectual disabilities and dementia: A pilot study. *Advances in Mental Health and Intellectual Disabilities*, 9(1), 40-48.
- Bhaumik, S., Tyrer, F. C., McGrother, C., & Ganghadaran, S. K. (2008). Psychiatric service use and psychiatric disorders in adults with intellectual disability. *Journal of Intellectual Disability Research: JIDR*, 52(11), 986–995. <https://doi.org/10.1111/j.1365-2788.2008.01124.x>
- Bigby, C., Bowers, B., & Webber, R. (2011). Planning and decision making about the future care of older group home residents and transition to residential aged care. *Journal of Intellectual Disability Research*, 55(8), 777-789.
- Bowey, L. & McGlaughlin, A. (2005). Adults with a learning disability living with elderly carers talk about planning for the future: Aspirations and concerns. *British Journal of Social Work*, 35(8), 1377-1392.
- Bratek, A., Krysta, K., & Kucia, K. (2017). Psychiatric Comorbidity in Older Adults with Intellectual Disability. *Psychiatria Danubina*, 29(3), 590–593.
- Stöppler, M. C., MD. (2005, May 23). Progressive Muscle Relaxation for Stress and Insomnia. *WebMD*. <https://www.webmd.com/sleep-disorders/muscle-relaxation-for-stress-insomnia>
- Edwards, G., Jones, C., Pearson, E., Royston, R., Oliver, C., Tarver, J., Crawford, H., Shelley, L., & Waite, J. (2022). Prevalence of anxiety symptomatology and diagnosis in syndromic intellectual disability: a systematic review and meta-analysis. *Neuroscience and Biobehavioral Reviews*, 138, [104719]. <https://doi.org/10.1016/j.neubiorev.2022.104719>
- El Mrayyan, N. (2020). *Older people with intellectual disability and affective and anxiety disorders: Comorbidities, healthcare utilisation, pharmacotherapy and frailty factors requiring support and social services*. [Doctoral Thesis (compilation), Department of Health Sciences]. Lund University: Faculty of Medicine.
- Flygare Wallén, E., Ljunggren, G., Carlsson, A. C., Pettersson, D., & Wändell, P. (2018). High prevalence of diabetes mellitus, hypertension and obesity among persons with a recorded diagnosis of intellectual disability or autism spectrum disorder. *Journal of Intellectual Disability Research: JIDR*, 62(4), 269–280. <https://doi.org/10.1111/jir.12462>
- Galassi, F., Merizzi, A., D'Amen, B., & Santini, S. (2022). Creativity and art therapies to promote healthy aging: A scoping review. *Frontiers in Psychology*, 13, 906191. <https://doi.org/10.3389/fpsyg.2022.906191>

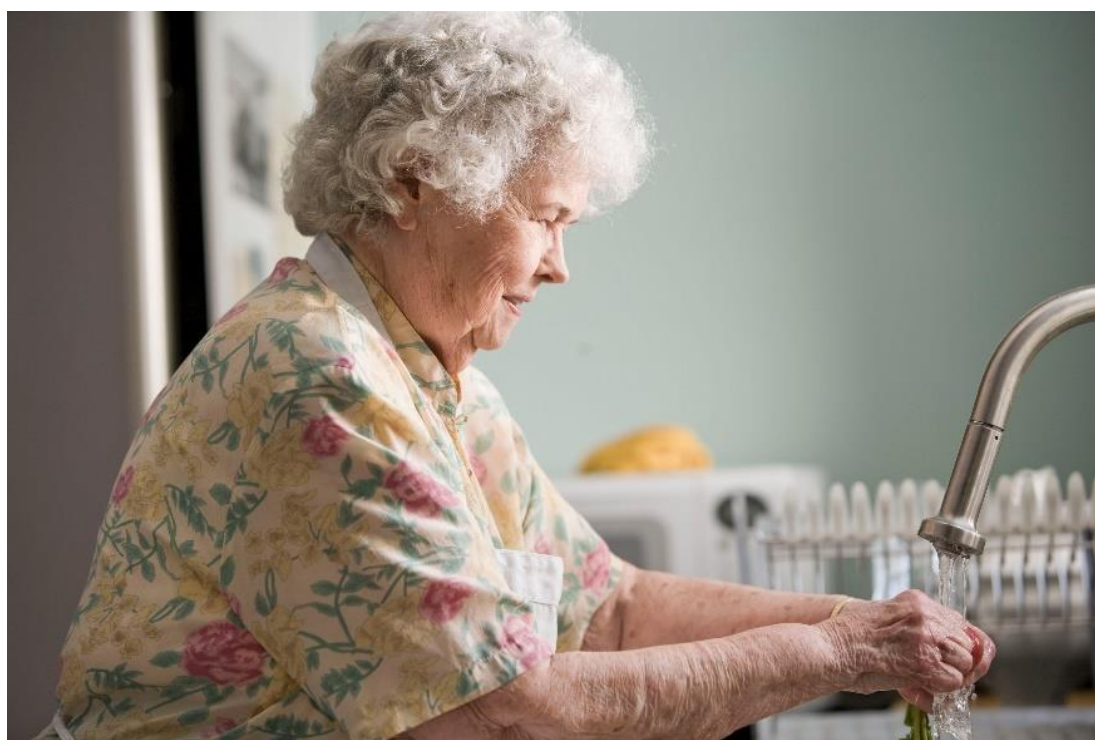
- Hankle, Z. J., Bluestone, D. C., Kramer, J. K., Bassi, P., & Goreczny, A. J. (2021). What activities individuals with intellectual disabilities do for fun: exploration into self-care. *International Journal of Developmental Disabilities*, 68(5), 712–722. <https://doi.org/10.1080/20473869.2021.1884788>
- Hermans, H., & Evenhuis, H. M. (2014). Multimorbidity in older adults with intellectual disabilities. *Research in Developmental Disabilities*, 35(4), 776–783. <https://doi.org/10.1016/j.ridd.2014.01.022>
- Hoge, G., & Wilhite, B. (1997). Integration and Leisure Education for Older Adults with Developmental Disabilities. *Activities, Adaptation & Aging*, 21(3), 79–90. https://doi.org/10.1300/j016v21n03_08
- Kolanowski, A., Fortinsky, R. H., Calkins, M., Devanand, D. P., Gould, E., Heller, T., Hodgson, N. A., Kales, H. C., Kaye, J., Lyketsos, C., Resnick, B., Schicker, M., & Zimmerman, S. (2018). Advancing Research on Care Needs and Supportive Approaches for Persons with Dementia: Recommendations and Rationale. *Journal of the American Medical Directors Association*, 19(12), 1047–1053.
- Krysta, K., Romańczyk, M., Diefenbacher, A., & Krzystanek, M. (2021). Telemedicine Treatment and Care for Patients with Intellectual Disability. *International Journal of Environmental Research and Public Health*, 18(4), 1746. <https://doi.org/10.3390/ijerph18041746>
- LePore, P. & Janicki, M.P., (1990). *The Wit to Win: How to Integrate Older Persons with Developmental Disabilities into Community Aging Programs*. Albany, NY: New York State Office for the Aging.
- Morris, M. A., Wong, A. A., Dorsey Holliman, B., Liesinger, J., & Griffin, J. M. (2021). Perspectives of Patients with Diverse Disabilities Regarding Healthcare Accommodations to Promote Healthcare Equity: a Qualitative Study. *Journal of General Internal Medicine*, 36(8), 2370–2377. <https://doi.org/10.1007/s11606-020-06582-8>
- Schepens, H. R. M. M., Van Puyenbroeck, J., & Maes, B. (2019). How to improve the quality of life of elderly people with intellectual disability: A systematic literature review of support strategies. *Journal of Applied Research in Intellectual Disabilities: JARID*, 32(3), 483–521. <https://doi.org/10.1111/jar.12559>
- Siegler, E. L., Lama, S. D., Knight, M. G., Laureano, E., & Reid, M. C. (2015). Community-Based Supports and Services for Older Adults: A Primer for Clinicians. *Journal of Geriatrics*, 2015, 678625. <https://doi.org/10.1155/2015/678625>
- Shankar, R., Haut, F. & Courtenay, Ken. (2020). *Mental health services for adults with mild intellectual disability* (College Report, Faculty of General Adult Psychiatry of the Royal College of Psychiatrists, UK).
- Sherrington, C., Fairhall, N. J., Wallbank, G. K., Tiedemann, A., Michaleff, Z. A., Howard, K., Clemson, L., Hopewell, S., & Lamb, S. E. (2019). Exercise for preventing falls in older people living in the community. *The Cochrane Database of Systematic Reviews*, 1(1), CD012424.
- Thompson, R. (2018). Gardening for health: a regular dose of gardening. *Clinical Medicine*, 18(3), 201–205. <https://doi.org/10.7861/clinmedicine.18-3-201>

- Toussaint, L., Nguyen, Q. A., Roettger, C., Dixon, K., Offenbacher, M., Kohls, N., Hirsch, J., & Sirois, F. (2021). Effectiveness of Progressive Muscle Relaxation, Deep Breathing, and Guided Imagery in Promoting Psychological and Physiological States of Relaxation. *Evidence-based Complementary and Alternative Medicine*, 2021, 5924040. <https://doi.org/10.1155/2021/5924040>
- Tremblay, M., Tryssenaar, J., Clark, K., Richardson, J., Watt, S., Rosenthal, C., Tompkins, C., Turpie, I., McColl, M.A. & Pentland, W. (1997). Aging with a Preexisting Disability: Developing a Bibliography and Curriculum Guide for Health and Social Science Educators. *Educational Gerontology: An International Quarterly*, 23(6), 567–579. doi:10.1080/0360127970230606
- Truong, A., Alverbratt, C., Ekström-Bergström, A., & Antonsson, H. (2021). Caring for Persons with Intellectual Disabilities and Challenging Behavior: Staff Experiences with a Web-Based Training Program. *Frontiers in Psychiatry*, 12, 580923. <https://doi.org/10.3389/fpsy.2021.580923>
- van den Bemd, M., Cuypers, M., Bischoff, E. W. M. A., Heutmekeers, M., Schalk, B., & Leusink, G. L. (2022). Exploring chronic disease prevalence in people with intellectual disabilities in primary care settings: A scoping review. *Journal of Applied Research in Intellectual Disabilities*, 35(2), 382–398. doi:10.1111/jar.12957
- Woodyard, C. (2011). Exploring the therapeutic effects of yoga and its ability to increase quality of life. *International Journal of Yoga*, 4(2), 49–54. <https://doi.org/10.4103/0973-6131.85485>
- Zaragoza-Martí, A., Ruiz-Robledillo, N., Sánchez-SanSegundo, M., Albaladejo-Blázquez, N., Hurtado-Sánchez, J. A., & Ferrer-Cascales, R. (2020). Eating Habits in Older Adults: Compliance with the Recommended Daily Intakes and Its Relationship with Sociodemographic Characteristics, Clinical Conditions, and Lifestyles. *Nutrients*, 12(2), 446. <https://doi.org/10.3390/nu12020446>

Chapter 3: Tips for challenges and changes in cognitive capacities, physical abilities; social support networks; physical health of ageing adults with intellectual disabilities

3.1 Cognitive abilities

3.1.1 What is cognitive ability?



Ageing is defined as a period in which various functions, abilities and opportunities, especially social, cognitive and psychosocial, outweigh progress. Active ageing, on the other hand, suggests a different perspective on the ageing processes of individuals: the expression identifies ageing adults who can fulfil the conditions of adequate nutrition, being physically and mentally active, living in a safe environment, working and taking part in the social environment while maintaining a healthy lifestyle. The term active ageing emphasizes that the person continues to use and even develop their strengths by focusing on their strengths rather than their losses during the ageing period. The World Health Organisation defines active ageing as the process of ensuring the best level of health, social participation and security opportunities so that the quality of life does not decline as people age and defends it as a right for all individuals. (Ünalán, 2012).

In other words, active ageing is the ability to live the senior years in the highest quality possible. The absence of diseases or disabilities with ageing, the preservation of physical and cognitive ability, and the person's

continued active participation in society (the continuation of interpersonal relations and social roles) are listed as the basic requirements for active ageing. (Ünalın, 2012).

Preserving cognitive abilities and physical features as much as possible is crucial to increase the person's well-being and adaptation to the environment. This is even more important for persons with disabilities, which require extra attention and precautions to preserve and enhance their cognitive abilities. There are some activities or situations that can be implemented to increase these kinds of abilities for persons with disabilities. There are some factors that we can consider in this case, such as socio-economic status. In the research conducted by Diker in 2001, it has been revealed that the situation in which the individual is in, and the socio-economic level of the life he/she lives affects his/her cognitive ability. This situation is related to the fact that individuals with higher socio-economic status can access health care more easily. In other words, it is very important to keep the welfare level of the individual, especially the socio-economic situation, at the highest level possible. (Diker et al., 2001).

Studies examining the behavioural effects of Alzheimer-type Dementia (ATD) show that the psychiatric and psychological disorders accompanying the disease are apathy, agitation, anxiety, irritability, dysphoria, delusion, abnormal motor behaviour, hallucinations, depression and euphoria. Depending on the ATD process, if a patient struggles with maintaining a daily lifestyle, the likelihood of depression increases. As a result of these factors, the cognitive processes are negatively affected too. It has also been shown by various research findings that the cognitive performance of ATD individuals with depression is lower than those without depression. (Şat, 2020).

Given the above information, several basic strategies have been developed for the care of persons with disabilities. Among the strategies and elements to consider and take care of, there are: (Demir, 2018).

1. Maintaining the patient's mental functions

In general, there are some elements that the caregiver should pay attention to in order to maintain their patients' mental functions. It is necessary to reduce the uncertainty around the patient and increase the clues. By making a regular plan for daily life, it is necessary to facilitate the patient's adaptation to use pictures, notes, labels, clues that help the patient's remembering and orientation, through an exposure with the external environment to receive various stimuli.

2. Physical Security

Persons with intellectual disabilities may experience injuries because they cannot think that objects or situations may be harmful. Therefore, they should create a safe environment around the patient and place gripping devices in the bathroom and toilet to prevent falling. Floors should not be left slippery. Items that may disturb the patient's balance should be removed. Dangerous substances, drugs and sharp tools should not be left in the open.

3. Reduction of Agitation and Anxiety

In cases of agitation and anxiety, the caregiver should talk to the patient softly and calmly, make positive evaluations, make a guided choice between two possibilities, and offer simple exercise suggestions to the patient.

4. Organisation of Communication

In general, the caregiver should pay attention to communication. For instance, it constitutes a good practice to introduce themselves when entering the room. When starting a conversation, remember to speak clearly,

simply, slowly, to explain one concept at a time, allowing time for the person with ATD to understand and respond. Also, it is important to consider your tone while speaking, without shouting, addressing the interlocutor with his name if needed. If a concept is not clear, being sensitive is crucial to not embarrass the patients, trying to understand what they meant, reassuring, and being careful of the patients' body language and observing if they feel comfortable with the situation and environment. The caregiver can encourage them to talk about their memories and make a daily activity plan (Ünsal-Barlas & Onan, 2008).

5. Ensuring the Fulfilment of Activities of Daily Living

It is the caregiver's role to help them fulfil their daily life activities such as feeding, bathing, dressing, and to make them independent. The patient should be encouraged to complete tasks about daily life activities and support them with positive feedback when they do.

6. Supporting Caregivers

Caregivers experience mental and physical health problems because of their inability to effectively cope with the stress they experience. In order to reduce these risks, family members can support caregivers learning about the nature of the disease, its causes, symptoms, and management of the problems caused by the disease and provide support by forming support groups.

In addition, the way a message is conveyed can affect the communication success. Indeed, the research by Christine L. Williams and her colleagues in 2005, has suggested that open-ended questions should NOT be used in communication with persons with disabilities and questions should be asked in such a way that they can only be answered with "yes, no" (Tappen, 1994; Williams et al., 2005). Communication should be focused on a single subject. While interacting with an adult with ATD, a caregiver should: (Akyar, 2011):

- Treat the individual as an adult;
- Keep in mind that the patient understands you and believes in their abilities.
- Observe and follow non-verbal communication to detect any feelings;
- Give time to answer;
- Remember that there is an individual behind the disease and remember the features of their impairment;
- Change communication strategies according to the purpose of communication.

Apart from all this, it is always possible that the person being cared for may pass away. At this point, there are a few points that should be mentioned.

People have relationships based on love and trust, developed in childhood or later in life. When we feel happy or unhappy, we go to the persons with whom we have formed these deep attachments. However, when this loved and trusted person is lost, intense emotions such as anxiety, grief and sadness emerge as grief reactions. These grief reactions can lead to the feeling that a part of oneself has died and that one's life has no meaning. During the grieving process, the person may often feel that his/her life is empty and poor.

Every person reacts to the loss of someone in a variety of ways depending on many different factors. In general, these reactions can be divided into four categories:

- **Emotional:** Shock, sadness, anger, guilt, anxiety, fear, loneliness, fatigue, helplessness, numbness, reluctance, hopelessness

- **Physical:** Stomach problems, tension in the heart and throat, sensitivity to noise, shortness of breath, feeling weak/weak, dry mouth.
- **Intellectual:** Disbelief, confusion, distorted or erroneous thoughts, hallucinations, distraction, forgetfulness, disturbing thoughts or dreams.
- **Behavioural:** Sleep and eating problems, inattentive or obsessive behaviour, use of alcohol or other substances (drugs), avoiding or not leaving the social environment and stimuli reminding the deceased person, searching for the deceased person by denying the reality of death.

However, the mourning process can be divided into five stages: shock and numbness, disbelief and denial, desire, helplessness, acceptance and organization of life.

There are some important suggestions to overcome these stages in a healthy way. These suggestions can be briefly explained as follows (Zara, 2011):

1. Do not experience your loss alone, telling someone you trust about what you have experienced will help you.
2. In order to cope with your grief reactions and to complete the grief process in a shorter time, you need to pay attention to your physical needs (sleep, food, health).
3. When you lose a family member, each family member may have different grief reactions. It may be difficult to share your feelings with other family members to avoid upsetting them further, to protect them, or to avoid appearing weak. In fact, talking about the person you have lost as a family, sharing memories about this person will help you better understand each other as a family, and help you start and complete the grieving process.
4. The mourning process is not to not talk about the person who has passed away, but to talk about them, not to remove their photographs, but to endure being able to see their photographs. Therefore, during the grieving process, it is very important to allow the bereaved person to talk about their loss frequently and to come into contact with stimuli (photographs, special items) that remind them of the person they have lost.
5. Talking to people who have experienced loss prepares you for the possible grief reactions and process. Remember, however, that not everyone reacts and experiences grief in the same way.
6. Whatever grief reactions you experience, remember that they are normal reactions. Trying to express these reactions verbally (talking) or behaviorally (crying, visiting graves) will help you to relax and develop a sense of being in control. It may also help to express your feelings by writing or drawing.
7. Going to the funeral and then to the grave of the person you have lost not only confronts you with the reality of death, but also gives you the opportunity to experience and express your grief and to say goodbye to your loss.
8. Special occasions such as anniversaries, birthdays and holidays can be difficult for you, and being with people you love and feel safe with reduces the difficulty.
9. Although it may be difficult to do activities that remind you of the person you have lost on meaningful days, it will help to facilitate and complete the grieving process in the long term.

Further elaboration of these strategies would be very useful for a person with any disability to provide them with the support needed. We can read more about this topic in the next section.

3.1.2 How can we increase cognitive ability?

Being a relative of a patient with ATD and being responsible for their healthcare may cause negative effects on life satisfaction and mental and physical health. Especially if the person being cared for has an intellectual impairment such as dementia, which leads to impaired mental functions and behavioural problems, the caregivers can find themselves in hardship. (Kiral, 2011). Therefore, it is also important to safeguard the caregivers' mental and physical health to not deteriorate an already fragile situation.

Many activities can be used to communicate with a person with intellectual disabilities. These activities can be physical, artistic, mental and psychomotor exercises. In particular, mental activities provide the following advantages to the individual: (Türkiye Alzheimer Derneği, 2020).

- Maintaining the knowledge acquired.
- Strengthening perception processes.
- Preserving the ability to learn.
- Maintaining the processes of object recognition and understanding.
- Maintaining time-space orientation.
- Maintaining the ability to make connections between events.
- Helping to maintain a connection with reality.
- Supporting hand skills.
- Maintaining the ability to relate concepts.
- Maintaining relevance to everyday life events.
- Maintaining object knowledge.

We can explain all these outputs under two main headings as "Reality Orientation" and "Cognitive Retention Therapy" in the centre of Cognition Oriented Therapies.

Reality Orientation can encourage persons with dementia to make arrangements such as talking about people in family photos, jigsaw puzzles, sensory stimulation, short question-answer games, exercise and movement, music, singing, painting and handicraft activities, bingo, chess game, board games (such as word games, puzzles), traditional games (backgammon), room arrangement (with video, music) that will provide reminders, to help the needs of persons with dementia. The aim of cognition-oriented treatments such as reality orientation is to restructure dementia patients with cognitive training. Reality orientation therapy helps individuals with dementia to keep their memories about people, place and time orientation. On the other hand, it aims to restore the damaged abilities.

Cognitive Retention Therapy is another treatment method used in individuals with intellectual disabilities. The programme is a structured training that includes cognitive exercises. The aim is to stop the progression of the disease, to recollect and consolidate existing memories, to improve routine life activities and daily activities, to maintain and increase social functioning and to increase self-esteem. This therapy offers a new option in

the fight to maintain and strengthen cognitive functions. It is also promising in increasing cognitive activity, as it is an easy process to implement. (Lök & Buldukoğlu, 2014).

To give four examples of these activities:

- ***Seasonal Fruits and Vegetables:***

Objective: It aims to preserve the mental skills of the elderly by remembering vegetables and fruits.

Materials: Seasonal fruits and vegetables that can be found at home (leek, spinach, carrot, buffalo, orange, banana, apple, pear, quince, etc.).

Implementation: Show seasonal fruits and vegetables and start a conversation. Encourage the interlocutor to speak and express their thoughts about what they are seeing. Discuss which ones are fruits, which ones are vegetables and in which seasons they are likely to be found.

- ***Rice - Chickpea:***

Objective: The aim is to reinforce the elderly person's small motor muscles and counting skills.

Materials: Chickpeas, rice and two cups

Implementation: A bowl containing chickpeas and rice is placed in front of the elderly person. The elderly person is asked to randomly separate the chickpeas in this bowl and put them out. Then he/she is asked to count the chickpeas he/she put out.

- ***Which object does what?***

Objective: The aim is to identify the objects used by the elderly in daily life and to maintain their knowledge about the functions of these objects.

Materials: Objects they use in daily life and can remember (pen, watch, notebook, ball, socks, fork, spoon, jug, etc.).

Implementation: Talking with the elderly person about the objects they use in daily life and the objects they can remember.

- ***Doll therapy:***

Objective: It is usually used for people in the moderate or severe stages of dementia. The aim of this therapy is to help the patients to feel useful and needed and to give them something positive to focus on. The therapy allows both men and women to recall happy memories of parenthood. Having a child to look after can also alleviate feelings of loneliness and sadness. In this therapy, the doll is a powerful environmental stimulus that helps the individual to remember and orientate in the past, since it is asked to attribute to the doll the identity of an important person in their lives such as parents, siblings, spouses.

Material: Doll

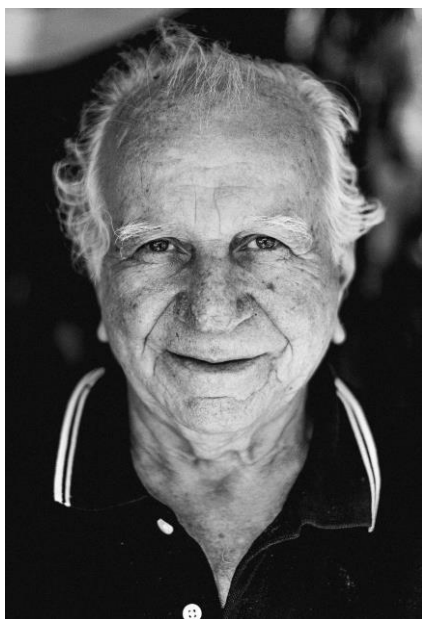
Implementation: Spending time with a doll in general (Arslan & Bulduk, 2021).

In addition, since elderly individuals are more likely to be exposed to age-related diseases and functional disorders than younger individuals, it is important to maintain and sustain good nutritional status. Elderly individuals may also face nutritional deficiencies depending on the number of medications they take. Good

nutrition and physical activity are very important for a physically and psychologically healthy ageing. Especially in order to maintain the quality of life and to minimise the complications that may occur with ageing.

Diets for the elderly should be individualised and meet the needs of the individual. Adequate and balanced nutrition, which is one of the basic conditions for maintaining a healthy life, can be provided by eating regular meals throughout the day. In order for elderly individuals to get the nutrients they need to take daily, not skipping meals is very important. Snack consumption should be encouraged in elderly individuals as it provides higher energy intake. Body weight loss is a prominent clinical feature of dementia. Compared to cognitively healthy individuals, individuals with dementia have more frequent body weight loss. Increasing weight loss pair with the severity of dementia can be explained by decreased functional independence¹, eating disorders and loss of appetite. (İlhan, 2017). In order to minimise the negative effects of all these conditions, the diet of these individuals should be followed regularly.

3.2 Physical abilities



The ageing process can bring about various physical changes, such as decreased mobility, strength, and coordination. These changes can make it more difficult for individuals with intellectual disabilities to perform activities of daily living, participate in recreational activities, and maintain overall physical well-being. It is crucial to understand and address these challenges to ensure the continued quality of life for ageing adults with intellectual disabilities.

One important aspect to consider is the individual's unique needs and abilities. Each person with an intellectual disability has specific strengths and challenges, and it is essential to tailor support and interventions accordingly. Taking a person-centered approach that focuses on their individual capabilities and preferences can guide the development of effective strategies to maintain physical abilities and independence. Regular exercise and physical activity tailored to their abilities can help maintain strength, flexibility, and overall physical health. Besides,

engaging in activities such as adaptive sports, yoga or modified fitness programs can provide opportunities for social interaction.

3.2.1 Health and well-being of ageing adults with intellectual disabilities

The remarkable rise in life expectancy stands as one of the notable accomplishments of our society over the past century. In developed nations, there is a consistent increase in life expectancy by a minimum of two years per decade, and according to the World Health Organization, individuals who reach the age of 60 can expect

¹ Functional independence can be defined as an individual's ability to perform activities of daily living (ADLs). Autonomy in performing tasks ensures a person's ability to live alone in a domiciliary context.

to live approximately 20 additional years. This extended lifespan also applies to individuals with intellectual disability (ID). Starting from the late 1970s and early 1980s, scientific literature began to report an extraordinary expansion in the life expectancy of individuals with ID, attributable to various factors such as improvements in care provision. Presently, the number of adults with intellectual and developmental disabilities over the age of 60 is projected to grow from around 641,860 in 2000 to 1.2 million in 2030. Furthermore, in Europe, individuals over the age of 65 already comprise 45% of the population with disability (García et al., 2020).

In addition to experiencing premature aging, individuals with ID are more prone to encounter specific chronic health conditions throughout their lives compared to their peers without disabilities. These conditions encompass cardiovascular diseases, obesity, diabetes, and epilepsy, gastrointestinal tract abnormalities like constipation, kidney disease, osteoarticular disorders, and thyroid disorders. Furthermore, individuals with intellectual disabilities exhibit extensive periods of sedentary behavior throughout the day and participate in limited physical activities that promote health. These unhealthy patterns of behavior lead to an imbalance between the amounts of energy consumed and expended, ultimately resulting in a significantly higher prevalence of obesity and the aforementioned health issues among adults with intellectual disabilities when compared to the general population (Harris et al., 2018).

To combat these problems and mitigate them, it is important to include in the daily life of people with intellectual disabilities the realization of physical activities that will improve both their health and also help to increase their life expectancy and adapt better to aging.

3.2.2 Enhancing physical activity for ageing with disabilities

Engaging in regular physical activity is essential for maintaining optimal health and well-being in adults, and this holds true for individuals with intellectual disabilities as well. Physical activity not only contributes to the physical fitness of individuals but also plays a vital role in promoting their cognitive and emotional well-being (Dolan et al., 2019).

Nowadays, there is growing recognition of the importance of promoting and facilitating physical activity opportunities for adults with intellectual disabilities. Research has shown that regular physical activity can have numerous benefits for this population, including improved cardiovascular health, increased muscle strength and flexibility, enhanced cognitive functioning, and enhanced social interaction and integration.

In this context, it is crucial to explore effective strategies and interventions that can encourage and support adults with intellectual disabilities to engage in regular physical activity. The following are some of the physical activities that could benefit them.

Yoga

Physical inactivity often leads to a decline in sensorimotor skills, coordination, muscular strength, flexibility, and balance among adults with intellectual disabilities (ID). To enhance functional fitness in this population, it is recommended to tailor physical activity to their age group and prioritize activities that integrate elements of balance, flexibility, and strength training.

To achieve this, it is beneficial to engage in social activities that involve low to moderate-intensity exercises targeting the major muscle groups. It is suggested that adults with ID aim for approximately 2½ hours per week of such activities to promote overall physical well-being. (Reina et al., 2020).

Yoga combines physical postures, breathing techniques, and mindfulness, promoting overall well-being and improving various aspects of health.

The gentle stretching, strengthening, and balance exercises involved in yoga contribute to improved flexibility, coordination, and muscular strength. These physical benefits can help individuals with ID to enhance their motor skills, promote better posture, and increase their overall physical skills.

In addition to the physical aspects, yoga also has a positive impact on mental and emotional well-being. The practice of mindfulness and deep breathing techniques in yoga helps to reduce stress, anxiety, and depression, which are commonly experienced by individuals with ID. Yoga encourages a sense of relaxation, self-awareness, and inner calm, fostering a more positive mental state and emotional resilience (Richardson, 2019).

A recommendation for families of adults with intellectual disabilities who wish to incorporate mindfulness into their daily lives is to start gradually and adapt the practices to the individual needs of each person. Start by becoming familiar with the basic concepts of mindfulness and how it is practiced. There are numerous online resources, books and apps that can provide guidance and exercises to get you started. Keep in mind that it is important to create a quiet space in which to practice and to establish a daily routine gradually.

Another significant advantage is that it can be adapted and modified to accommodate different abilities and limitations, making it accessible to individuals with varying degrees of disability. The practice can be tailored to suit the specific needs and capabilities of each individual, ensuring a safe and enjoyable experience.

Overall, the practice of yoga offers a holistic approach to promoting the well-being of adults with intellectual disabilities. It improves physical fitness, enhances mental and emotional health, fosters inclusivity, and provides a supportive social environment. By incorporating yoga into their routine, adults with ID can experience numerous benefits that contribute to their overall health and happiness, as well as to increase their quality of life as they age.

Laughter yoga

Laughter Yoga is a unique and beneficial practice for adults with ID. It combines laughter exercises with deep breathing techniques to promote physical, emotional, and social well-being.

Offers numerous advantages for example, provides a fun and engaging way to enhance physical fitness. The laughter exercises involve rhythmic clapping, playful movements, and simulated laughter, which stimulates the body and increases oxygen flow. This can improve cardiovascular health, boost immune function, and enhance overall energy levels. Also, it has significant emotional benefits because it helps reduce stress, anxiety, and tension by releasing endorphins, also known as "feel-good" hormones (Alici & Dönmez, 2020).

When implementing Laughter Yoga for adults with ID, it is important to adapt the exercises and techniques to their specific needs and abilities. Caregivers and facilitators should create a safe and supportive environment, allowing individuals to participate at their own pace. Visual cues, gestures, and simplified instructions can aid comprehension and engagement.

Incorporating regular Laughter Yoga sessions into the daily routine of adults with ID can provide ongoing benefits. It can be integrated into group activities, therapy sessions, or leisure time. Laughter Yoga can create a positive and enjoyable atmosphere, boost overall well-being, and contribute to a higher quality of life for individuals with intellectual disabilities.

Walking

Walking is a highly beneficial activity for adults with intellectual disabilities (ID), offering a wide range of physical, mental, and social advantages. Incorporating regular walking into their daily routine can contribute to their overall well-being and enhance their quality of life.

Physically, walking helps individuals with ID improve their cardiovascular health and strengthen their muscles and bones. It is a low-impact exercise that can be easily adapted to their abilities and fitness levels. Walking promotes better coordination, balance, and overall motor skills, supporting their physical development and functional abilities.

For families to incorporate walking into daily life, they can start with realistic goals and gradually increase the duration and intensity of walks, establishing regular schedules or using them instead of using transportation for routine mobilities.

3.2.3 The impact of aging on common physical changes

Cardiovascular system

Adults with ID may have reduced cardiovascular endurance, which refers to the ability of the heart and lungs to supply oxygen to the muscles during sustained physical activity. This reduced ability can be attributed to a variety of factors, such as lower levels of physical activity, underlying health conditions, and limitations in motor skills and coordination. They also tend to have lower levels of muscle strength, which refers to the ability of muscles to exert force against resistance. This decline may be due to a variety of factors, including decreased opportunities for physical activity, limited access to strength training programs, and differences in muscle development and coordination, as well as functional and balance deficits that may be due to motor coordination difficulties, sensory deficits or musculoskeletal abnormalities (Hernández, M., 2018).

Muscles, joints and bones

Certain joint and muscle changes occur more frequently in adults with ID. However, because of the cognitive and physical limitations associated with intellectual disability, these changes may be more common and more pronounced. Some of the possible changes include muscle contractures that may occur due to lack of regular movement, lack of stretching, or improper posture. People with ID who have difficulty moving or who spend a lot of time in a sedentary position may be more likely to develop muscle contractures. They may also experience hypertonia (increased muscle tone) or hypotonia (decreased muscle tone). These tone problems can affect posture, balance and motor coordination.

In addition to problems at the muscle level, joint problems such as joint stiffness can result from lack of movement or incorrect positioning for prolonged periods of time. Lack of mobility can lead to loss of flexibility and limited ranges of motion in the joints. People with intellectual disabilities may experience joint problems,

such as osteoarthritis, which is the gradual wearing away of cartilage in the joints. Osteoarthritis can cause pain, swelling and stiffness in the joints, making movement difficult. The life expectancy of people with ID has been extended and the possibility of conditions associated with aging, such as osteoporosis, has increased. Osteoporosis is often diagnosed after an initial clinical fracture, by which time bone quality has already been substantially compromised. For people with ID, fracture can contribute to established impairment and impact overall health, quality of life and loss of independence. (Burke et al., 2019).

It is important to note that joint and muscle changes can vary considerably from person to person, depending on the severity of the intellectual disability, level of physical activity, caregiving and other factors. Everyone may require a personalized approach to managing these changes, and it is advisable to work with healthcare professionals, such as physicians, physical and occupational therapists, to develop care strategies and promote physical health and wellness. (Frighi et al., 2022).

Metabolism

Elevated cardiovascular and metabolic risk factors and altered autonomic function in adults with ID. Studies indicate that they have higher rates of obesity which is related to many metabolic abnormalities, including lipid and glucose metabolism, as well as inflammation and an increased risk of diabetes.

It should also be noted that specific disorders, such as Down syndrome or autism spectrum disorder, can influence metabolism. For example, Down syndrome is associated with a lower basal metabolism and an increased risk of obesity. (Zwack et al., 2021).

Ageing adults with ID may have difficulty eating a balanced and healthy diet due to cognitive limitations, autonomy issues or dependence on caregivers. This can result in inadequate intake of essential nutrients and, in some cases, lead to weight problems, such as overweight or malnutrition.

Sexuality

Adults with ID have significantly less knowledge about sexuality than their peers without disability and have more misunderstandings about sexual issues. An intimate life without adequate knowledge and support could lead to unsatisfactory or harmful sexual or intimate interactions. Such lack of knowledge and support may be strongly influenced by the attitudes and behaviors of others toward the sexuality of adults with ID. For that reason, it is very important that people close to adults with ID, such as their family, are key to providing information on this topic, as it is necessary to raise awareness before training them to support adults with ID to achieve a healthy intimate life and to manage sexual behaviors, either alone or with a partner. (Correa et al., 2022)

Brain

Innate characteristics, such as level of intelligence, determine the individual's cognitive reserve, as do life events, such as educational or occupational experiences and participation in leisure activities. People with intellectual disabilities have lower intelligence by definition. In general, most of them study in special education centers and are often not included in the labor market and have limited access to intellectually stimulating leisure activities. These situations mean that as the person with ID gets older, his or her brain is exercised less and less because he or she does not have enough stimulation to do so (Zemach et al., 2023).

Some studies show that physical exercise can help preserve or even improve cognitive function in healthy elderly adults. Some of the positive effects of exercise are: increased prefrontal cortex and anterior hippocampal volumes and improved neurogenesis and angiogenesis. (Roldán et al., 2020).

Some innovative programs are being developed to improve memory in patients with Alzheimer's and early-onset dementia through technology and 3D printing. One of these initiatives has been implemented through the Erasmus+ project called: "3D4ELDERLY - 3D printing to create innovative learning pathways for caregivers and staff members dealing with people with Alzheimer and elderly people with dementia".

By leveraging 3D printing technology, the project aims to provide a multisensory experience for individuals with Alzheimer's and dementia through the creation of specialized tools. This technology can support visual, tactile, and therapeutic approaches, allowing for hands-on experiences that stimulate various senses. These experiences have a direct impact on the brain areas associated with instincts and senses, leading to positive effects on cognition and social interaction. Through the project, experts in the field created 15 exercises designed to meet both technical and therapeutic specifications. This means that they not only focus on the technical aspects required for successful 3D printing but also stimulate memory, language, perception, reasoning, creativity, sociability, and overall well-being. The exercises and the training are available on the platform and through the app for iOS and Android, and they include a list of providers of 3D products. Discover more on the project website: <https://www.3d4elderly.infoproject.eu/>

3.2.4 General recommendations for including exercise in daily life

Here are some general tips for families with adults with intellectual disabilities to incorporate physical activity into their lives:

- **Start with their interests:** Take into consideration their likes and preferences when selecting physical activities. Find activities that align with their interests, whether it is dancing, swimming, cycling, or playing a specific sport. By incorporating activities, they enjoy, they are more likely to stay engaged and motivated
- **Adapt activities to their abilities:** Modify physical activities to suit their abilities and ensure safety. Consider their motor skills, coordination, and fitness level when selecting activities. Break down complex movements into simpler steps and gradually increase the difficulty as they progress.
- **Make it a family affair:** Involve the entire family in physical activities. Plan outings, such as walks in the park, bike rides, or family sports games. This not only promotes physical fitness but also strengthens family bonds and creates opportunities for shared experiences.
- **Set achievable goals:** Set realistic and achievable goals for physical activity. Start with small milestones and celebrate their accomplishments along the way. This helps to build confidence and motivation, leading to a sustained commitment to physical activity.
- **Create a supportive environment:** Provide a supportive environment that encourages physical activity. Remove barriers and create a safe space for them to engage in physical activities. Ensure they have appropriate clothing, equipment, and access to facilities or community programs that cater to their needs.

- **Schedule regular activity sessions:** Establish a consistent schedule for physical activity sessions. Whether it is a specific time each day or certain days of the week, having a routine helps to integrate physical activity into their daily lives. Consistency is key in developing a habit.
- **Seek professional guidance:** Consult with healthcare professionals or qualified trainers who have experience working with individuals with intellectual disabilities. They can provide guidance on suitable activities, proper form, and techniques to ensure a safe and effective exercise routine.
- **Focus on enjoyment:** Emphasize the enjoyment and fun aspects of physical activity. Encourage a positive mindset and create a supportive and inclusive atmosphere. Incorporate games, music, and social interaction to make the activities more engaging and enjoyable.

Remember, every individual is unique, so it is important to tailor physical activity plans to their specific abilities and interests. By incorporating physical activity into their daily lives, families can promote overall health, well-being, and a lifelong commitment to an active lifestyle.

Conclusion

Lastly, involving family members, caregivers, and support networks is vital in ensuring the overall well-being of ageing adults with intellectual disabilities. Providing education, training, and resources to families and caregivers can empower them to support individuals in maintaining physical abilities and adapting to changes effectively. Respite care services can also offer relief and support for caregivers, ensuring a balanced approach to caregiving responsibilities.

In conclusion, changes in physical abilities pose unique challenges for ageing adults with intellectual disabilities. By understanding their specific needs, implementing person-centered approaches, providing assistive devices, promoting physical activity, creating accessible environments, collaborating with healthcare professionals, and supporting caregivers, we can help individuals navigate these challenges and maintain physical well-being.

3.3 Social support networks



Introduction

As ageing adults with intellectual disabilities face challenges and changes in their social support networks, it is important to provide them with the necessary tools and strategies to navigate these transitions effectively. This chapter offers valuable tips to address these challenges and promote social well-being for ageing adults with intellectual disabilities. Understanding their specific challenges can help tailor support and interventions to meet their social needs effectively.

²The importance of the social support network for humans has been crucial since birth. G. Clare Wenger identified the five types of networks of ageing and elderly people, which are enclosed in two main categories:

Integrated social network types

1. Locally integrated: including the restricted social circle, such as family members and friends, which provides a good support;
2. Wider community focused: in which the local family members are often distant, but the network is active and composed of friends, neighbors and relationships connected. These social circles are distinct and not considered as care providers, so their help will probably occur just in emergency cases.

Restricted social network types

3. Local self-contained: it is a larger network with at least one kin living nearby or in a close community. Ageing/elderly people usually ask for help from family members which are distant, or with whom there is not a very close relationship. There is a risk of social isolation and possible resistance to professional help. Although neighbors may assume a monitoring role, respondents are likely to suffer because of unrecognized needs and emergencies.
4. Family dependent: characterized by close family relationships, some friends and neighbors. There are high standards of practical help and personal care based on long-term reciprocity.

² Golden, Jeannette & Conroy, Ronán & Lawlor, Brian. (2009). *Social support network structure in older people: Underlying dimensions and association with psychological and physical health*. Psychology, health & medicine. 14. 280-90. 10.1080/13548500902730135.

<https://people.eecs.berkeley.edu/~jfc/papers/MH432143/Wenger91.pdf>

5. The private restricted support network: in which local kins are absent, there is minimal contact with neighbors, no local friends and lack of wider community contacts.

The importance of social support networks for health and wellbeing has been investigated in a study carried out by Golden et al., 2009. According to the study, not all social support is created equal, and there may be distinct dimensions that are more important than others.

The analysis identified two distinct dimensions that were essentially uncorrelated: one of family support and one of social activity and engagement. The study found that the family dependent type was high on family support but low on social engagement. In contrast, the locally integrated network type, which is considered optimal for maintaining wellbeing in elderly and ageing people, had high levels of social engagement and intermediate levels of family support. The locally self-contained and private types had low levels of support on each dimension.

One of the essential arguments for distinguishing these two dimensions comes from their differential association with health and wellbeing. The study found that higher levels of social engagement were significantly associated with a broad spectrum of health and wellbeing, including reduced prevalence of depression, generalized anxiety disorder, physical and cognitive impairment. These findings suggest that the association between social support networks and better health derives from the high level of social engagement that characterizes the type, regardless of the level of family support.

In contrast, the family support dimension, including proximity of kin and frequency of contact, was not significantly associated with any health outcome. This suggests that social engagement of any form may offer benefits, and that broadly-based intervention programs are required to refine our understanding and assess the value of these associations in promoting health. The study also attempted to divide the social engagement domain into two sub-domains, reflecting frequency of attendance at social events and frequency of contact with friends and neighbors. However, the analysis found no distinctive pattern of association that would justify separating the two. Each sub-domain was associated similarly with health and wellbeing, suggesting that there were no good grounds for considering them to be distinct dimensions of social support.

While family support is undoubtedly essential, this study suggests that it is not the most critical factor in promoting health and wellbeing.

3.3.1 Discrimination

Age discrimination can have adverse effects on the health and wellbeing of elderly people.³ Studies suggest that age discrimination can cause stress, lead to negative emotional states, and affect physical health. One possible pathway is that discrimination could cause physiological stress responses, including cardiovascular reactivity and cortisol responses. In turn, these responses could lead to negative emotional states, which could contribute to health problems through an allostatic load. Age discrimination could also lead to unhealthy behaviors such as smoking, poor diet, and physical inactivity, which can cause physical health problems. Furthermore, ageism in medical settings could also contribute to health problems. It is essential to address age discrimination in society and clinical settings to improve the health and wellbeing of older people. On a

³Jackson, S. E., Hackett, R. A., & Steptoe, A. (2019). Associations between age discrimination and health and wellbeing: cross-sectional and prospective analysis of the English Longitudinal Study of Ageing. *The Lancet. Public Health*, 4(4), e200–e208. [https://doi.org/10.1016/s2468-2667\(19\)30035-0](https://doi.org/10.1016/s2468-2667(19)30035-0)

societal level, public awareness about the negative effects of ageism and teaching effective coping strategies to older adults could help mitigate its effects. On a clinical level, raising awareness about age-related bias among health professionals and making data-driven treatment decisions could help reduce the impact of age discrimination on health (Jackson et al., 2019).

⁴Research carried out through the project “Disability: discrimination doesn't add up, it multiplies. Innovative actions and tools to recognize and combat multiple discriminations” promoted by the Italian Federation for the Overcoming of Handicap, had the objective to question about what “disability” means and shows that both the elderly and young people interviewed associate it with physical difficulties, coming to terms with the limits of one's own body, and having to ask for help from other people for daily activities such as transportation. The definition of “elderly,” for both groups, was linked to no longer being able to perform the same activities as before, loneliness, needing others, and not being independent. Most of the elderly respondents do not feel that they are elderly precisely because this concept is made to correspond to physical and cognitive decline. Some underline how the concept of “elderly” should instead be more closely linked to volunteering, helping others, and the freedom to choose how to spend their time without having to adhere to the obligations resulting from work activities (Dantino et al., 2020).

3.3.2. How to face changes and challenges using the internet

In a society where the problem of family relationships and intergenerational relationships is emerging, relationships that are no longer based on the automatic transmission of knowledge and heritage from one generation to the next but are based on the sentimentalization of the family bond, high-quality family ties appear to exist. That's why we are going to give you some tips on how to face changes and challenges in the social field.

Video Calling Devices

Video calling devices for the elderly and ageing people can be a fantastic way to stay connected with loved ones, even if they live far away. These devices are designed to be simple and easy to use, making them ideal for ageing people who may struggle with technology.

Video calling can also be a more personal experience than a phone call, as you can see the person you're talking to, which helps you feel more connected. For ageing and elderly people, however, video calling can be challenging. Smartphones and tablets may be too complicated, and navigating through video calling apps can be frustrating. To help bridge this gap, companies have started developing video calling devices designed specifically for adults.

Here are some top three picks for video calling devices for the elderly and ageing adults, which are used-friendly for people with intellectual disabilities. Explain them how they work and the timeline in which it is better use them.

⁴Dantino, P., Mennuni, S., & Spagnuolo, S. (2020). *INVECCHIARE CON UNA DISABILITÀ, Opinioni di giovani e anziani sulla discriminazione multipla*, Italiana per il Superamento dell'Handicap. https://www.fishonlus.it/progetti-fish/multidiscriminazione/azioni/files/Report_interviste.pdf.

GrandPad

GrandPad is a tablet designed exclusively for seniors. The device has a large, 8-inch screen and runs on a simple, easy-to-use interface that's tailored to the needs of ageing adults and elderly people. GrandPad comes preloaded with a range of senior-friendly features, including video calling, email, web browsing, and photo sharing.

One of the standout features of GrandPad is the companion app, which allows family members to remotely manage the device and set up video calls. The app also enables family members to share photos and messages with their loved ones, making it easy to stay connected.

Amazon Echo Show

The Amazon Echo Show is another great option for ageing adults and elderly who want to stay connected with loved ones. The device is powered by Alexa, Amazon's virtual assistant, and allows users to make video calls using voice commands.

The Amazon Echo Show has a range of functions beyond video calling, including playing music and setting reminders. The device is also compatible with a range of smart home devices, such as security cameras and smart thermostats.

Google Nest Hub

The Google Nest Hub is a smart display that allows users to make video calls using Google Duo. The device has a range of features, including a voice assistant, music streaming, and smart home controls.

One of the standout features of the Google Nest Hub is the "Knock Knock" feature, which allows users to see a live video preview of the person calling them before answering the call. This feature can be particularly helpful for older adults who may not want to answer calls from unknown numbers.

Zoom, FaceTime and Skype are other free platforms with which you can put your family members in touch with more distant friends and relatives.

In addition, technology has advanced to the point where there are now a range of apps available to help people communicate independently. From basic communication board type apps, where the user points at a picture on their device to explain what they want, right up to more advanced communication apps that construct sentences and have text-to-speech capabilities, there is something to suit every level of need.

One example of a communication app designed to help people communicate their needs independently is **Grace**, which is available on iOS devices. The app enables users to create sentences by selecting pictures, which they can then share by pointing at the card on the device. Each word is read aloud by the app, but the emphasis is on encouraging the user to try vocalizing the words themselves. The app includes a set of preloaded pictures representing basic vocabulary, but it also allows complete customization by utilizing the device's camera or importing images from the internet. This way, users can personalize their sentences by incorporating their own pictures.

Another app that aids basic communication is **Autism Speech Diego Says**, which is available on Android devices. The user pushes the action button 'I want' and then presses one of the next possible options, for

example 'food'. This simple interface makes it easy for those with autism or other communication difficulties to express their needs and wants.

For those looking for a more comprehensive communication app, **iConverse**, available on iOS devices, may be a good option. It has six display icons that represent a person's most basic needs. When activated, the icons give an auditory and visual representation of the user's specific need.

It is important to note that while these apps are designed to help people communicate independently, they may require some support and training for the user to get the most out of them.

It is worth considering the device being used to run the app. A tablet or smartphone with a larger screen may be easier to use for those with visual or motor difficulties.

Overall, these apps offer a lifeline to those with communication difficulties, providing a means of expression and independence that may not have been possible in the past. As technology continues to evolve, it is likely that we'll see even more innovative solutions to help those with communication difficulties live their lives to the fullest.

Socializing does not necessarily require physical presence. Your relatives can engage with others on your preferred social media platform. Facebook is preferable, where they can reconnect with old acquaintances; search for past high school mates, or become a member of groups that align with your hobbies and passions. Sharing their life experiences is an effective way of building connections with others. Try to set a routine for regular phone calls with family and friends.

3.3.3 How to face change and challenges with social events

Opportunities for interactions and participation in community events and centers

Ageing people with disabilities might have friends with whom to socialize, have phone calls or carry out various activities, such as going for a walk and playing card games. In the ageing process, the interest in social participation becomes less. It could be easier if ageing people with disabilities are involved in a community for a long time, in which there are various social opportunities to keep their social life active. Instead, it could be more complicated in various situations, for example if they live just with relatives, they changed community or the support center or if they have experienced the death of friends and loved ones.

Let's see now some opportunities for interactions and participation in community events and centers:

- Going to typical markets, festival and fairs, enhancing the roots and relationship with the community;
- Birthday parties and celebration of important events;
- Sport activities, such as walking, physical exercises, bowling and lawn bowling;
- Card game tournaments;
- Cinema and theater shows;
- Gardening, bakery, painting, cross stitching, music and theater labs;
- Contests in which people with disabilities can show a talent,
- Picnics;
- Board games;

- Pet therapy or even just spend time with a pet of a relative or friend;
- Arts and crafts,
- Dancing courses,
- Activities about emotions regulations for social situations or scrapbooking about social moments.

Engaging in a fun and interactive program not only stimulates socialization, but also cognitive function, emotional well-being and physical health. For example, the combination of music and movement has been found to have profound benefits for brain health and longevity.

Emotional resilience is another key aspect of well-being, especially as we age. Focusing daily on positive moments can help build emotional resilience. By consciously savoring special moments, individuals are better equipped to cope with adversity and stress and are less likely to experience depression. Incorporating recreational life enrichment programs into ageing adults with disabilities living communities can create opportunities for residents to experience these positive moments, whether it's through personal artwork exhibitions or special celebratory events, fostering an optimistic outlook and improving overall emotional well-being. Maintaining mental sharpness is a priority for many older adults, and board games have been shown to be effective tools in achieving this.

The benefits of leisure activities against depression

Engaging in these kinds of leisure activities has long been recognized as beneficial for mental health, particularly for elderly and ageing adults. Research carried out in 2022⁵ examines the associations between a diverse range of leisure activities and concurrent and subsequent depression in a large nationally representative cohort of older adults in the US. By investigating various activities individually, they aimed to understand the specific active ingredients that may contribute to reducing depression and improving mental well-being (Jessica et al., 2022).

According to the study, in elderly adults is a prevalent and often undiagnosed condition that significantly impacts daily life and can coexist with other health problems. It highlights the potential of engaging in certain leisure activities as a means to reduce depression in elderly and ageing adults. Participation in sport, social activities, or other clubs, hobbies or projects, and baking or cooking something special independently contribute to lower rates of depression. These activities may activate mechanisms such as increased social identity, cognitive stimulation, and physical activity.

Engagement in sport, social, or other clubs provides opportunities for increased social identity, fostering a sense of belonging and connection. This social support network can mitigate feelings of loneliness and isolation, which are common risk factors for depression. Hobbies or projects and baking or cooking something special, offer cognitive stimulation and the potential for increased cognitive restructuring, aiding in the management of negative thoughts and emotions. Additionally, these activities often involve physical activity,

⁵Jessica K. Bone, Feifei Bu, Meg E. Fluharty, Elise Paul, Jill K. Sonke, Daisy Fancourt, Engagement in leisure activities and depression in older adults in the United States: Longitudinal evidence from the Health and Retirement Study, *Social Science & Medicine*, Volume 294, 2022, 114703, ISSN 0277-9536, <https://doi.org/10.1016/j.socscimed.2022.114703>. (<https://www.sciencedirect.com/science/article/pii/S0277953622000065>)

which has well-established protective effects against depression in elderly adults. Sedentary activities such as writing, reading, and sewing, however, did not consistently show an association with depression.

Besides, cognitive restructuring, which involves challenging negative thoughts and promoting positive thinking patterns, is a core component of depression treatment approaches like cognitive behavioral therapy (CBT).

Besides, the closure of many arts venues during the COVID-19 pandemic has limited access to creative arts interventions, emphasizing the significance of elderly and ageing adults' own choices in leisure activities. While creative arts interventions often provide specific activities, the freedom to choose activities that align with personal preferences and interests may have a more profound impact on mental health.

Another review conducted by McMaster University⁶, which analyzed over 25 research studies, found that board games, both physical and digital, can improve memory, mental agility, concentration, and creativity. Furthermore, engaging in these games promotes social interaction, providing an opportunity to maintain meaningful connections with others (McMaster University, 2020).

Finding purpose and social connection becomes increasingly important as we age. Regular volunteering has been found to strengthen social bonds, give a sense of purpose, and protect elderly from feelings of loneliness and hopelessness, according to a study published in the ⁷American Journal of Preventive Medicine. Retirement homes can play a crucial role in providing opportunities for residents to make a positive difference in their local communities. Whether it is participating in fundraising efforts or engaging with local shelters or rescue organizations, these activities foster a sense of belonging and fulfillment (X, S., 2020). Lastly, pursuing artistic passions has shown positive effects on mood and anxiety levels in elderly adults. Engaging in creative activities, such as singing, crafts, painting, drawing, dance, and creative writing, can ease depression and lower anxiety, as highlighted by studies from Northwestern University and the Behavioral Sciences⁸. These artistic pursuits provide a channel for self-expression and creativity, allowing individuals to explore new interests and experiences (Portal, M. O. A., 2020).

⁶McMaster University. "Board games for your health and well-being." (2020), online:

<https://www.mcmasteroptimalaging.org/blog/detail/blog/2020/12/16/board-games-for-your-health-and-well-being>

⁷X, S. (2020, June 11). *Regular volunteer work provides demonstrable benefits for the health and well-being of older adults.*

<https://medicalxpress.com/news/2020-06-regular-volunteer-benefits-health-well-being.html>

⁸ Portal, M. O. A. (2020b, December 16). *Board games for your health and well-being.* Default.

<https://www.mcmasteroptimalaging.org/blog/detail/blog/2020/12/16/board-games-for-your-health-and-well-being>

Alzheimer's cafés

In recent years, dementia support centers have emerged as invaluable resources for people living with dementia, their families, and professional caregivers. These centers provide safe and welcoming spaces where people can come together, share experiences, and receive support.

These cafés offer a welcoming and listening-centered atmosphere, enabling people to maintain social relationships, combat the isolation and stigma associated with dementia, and share experiences and strategies for coping with the disease. They are an integral part of the network of services for people with mild to moderate cognitive impairment and offer support to both people with dementia and their relatives.

Alzheimer Cafés provide information on the medical and psychosocial aspects of dementia, encouraging open discussion on the problems faced by the person with dementia and their family on a daily basis. These centers

aim to promote social recognition and acceptance of individuals with dementia and their families, working to prevent isolation. Furthermore, they offer opportunities for acquiring knowledge, sharing experiences, and receiving support from experienced professionals.

Alzheimer Cafés provide a wide range of activities that focus on promoting the overall well-being of individuals with dementia. These activities include non-pharmacological therapies such as cognitive stimulation, engaging social activities, physical exercises guided by physiotherapists, creative workshops, culinary experiences, animal-assisted therapy, and even Laughter Yoga sessions. Each activity is designed to enhance the psycho-physical well-being of individuals with dementia, fostering socialization and providing a break from the monotony of daily routines.

One highly effective approach utilized in dementia support centers is the Montessori Method, which has a proven track record in education with children. Adapted to suit the needs of individuals with dementia, this approach encourages self-education and exploration within their living context. By promoting autonomy and enabling active participation in daily activities, the Montessori Method can yield significant behavioral benefits and assist with daily tasks.

A notable example is the coordination group of Alzheimer Cafés in eastern Lombardy. Since April 2013, under the supervision of the Geriatric Research Group in Brescia, this group has adhered to a shared intervention and collaboration philosophy based on the guidelines proposed by Bere Miesen, tailored to the Italian context. Their analysis revealed that attending the support centers had a positive impact on neuropsychological symptoms, reducing their manifestation one year later. However, it is important to note that these symptoms are influenced by various factors, including age, gender, pre-existing personality traits, disease type and stage, living conditions, family dynamics, economic circumstances, social aspects, and the overall well-being of caregivers.

During the COVID-19 pandemic, the initiative of Alzheimer Cafés in Lombardy played a crucial role as essential services were suspended or scaled back. However, the crisis necessitated a reorganization of services, including these centers. Physical gatherings and group activities were replaced with remote communication methods such as telephone calls, video calls, and digital platforms to maintain contact with families and provide ongoing support. Despite the shift in delivery methods, the core objectives of the support centers remained unchanged: supporting families, staying connected with the reference group, and alleviating feelings of loneliness. The coordination group of dementia support centers in eastern Lombardy, in collaboration with organizations nationwide, successfully adapted to the situation by finding innovative ways to connect virtually and offer support during a period dominated by social distancing.

Embracing the outdoors and social connections

As people enter their ageing years, they may develop resistance to venturing outside and engaging in social activities. However, it is crucial to nurture their desire for fresh air and social interaction, as these experiences greatly contribute to their overall well-being and reduce loneliness and isolation. By approaching the process gently and starting with small steps, it is possible to gradually reignite their enthusiasm for the outdoors and social engagement. Here there are practical ideas to support elderly and ageing adults in embracing outdoor activities and fostering new connections.

1. Extending an invitation to a child part of the family, such as a grandchild or a son of one's brother or sister, or of one's brother-in-law or sister-in-law, like an invitation to attend school functions or extracurricular activities. Identify upcoming events and encourage the person with disability to participate. By attending, they will have the opportunity to interact with other attendees, potentially forging connections with fellow grandparents along the way.
2. Introduce the person with disability to a neighbor. Ageing and elderly people often hesitate to reach out and meet their neighbors, even in close-knit communities. Help the person with disability assemble a thoughtful gift basket for new neighbors, fostering a sense of helpfulness and potentially sparking friendly chats and connections.
3. Facilitate social invitations from peers. If your relative consistently declines your offers, consider reaching out to another person's acquaintance and asking them to invite your loved one to a social event in the area. The presence of a friend can increase the likelihood of attendance and enhance enjoyment of the activity.
4. Provide companionship and engagement. Arranging for a professional caregiver to spend quality time with your loved one at home can offer companionship and engagement. Activities such as playing board games or engaging in conversations can promote social interaction and prevent feelings of isolation.
5. Establish regular social events. Creating a routine event that encourages socialization can help the person with disability to be mentally and physically prepared for social interactions. Whether it's having a weekly dinner with a special someone or participating in a class or group activity, regular engagements provide structure and anticipation.

To encourage spending time outdoors, consider the following suggestions:

- Encourage your loved one to sit by an open window to read or enjoy a cup of tea, allowing them to experience the fresh air. Utilize a covered patio, porch, or create a cozy, fenced-in backyard space to provide comfort, privacy, and a safe outdoor environment.
- Engage in gardening by planting flowers or starting a small garden. This allows your loved one to connect with nature, observe the beauty of blooming plants, and potentially inspire outings to local garden centers or botanical gardens.
- Encourage short walks to the mailbox as a simple addition to your relative's routine, promoting coordination, strength, and stamina. This activity can also instill a sense of usefulness.
- Explore ways to merge indoor hobbies and activities with the outdoors. For example, set up art supplies near an open window or enjoy outdoor concerts or performances if your loved one has a love for music. Hosting casual backyard picnics or barbecues can also provide opportunities for family bonding and outdoor enjoyment.

Conclusion

This chapter has recognized the role of family members and caregivers in supporting ageing adults with intellectual disabilities. Providing them with the necessary support and respite care can help alleviate the

burden and enable family members and caregivers to continue supporting their loved ones effectively. An important aspect is the provision of ongoing support and training. This includes equipping individuals with the necessary skills and resources to navigate social situations independently.

Collaboration with community support services and organizations is also vital. These agencies can provide valuable resources, social activities, and support networks specifically tailored to the needs of ageing adults with intellectual disabilities. By implementing the tips outlined in this article, it is possible to overcome obstacles and thrive in their social lives. Implementing social skills training programs and offering guidance on building and maintaining relationships can empower ageing adults with intellectual disabilities to develop and strengthen their social networks.

3.4 An overview of physical health



The elderly constitutes a very heterogeneous group in terms of their lifestyles and environmental characteristics. Therefore, physiological changes seen with aging occur at different speeds. Several changes occur in all systems of the body in old age. It is known that physical activities are good against many health problems, especially falls, ligament tears, and muscle pulling in the elderly. It is also stated that physical activities are advantageous for many health problems, such as decreased mortality rates, decreased risk

of obesity, cardiovascular disorders, diabetes, colon cancer, and psychiatric disorders. Therefore, although there is a decline in physical strength in old age in every sense, it is crucial to engage in physical activities to reduce or eliminate these problems and spend an eligible and healthy old age.

Changes in the sensory organs

Changes occur in the sensory organs of people as they age, and these changes can negatively affect the lifestyles of the elderly. Considering the importance of the senses in communication, the gradual deterioration of the sense organs may adversely affect the elderly by leading them to be isolated. The sensory organs most affected by old age are the senses of sight and hearing (Aging Changes in the Senses, 2017).

Changes in the skin system

Changes occurring on the skin are the most easily recognizable changes of aging. With the advancement of age, wrinkles and sagging of the skin surface and hair turns white or grey. The skin has significant effects on the human body. First, "the nerves that allow us to feel sensations such as touch, pain, and pressure are located in the skin; it helps to control body temperature and protects it from the environment by acting as a barrier (Aging Changes in Skin, 2017).

Changes in musculoskeletal System

Changes in posture and gait are standard in old age. The skeleton is a structure that supports and supports the body. Muscles provide strength and power to move the body.

With aging, the muscles decrease, the discs between the vertebrae become thinner, and the fluids in the joints decrease. For these reasons, changes in posture and gait, rapid fatigue, and balance problems occur. These changes also make the elderly prone to falls (Aging Changes in the Bones-Muscles-Joints, 2017).

Digestive system

Changes such as slowing down of the digestive system and metabolic activities with aging, deterioration of dental health, tooth loss, and use of dentures cause functional digestive disorders such as dry mouth, indigestion, burning, and difficulty swallowing in elderly individuals. In addition, malnutrition, multiple drug use, tea, coffee, smoking, stress, unconscious and non-prescription drug use, and other systemic diseases increase these complaints (Karadeniz, 2008).

3.4.1 Immune system

Aging of the immune system causes an increase in infectious diseases in the elderly. In addition, significant changes are observed in all other body systems, such as the cardiovascular, respiratory, metabolic, and endocrine systems with aging.

As a result, the changes that occur in old age are inevitable. Although many reasons cause these changes, nutritional disorders, hormonal changes, and those caused by sedentary life are among the most important ones. In other words, if nutritional conditions, hormonal changes, and sedentary life are combated, it is easier to control the changes that may occur with the advancement of age. **The most important of these is physical activity.**

The role of physical activity and exercise in maintaining health and adopting an active lifestyle in persons with disability is becoming increasingly important today. Exercise is effective in the prevention of chronic diseases such as dementia, which develops with age and negatively affects the life of the individual. Physical activity is of great importance in preventing dementia and slowing down the transition between stages of dementia. However, this importance is not sufficiently understood. The preference for a more sedentary lifestyle with aging and the progression of the disease increases the incidence of dementia and may accelerate the transition between stages.

3.4.2 Physical health and ageing with disabilities



Providing care to persons with a intellectual disability may lead to increased risks of physical health problems. In this context, research suggests that chronic stress associated with caregiving may negatively affect metabolism and increase susceptibility to various diseases. There is also evidence that carers of persons with disabilities neglect their health, such as not getting enough sleep and eating poorly. This increases their illness risk (Vitaliano, Zhang, & Scanlan, 2003).

The determinants of poor health among carers of persons with disabilities have been identified as (Pinquart & Sorenson, 2007):

- Behavioral problems and cognitive impairment
- Longer duration of caregiving
- Receipt of less informal support
- Older age
- Not being a spouse
- Co-residence with the care recipient
- High levels of depression/burden

In this respect, the carer should pay close attention to the elements listed above. In cases where the person feels exhausted and worn out, psychological support can help to ensure that physical abilities are not deformed as much as possible.

3.4.3 Promoting active lifestyles: Physical activities for individuals with intellectual disabilities and mild to moderate dementia

In this stage of dementia, there are many alternative exercises for elderly individuals. In this stage, physical activities such as simple exercises, tai chi, musical dance and swimming can be done. However, these activities can be costly exercises that can usually be done in centers. In addition, walking, gardening, and housework can also be positive alternatives in this phase. Regular physical activities in this phase are essential in reducing the increasing agitation of the elderly and ensuring quality sleep. Although all these activities described and to be described are centered on patients with mild and moderate dementia, they can also be applied to persons with intellectual disabilities.

Musical dance

In musical dance activities, individuals are given rings, balloons or balls and asked to improvise. Activities can also be organized as couple or group dances. Individuals with mobility limitations are asked to move in a sitting position and accompany the music. Individuals with dementia can be enabled to recall memories and express their feelings through musical dance activities. Since this activity can be done with a group, it is both a fun exercise and a social activity for individuals. At the same time, it increases strength and flexibility and reduces stress by sharing.

Simple exercises

Individuals can perform sitting exercises regularly at home or in a center daily. These exercises are aimed at maintaining individuals' muscle strength and balance and are less tiring than those performed standing. These may include walking, turning left and right, raising and lowering the heel and feet, bending the arms, bending the legs, bumping the feet together, moving the legs as if riding a bicycle, stretching the arms, reverse arm and leg movement, and practical standing sitting exercise. Physical activities to be recommended to individuals should only be aimed at increasing the level of physical activity without calorie restriction. Walking programmes are the easiest and most reliable way to achieve this. Walking is also one of the activities that is manageable. It stimulates the heart and lungs and enables the heart and respiratory system to work quickly and efficiently. During walking, it is necessary to walk while keeping the neck and body upright. If necessary, auxiliary tools (cane etc.) can be used. Shoes should be suitable for the foot and should not be worn with slippers because it increases the risk of falling. Walking is one of the most important social activities. Healthy walking should be 10-15 minutes a day, 3-4 hours a week for beginners, and 15-20 minutes a day, 4 hours a week for those who succeed. If the elderly people do not have difficulty in doing this, 20-30 minutes a day, more than 4 hours a week should be targeted.

Exercise programs for the elderly contribute to the development of balance, flexibility, strength, agility, and fitness, enabling the individual to participate in life and lead an active, fit, and healthy life. It is also known that physical activities increase bone mineral density and muscle strength, spinal mobility, and flexibility of elderly individuals. It is also known that exercise improves the body composition of the elderly, increases muscle strength, reduces falls, reduces joint pain and depression, and increases quality and duration of life.

Briefly, the precautions to be taken while walking can be summarized as follows:

1. Walking should be avoided immediately after meals.
2. Walking increases body temperature. The elderly should prevent themselves from dressing tightly.
3. Afternoon hours are the hottest, therefore walking should be avoided.
4. If the elderly people are out of breath while walking, it is good for them to slow down and rest before they continue their walking exercise.
5. If the elderly people have a cold and high fever, walking should be avoided.
6. It is crucial to keep in mind the importance of hydration while walking. Therefore, the elderly should consume plenty of fluids as fluid loss is high during walking.

Swimming

Swimming is one of the rare sports where all body muscles are used. Since it is a sport against the resistance of water, it makes significant contributions to muscle strength and general resistance. Swimming is a good exercise for individuals with dementia when supervised. After swimming, the person's stress decreases, agitation decreases, self-confidence increases, and feels relaxed. Although scientific evidence is insufficient for individuals with dementia, water may have a soothing effect for many individuals.

Physical activities to be done in the middle stages of dementia should be divided into hours of the day, not continuously. For example, after a 15-minute walk, 1-2 hours of rest can be followed by gardening or housework. Daily physical activity for at least 30 minutes is also very important in the protection of cognitive functions. The duration and type of physical activity is determined according to the individual characteristics of the elderly persons with dementia, should be maximized by increasing the time and type as much as possible.

Physical activities in advanced dementia

Since cognitive impairment is higher in the advanced stage, the care needs of the elderly are also increasing. Physical activity may also be useful in the later stages of dementia. Physical activity can help reduce individuals' care needs in this stage and minimize the stimuli in the home or environment. Since the movements of the elderly may be limited in this phase, the exercises to be recommended may be in the form of walking from one room to another room in the house, sitting in different sitting places (chairs, etc.) at certain times of the day and changing their positions intermittently while sitting. Intermittent change of position in bed is also recommended.

Recommended Exercises (Lök & Lök, 2015):

1. It can be moved slowly along the edge of the bed. Even getting up to sit on a chair and sitting on the chair for a certain period can help some muscles to move.
2. It can be ensured to balance standing. If necessary, it can be helped to stand with support. This activity can also be done while taking a shower. This exercise helps to strengthen the leg muscles of the individual.
3. It should be supported to sit without support for a few minutes every day. This exercise is used to support posture and helps to strengthen the stomach and back muscles. It is necessary to take precautions against the risk of falling during this exercise.
4. It should be ensured that the patient lies flat on his/her back in bed for 20-30 minutes every day as much as possible. This exercise also rests the neck muscles and allows the body of the elderly person to stretch.

3.5 Ageing persons with intellectual disabilities and obesity



The problem of overweight and obesity, which is frequently seen in healthy individuals, is also an important problem for persons with disabilities. In studies conducted to determine the rate of obesity in persons with intellectual disabilities, it has been explained that the rate of obesity in mild and moderate individuals is higher than in individuals with severe intellectual disabilities.

When the distribution of obesity rate in persons with disabilities by gender was examined, it was found that the rate of women with intellectual disabilities was higher than that of men with

intellectual disabilities.

In various studies conducted for these purposes, it was stated that more than half of the persons with intellectual disabilities were obese.

This disease, which has an increasing incidence rate and directly affects the quality of life negatively, should be detected and prevented before entering the overweight period. Otherwise, it causes serious chronic diseases.

Nutrition is a basic need and when it cannot be realized in an adequate, balanced and healthy way, there may be a situation that may pose a life risk.

There may be various environmental and individual-related reasons under the failure of nutrition to be realized as it should be:

Digestive problems

Nutritional problems are the main health problems seen in the elderly with intellectual disabilities. Chewing and swallowing difficulties, which are among the motor skills that cannot be realized especially in individuals with moderate and severe disabilities, can cause many diseases.

Especially chewing and swallowing problems are seen in persons with severe intellectual disabilities. Care should be taken in case large pieces swallowed without chewing block the esophagus or food and liquid may get into the windpipe. Otherwise, there is a risk to life. In persons with intellectual disabilities and incompletely developed motor skills, it is generally recommended to feed pureed, semi-solid foods.

Inability to control the lip movement function, which is one of the developmental motor skills, and the ability to move the tongue, together with the functional impairment of the mouth, jaw and cheek muscles, may cause chewing problems and lead to problems in terms of nutrition and digestion. Some medications used to increase muscle control ability or to calm persons with disabilities may cause inadequacies in secretion and saliva flow. Therefore, these factors should be paid close attention.

Hygiene

Personal care and general hygiene rules, which are one of the daily life activities, cannot be provided especially by persons with moderate and severe disabilities. For these reasons, they need environmental support. If the environment, clothing, hand and mouth hygiene of the individual cannot be provided, the risk of infection will be quite high while feeding. Sterile foods are one of the hygiene rules that should be considered in the nutrition of persons with disabilities. Since the digestion of food first starts in the mouth, it is also important to ensure oral hygiene. Prolonged meal consumption time for people who do not have the ability to chew, prolonged exposure of food for a long time are also factors that may increase the risk.

In various studies, oral health problems have been found more frequently in persons with intellectual disabilities to healthy and normal individuals due to unfavorable hygiene conditions.

It has been determined that persons with intellectual disabilities who need and should benefit more from social life rights do not benefit from health and treatment services sufficiently, although they have more oral dental problems.

One of the reasons that causes problems in oral health is caries. Excessive use of medication may cause caries due to the sugar content in medicines. If left untreated, it may result in tooth loss. In order to ensure hygiene in patients with disabilities and in need of care, bathroom toilet usage areas should also be convenient. Physical arrangements should be made considering the conditions of these individuals.

Inadequate physical activity

In order to maintain weight, the energy taken into the body and the energy spent must be in balance. When this balance cannot be maintained and energy intake increases and cannot be spent, weight gain begins. Physical activity plays an important role for the expenditure of the energy taken. To maintain physical activity and sportive activities, it is necessary to have certain motor skills and the integrity of physical and mental health in order to control it.

There are reasons such as being bedridden and needing clinical treatment, motor deficiencies, inability to move independently, inability to achieve muscle stabilization, side effects of heavy medications used, especially in persons with moderate to severe intellectual disabilities.

When the studies conducted were examined, supportive findings were found regarding the effects of participation in sports and society on social skill development and psychological effects while contributing to energy expenditure to meet the physical needs of individuals with intellectual disabilities. With the positive effects of hormones such as endorphins and serotonin secreted during and after sports, it is also beneficial for persons with disabilities in terms of mood and increases physical motivation.

Constipation

Constipation, which can be encountered in terms of nutrition and digestion and is a factor in the formation of weight problems, is inevitable when inadequate water consumption and insufficient physical activity are added to the wrong eating habits and a continuous dry solid and fibre-free diet.

Liquid and pulp intake in the diet to eliminate the problem of constipation, which is quite common should be increased.

Wrong eating habits

Adequate and balanced nutrition is essential for all individuals to sustain life. This is even more important for persons with chronic diseases, the elderly, individuals in need of care support and persons with intellectual disabilities.

An appropriate diet programme should be planned for individuals with weight problems due to various reasons and consumption of empty calorie sources should be prevented. Meal planning should be made and foods cooked in accordance with healthy cooking methods should be consumed.

The nutrition diet programme for each individual is tailored individually. The nutrient balance of persons with obesity and overweight problems should be adjusted correctly, taking into account the nutritional history diseases and physical activity. Persons with intellectual disabilities should be even more sensitive. Foods that should not be consumed should be completely removed and alternatives that will benefit should be added instead.

References:

6 health benefits of recreation for seniors in a retirement community. (n.d.).

<https://chartwell.com/en/blog/2022/02/6-health-benefits-of-recreation-for-seniors-in-a-retirement-community>

Aging Changes in Skin. (2017). Medical Encyclopedia. MedlinePlus: Trusted Health Information for You. U.S. National Library of Medicine, A.D.A.M., Inc. Retrieved from

<https://medlineplus.gov/ency/article/004014.htm>

Aging Changes in the Bones, Muscles, Joints. (2017). Medical Encyclopedia. MedlinePlus: Trusted Health Information for You. U.S. National Library of Medicine, A.D.A.M., Inc. Retrieved from

<https://medlineplus.gov/ency/article/004015.htm>

Aging Changes in the Senses. (2017). Medical Encyclopedia. MedlinePlus: Trusted Health Information for You. U.S. National Library of Medicine, A.D.A.M., Inc. Retrieved from

<https://medlineplus.gov/ency/article/004013.htm>

Akyar, İ. (2011). Demanslı hasta bakımı ve bakım modelleri. *Hacettepe Üniversitesi Hemşirelik Fakültesi Dergisi*, 18(2), 79-88.

Alici, N. K., & Dönmez, A. A. (2020). A systematic review of the effect of laughter yoga on physical function and psychosocial outcomes in older adults. *Complementary therapies in clinical practice*, 41, 101252.

- Alzheimer Hastası Yaşlılarla Evde Uygulanacak Etkinlik Rehberi. (11.08.2020).
<https://www.alzheimerdernegi.org.tr/alzheimer-hastasi-yaslilarla-evde-uygulanacak-etkinlik-rehberi/> (Accessed on 27.12.2022).
- Arslan, Z., & Bulduk, S. (2021). Demanslı Yaşlılarda Oyuncak Bebek Terapisinin Bilişsel Durum ve Ajitasyona Etkisi. *Düzce Üniversitesi Sağlık Bilimleri Enstitüsü Dergisi*, 11(3), 368-376.
- Barlas, G. Ü., & Nevin, O. N. A. N. (2008). Alzheimer Hastası ve Aileleri ile İletişim. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, 11(4), 105-111.
- Bone, J. K., Bu, F., Fluharty, M. E., Paul, E., Sonke, J., & Fancourt, D. (2022). Engagement in leisure activities and depression in older adults in the United States: Longitudinal evidence from the Health and Retirement Study. *Health and Retirement Study, Social Science & Medicine*, 294, 114703.
<https://doi.org/10.1016/j.socscimed.2022.114703>
- Bowen, M. E. (2012). A prospective examination of the relationship between physical activity and dementia risk in later life. *American Journal of Health Promotion*, 26, 333-340.
- Burke, É., Carroll, R., O'Dwyer, M., Walsh, J. B., McCallion, P., & McCarron, M. (2019). Quantitative examination of the bone health status of older adults with intellectual and developmental disability in Ireland: a cross-sectional nationwide study. *BMJ open*, 9(4), e026939.
- Çalışkan, S. Ş. (2022). Fazla kilolu ve obez zihinsel engelli bireylere uygulanan sağlıklı beslenme danışmanlığının beslenme alışkanlıkları ve antropometrik ölçümlere etkisi (Master's thesis). İstanbul Sabahattin Zaim Üniversitesi.
- Correa, A. B., Castro, Á., & Barrada, J. R. (2022). Attitudes towards the sexuality of adults with intellectual disabilities: a systematic review. *Sexuality and Disability*, 40(2), 261-297.
- Cruse, C. (2020, February 19). *6 Ways to Engage Your Aging Loved One Socially. Home Care Assistance Des Moines*. <https://www.homecareassistancedesmoines.com/how-to-persuade-your-senior-loved-one-to-socialize/b>
- Dantino, P., Mennuni, S., & Spagnuolo, S. (2020). *INVECCHIARE CON UNA DISABILITÀ, Opinioni di giovani e anziani sulla discriminazione multipla*, Italiana per il Superamento dell'Handicap.
https://www.fishonlus.it/progetti-fish/multidiscriminazione/azioni/files/Report_interviste.pdf.
- Demir, G. (2018). Demans ve Hemşirelik Bakımı. *Black Sea Journal of Health Science*, 1(2), 35-39.
- Diker, J., Etiler, N., Yıldız, M., & Şeref, B. (2001). Altmış beş yaş üzerindeki kişilerde bilişsel durumun günlük yaşam aktiviteleri, yaşam kalitesi ve demografik değişkenlerle ilişkisi: Bir alan çalışması. *Anadolu Psikiyatri Dergisi*, 2(2), 79-86.
- Dolan, E., Lane, J., Hillis, G., & Delanty, N. (2019). Changing trends in life expectancy in intellectual disability over time. *Irish medical journal*, 112(9), 1006.
- Encouraging a Senior with Limited Mobility to Get Outside*. (n.d.). © 2007-2023 AgingCare All Rights Reserved. <https://www.agingcare.com/articles/how-elders-with-mobility-problems-can-go-outside-more-easily-153728.htm#:~:text=Tips%20for%20Getting%20a%20Senior%20Outside&text=Suggest%20that%20they%20sit%20by,to%20spend%20more%20time%20outside>

- Frigi, V., Smith, M., Andrews, T. M., Clifton, L., Collins, G. S., Fuller, A., ... & Holt, T. A. (2022). Incidence of fractures in people with intellectual disabilities over the life course: a retrospective matched cohort study. *Eclinicalmedicine*, 52, 101656.
- García-Domínguez, L., Navas, P., Verdugo, M. Á., & Arias, V. B. (2020). Chronic health conditions in aging individuals with intellectual disabilities. *International Journal of Environmental Research and Public Health*, 17(9), 3126.
- Golden, Jeannette & Conroy, Ronán & Lawlor, Brian. (2009). *Social support network structure in older people: Underlying dimensions and association with psychological and physical health*. Psychology, health & medicine. 14
- Gottardi, F., Trabucchi, M., Vecchi, Avanzini, S., Berruti, Rodella, A., & Boffelli, S. (2020). *Il Caffè Alzheimer e la relazione coi malati: risultati positivi e criticità* (I luoghi della cura online).
- Harris, L., McGarty, A. M., Hilgenkamp, T., Mitchell, F., & Melville, C. A. (2018). Correlates of objectively measured sedentary time in adults with intellectual disabilities. *Preventive Medicine Reports*, 9, 12-17.
- Hernández Chacón, M. (2018). Influencia de un programa de entrenamiento sensoriomotor sobre el equilibrio estático en nadadores con síndrome de down y discapacidad intelectual.
- Ilhan, A. (2017). Assessment of Relationship Between Physical Activity Level, Nutritional Status and Cognitive Function in Elderly. *Hacettepe University Institute of Health Sciences*, MSc Thesis in Community Nutrition Program, Ankara. (<http://hdl.handle.net/11655/3977>)
- Jackson, S. E., Hackett, R. A., & Steptoe, A. (2019). *Associations between age discrimination and health and wellbeing: cross-sectional and prospective analysis of the English Longitudinal Study of Ageing*. *The Lancet. Public Health*, 4(4), e200–e208. [https://doi.org/10.1016/s2468-2667\(19\)30035-0](https://doi.org/10.1016/s2468-2667(19)30035-0)
- Karadeniz, G. (2008). Yaşlılık Dönemi Fiziksel Özellikleri. In K. Ersanlı & M. Kalkan (Eds.), *Psikolojik, Sosyal ve Bedensel Açidan Yaşlılık* (pp. 19-38). Ankara: Pegem Akademi.
- Kıral, K. (2011). Demans hasta yakınlarında depresyon ve yaşam doyumu: Bilişsel duygu ayarlama, sosyal destek ve adil dünya inancı ilişkisi. *Mersin University Institute of Social Sciences*, MSc Thesis, Mersin.
- Kömerik, N., & Efeoğlu, C. G. (2012). Zihinsel engele sahip bireylerde ağız sağlığı. *Atatürk Üniversitesi Dış Hekimliği Fakültesi Dergisi*, 2012(1), 96-104.
- Lök, N. & Buldukoğlu, K. (2014). Demansta bilişsel aktiviteyi artırıcı psikososyal uygulamalar. *Psikiyatride Güncel Yaklaşımlar*, 6(3), 210-216.
- Martin, L. W., Oepen, R., Bauer, K., Nottensteiner, A., Mergheim, K., Gruber, H., & Koch, S. (2018). *Creative Arts Interventions for Stress Management and Prevention—A Systematic Review*. *Behavioral Sciences*, 8(2), 28. <https://doi.org/10.3390/bs8020028>
- Pardue-Spears, C. (2021). *6 Easy-to-use Video Communication Devices for the Elderly*. *Family Matters*. <https://familymattershc.com/video-communication-devices-for-elderly/>
- Pinquart, M., & Sörensen, S. (2007). Correlates of physical health of informal caregivers: A meta-analysis. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 62(2), P126-P137.

- Portal, M. O. A. (2020b, December 16). *Board games for your health and well-being*. Default.
<https://www.mcmasteroptimalaging.org/blog/detail/blog/2020/12/16/board-games-for-your-health-and-well-being>
- Reina, A. M., Adams, E. V., Allison, C. K., Mueller, K. E., Crowe, B. M., van Puymbroeck, M., & Schmid, A. A. (2020). Yoga for functional fitness in adults with intellectual and developmental disabilities. *International Journal of Yoga*, 13(2), 156.
- Richardson, M. A. (2019). *Exploring Yoga as a Leisure-Stress Coping Strategy Among Adults with Intellectual and Developmental Disabilities* (Doctoral dissertation, Clemson University).
- Roldán, E., Valencia, L & Altamiranda, M. (2020). *Efectos fisiológicos del ejercicio en adultos mayores con y sin discapacidad intelectual*. Sello Editorial Tecnológico de Antioquia.
- Şat, S. (2020). Hafif bilişsel bozukluk ve erken evre alzheimer tipi demans hastalarında yönetici işlevler ve ileriye dönük bellek performanslarının incelenmesi. *Bursa Uludag University Institute of Social Sciences*, PhD Thesis, Bursa. (<http://hdl.handle.net/11452/19643>)
- Sean. (2020). *Apps for People with Disabilities and Older People: Thinking Disabilities*.
<https://thinkingdisabilities.ie/2019/05/23/apps-for-people-with-disabilities-and-older-people-2/>
- Sefa, L. Ö. K., & Neslihan, L. Ö. K. (2015). Demansta fiziksel aktivite ve egzersiz. *Psikiyatride Güncel Yaklaşımlar*, 7(3), 289-294.
- Tappen, R. M. (1994). The effect of skill training on functional abilities of nursing home residents with dementia. *Research in nursing & health*, 17(3), 159-165.
- Ünalın, P. C. (2012). Aktif yaşlanma: Bilişsel ve sosyal boyut. *The Journal of Turkish Family Physician*, 3(1), 13-17.
- Vitaliano, P. P., Zhang, J., & Scanlan, J. M. (2003). Is caregiving hazardous to one's physical health? A meta-analysis. *Psychological Bulletin*, 129(6), 946.
- Williams, C. L., Hyer, K., Kelly, A., Leger-Krall, S., & Tappen, R. M. (2005). Development of nurse competencies to improve dementia care. *Geriatric Nursing*, 26(2), 98-105.
- X, S. (2020, June 11). *Regular volunteer work provides demonstrable benefits for the health and well-being of older adults*. <https://medicalxpress.com/news/2020-06-regular-volunteer-benefits-health-well-being.html>
- Zara, A. (2011). Kayıplar, yas tepkileri ve yas süreci. *Yaşadıkça*, 73, 90.
- Zemach, M., Lifshitz, H., & Vakı, E. (2023). Brain reserve theory: Are adults with intellectual disability more vulnerable to age than peers with typical development?. *Journal of Applied Research in Intellectual Disabilities*.
- Zwack, C. C., McDonald, R., Tursunalieva, A., Cooray, A., Lambert, G. W., & Lambert, E. A. (2021). Does autonomic nervous system dysfunction influence cardiovascular disease risk in young adults with intellectual disability?. *American Journal of Physiology-Heart and Circulatory Physiology*, 320(2), H891-H900.

Chapter 4: How to emphasize healthy lifestyle habits?

Introduction

A habit is a behaviour that requires little thought or effort because you have become accustomed to it. Habits tend to be automatic, uncontrolled, and almost unintentional.

Healthy habits are habits that promote health and well-being in our lives—for example, exercising, eating healthy, getting enough sleep, and spending time with friends. Of course, important habits are not always related to your physical health. Healthy people usually have fewer bad habits, but that doesn't mean they don't have them at all. Any habit, good or bad, is hard to break. If we are able to give up bad habits and cultivate healthy ones, it can change our life for the better in many ways. Healthy habits, such as healthy eating, enough sleep, regular exercise, will give us more energy. With a healthy immune system, we will get sick less often, feel happier and live longer.

The chapter also deals with the analysis of the physical activity of people with intellectual disabilities and the factors for encouraging them to exercise more. We also presented ten key tips for a long and healthy life.

4.1 Physical activity and people with intellectual disabilities

Research studies

Regular physical activity strengthens the health of adults. There is a lot of evidence for this. Specifically, physical activity reduces the risk of coronary heart disease, stroke, hypertension, diabetes, certain cancers, and metabolic syndrome; improves bone mineral density; increases cardiorespiratory and muscle capacity; and is important for achieving a healthy body weight (Hall & Thomas, 2008).

The World Health Organization (WHO) Global Recommendations on Physical Activity for Health 2 state that adults aged 18 to 64 should do 150 minutes of moderate-intensity aerobic physical activity or 75 minutes of vigorous-intensity activity each week. Bone and muscle strengthening activities should also be done at least twice a week. Despite the well-established link between physical activity and health, research consistently shows that inactivity rates are increasing in many countries. Physical inactivity is the fourth leading risk factor for global mortality and is a major public health problem worldwide.

Adults with intellectual disabilities are no exception to the growing trends in physical inactivity. The activity habits of adults with intellectual disabilities are relatively well researched, and there is evidence to support that this group is insufficiently active to achieve health benefits, and may even be less active than the general population.

Previous research confirmed that adults with intellectual disabilities were predominantly sedentary and that less than one-third met the physical activity guidelines for health in the country where the study was conducted. Comparisons of activity levels with the general population have been weak and measurement flawed, due to the lack of valid and reliable instruments for defining physical activity. In research in 2010, objective monitors were used to measure the physical activity of individuals with intellectual disabilities.

Again, evidence supported that a small proportion of adults with intellectual disabilities met physical activity and health guidelines, but results were variable. Small-scale objective monitor studies that primarily included individuals with intellectual disabilities had milder limitations. Additional research has been conducted using accelerometers to objectively measure physical activity in adults with intellectual disabilities, and since this review was published, the reliability of the results has increased (Hall & Thomas, 2008).

Researchers in Norway studied physical activity and sedentary behaviour as measured by accelerometers in a large sample of adults. These authors found that individuals spent 63% of their day in sedentary activity and 3% in moderate to vigorous physical activity. Although individuals engaged in an average of 27 minutes of moderate-to-vigorous physical activity per day, only 12% of the sample met the Nordic recommendations for physical activity. In Scotland, researchers found that adults with intellectual disabilities engaged in an average of 12.8 minutes of moderate-intensity physical activity per day, well below the recommended amount of physical activity for health. In addition, adults with intellectual disabilities were sedentary for an average of 10.2 hours per day. Comparison of physical activity and sedentary behaviour of elderly persons with intellectual disabilities measured with an accelerometer for two groups; of younger adults with intellectual disabilities and older adults without intellectual disabilities was conducted by researchers Dixon-Ibarra et al. All three groups spent 60 to 65% of their day (that is, the time they wore the accelerometer) in sedentary activity for about four hours (Lorentzen & Wikström, 2012).

Although there were no significant differences between groups, older adults with intellectual disabilities and younger adults with intellectual disabilities spent an average of 10.2 and 21.0 minutes per day in moderate-to-vigorous physical activity, respectively. In this study, only 6% of older adults with intellectual disabilities and 13% of younger adults with intellectual disabilities met physical activity standards. These accelerometer studies provide evidence to support that adults with intellectual disabilities generally exhibit low levels of physical activity (Hall & Thomas, 2008).

Much effort has been made to understand the factors that influence physical activity among adults with intellectual disabilities in order to design intervention strategies. Given the intellectual, behavioural, social, and motor impairments often associated with intellectual disability, factors influencing physical activity participation in these adults may differ from the general population.

Special emphasis was placed on examining barriers to physical activity faced by adults with intellectual disabilities. For example, adults with Down syndrome reported that the most common barriers to accessing exercise were lack of transportation, high cost, and lack of support. In addition to these, the dominant factors were: lack of energy, too hard and boring exercise, cognitive-emotional barriers, as well as knowledge, costs, health and feelings of laziness. These were the most frequently described barriers to physical inactivity among adults with intellectual disabilities in the study. Interviews were conducted with a sample of adults with intellectual disabilities to identify factors predicting low activity. Age, immobility, epilepsy, lack of daily opportunities and living in shared care were examples of factors that contributed to the activity level of this group.

The most frequently cited promoters of physical activity were enjoyment of the activity, staff/family support for participation, and social contact/friendship with others. Frequent obstacles were: resistance to activities, physical discomfort, lack of support and too much activity. These examples of studies attempting to explain low levels of physical activity in adults with intellectual disabilities suggest that the process of designing and implementing physical activity interventions for adults with intellectual disabilities may be different than for the general adult population (Lorentzen & Wikström, 2012).

The low level of physical activity of these people has created an urgent need to develop and test interventions. Assessment of work is essential to identify effective strategies to increase physical activity and health outcomes in adults with intellectual disabilities.

Results

Interventions that focus on increasing physical activity and documenting these changes in adults with intellectual disabilities are a fairly new phenomenon. Very few studies have been conducted to date and these studies have generally been small in scale. It is encouraging that researchers have (in general) used validated approaches to document physical activity (Lorentzen & Wikström, 2012). Four studies used motion sensors (accelerometers and pedometers), which are the preferred approach to measuring physical activity in people with intellectual disabilities, as there is little evidence that carers or facilitators support conducting surveys with people with intellectual disabilities. One of the studies included in this review used systematic observation of physical activity behaviour, which is certainly an appropriate approach in terms of validity and reliability, but is very labour-intensive and less suitable for larger studies.

The targets of the interventions were generally adults with intellectual disabilities who were under the age of 66. One intervention targeted individuals with intellectual disabilities - older adults (> 75 years).

Effects on physical activity

The study showed that there is potential for a positive impact on physical activity opportunities and participation in a segregated environment. The results of the healthy lifestyle change program also show an increase in the duration and frequency of physical activity (Lorentzen & Wikström, 2012). The study, which showed a significant impact on participation in physical activity, sought to influence the personal behavior of individuals with intellectual disabilities and influence their social and physical environment by influencing the knowledge, skills and work routines of caregivers. Regarding physical activity, this intervention had a significant effect at two levels. First, there was a significant improvement in caregivers' work routines related to encouraging residents' physical activity, and second, residents (individuals with intellectual disabilities) significantly increased their number of steps per day by 1203 steps.

Two of the health promotion programs that did not have a significant effect on physical activity participation directly targeted individuals with intellectual disabilities and involved one activity per week for eight consecutive weeks. It is possible that each of these interventions involved too small a 'dose' to have a significant effect. Changes in the individual do not occur by themselves, but also involve interactions with immediate or immediate aspects of the environment, such as caregivers, family, and community organizations. Evidence suggests that individual and environmental limitations need to be addressed simultaneously to be effective in creating changes in physical activity.

One study, which did not lead to a significant increase in physical activity, did have a significant effect on walking energy expenditure, walking efficiency, and lower extremity function.

Effects on other health outcomes

Each of the interventions was designed to have a positive effect on other aspects of health in addition to physical activity, particularly Body Mass Index and waist circumference, healthy eating, self-efficacy in making

a doctor's appointment, life satisfaction, and knowledge about physical activity. However, the studies did not show significant effects on measures of weight status or diet quality. It is clear from this review that experimental research focused on increasing participation in physical activity and promoting physical activity to improve the health of adults with intellectual disabilities is in its infancy (Lorentzen & Wikström, 2012).

Further steps

Despite evidence that regular participation in physical activity enhances the physical and psychosocial health of adults, available evidence shows that among adults with intellectual disabilities, levels of physical activity are low, levels of sedentary behaviour are high, and less than one quarter meet national guidelines for physical activity. Despite the potential benefits of physical activity and low levels among adults with intellectual disabilities, this review demonstrates that research documenting the process and outcomes of physical activity interventions is sadly lacking. The little evidence that exists demonstrates that short- and medium-term improvements in physical activity levels are possible. Evidence to date suggests that targeted workplace intervention can improve physical activity levels in this discrete context, but achieving more pervasive increases in physical activity among adults with intellectual disabilities requires a 'multi-pronged' and sustained approach. It seems clear that relatively short programs (8-12 repetitions) are not sufficient for significant changes in physical activity behaviour in adults with intellectual disabilities. However, with more than a year of work with caregivers and people with intellectual disabilities, significant and meaningful changes in physical activity can be achieved. Although some improvements in other outcome variables were observed between the studies in this review, the most common outcome of interest in these physical activity studies, i.e. body weight status, only slightly changed. What is required to increase physical activity and subsequently improve body weight remains unclear. Therefore, on the basis of this review, we recommend that programs aimed at increasing physical activity among adults with intellectual disabilities are also aimed at their immediate environment of persons with intellectual disabilities (e.g. caregivers) over a longer period of time (Lorentzen & Wikström, 2012).

4.2 Importance of healthy lifestyle for people with intellectual disabilities

Physical activity is any physical movement produced by skeletal muscle, which causes in energy consumption. On the other hand, there is a type of physical activity that is "planned, structured and repetitive" and aims to improve or maintaining physical fitness. Regular exercise is associated with a reduction in cardiovascular risk factors by lowering resting heart rate, heart rate and blood pressure, and reducing total body fat. Natural moderate physical activity that increases energy expenditure like walking, most likely has a similar effect and may promote physical fitness. Fitness is further defined as health-related or skill-related attributes such as cardiorespiratory endurance, muscle strength, body composition, agility, flexibility, balance, coordination or strength. Physical activity has been identified as most important for public health. Physical activity and exercise is a means to promoting the health of older adults with developmental disabilities (Temple et al., 2017).

The elderly with developmental disabilities represent a heterogeneous group. Some general recommendations for promoting health and fitness for people with developmental disabilities:

- Help increase understanding and provide practical ideas.
- Making connections between rehabilitation facilities and fitness in the community helps ease the transition into the community. Increasing the physical fitness of the knowledge and skills of professionals related to
- Health promotion and disability is an important factor.
- Exploring ways to reduce costs, as cost is often cited as a barrier to exercise.
- Fitness programs should include an emphasis on increasing cardiovascular endurance, strength and flexibility and emphasize the importance of good nutrition.
- Discussions about health behaviour, such as smoking cessation, stress management, and coping strategies are also essential to an overall health promotion program for individuals with disabilities.
- Education about healthy lifestyles and healthy nutrition is also suitable.
- The cooperation of experts who have knowledge of malfunctions and related functional limitations.

Like all of us, the elderly and the elderly with intellectual and other disabilities must be as physically active as possible and practice as appropriate as possible. Family members, support professionals and professional service providers should create opportunities to encourage an active and healthy lifestyle (Temple et al., 2017).

4.3 Promoting physical activity for adults with intellectual disabilities

Physical inactivity is directly linked to many secondary health conditions, such as coronary artery disease, congestive heart failure, hypertension, stroke and some cancers. In addition, physical inactivity is known to contribute to obesity. New research shows that the likelihood of developing dementia is higher, diet and exercise can prevent the development of Alzheimer's disease. Adults with intellectual disabilities have similar health problems to the general population. Furthermore, elderly people with intellectual disabilities show a higher prevalence of obesity as younger individuals. In addition to the secondary health complications associated with physical inactivity, there are other consequences of inactivity for older people with intellectual disabilities. People may experience reduced self-esteem, greater dependence on others, and a reduced ability to fluidly, meaningful social interactions.

In individuals with intellectual disabilities, it is more likely to be physically inactive than people in the general population. Deconditioning can potentially lead to problems with mobility, as well as self-care, occupational and leisure activities. People with intellectual disabilities have high rates of morbidity and mortality (Hall & Thomas, 2008).

Promoting physical activity, exercise and fitness is very important for maintaining health among all individuals, including those who are aging with intellectual or other developmental disorders. Rehabilitation professionals

know functional limitations due to various developmental disorders. Increasing the participation in physical activities of individuals with physical, intellectual or developmental disabilities is a major challenge.

Given the changes associated with the normal aging process, older adults with developmental disabilities would likely face similar, or maybe more, challenges. The authors measured the accessibility of gyms, fitness centres, equipment, and swimming pools, as well as available information and the behaviour of professional staff. Many facilities did not have enough space to transfer from a wheelchair and exercise equipment. Changes in sensory and the musculoskeletal system could be additionally affected challenges faced by older individuals with developmental disabilities when considering participation in physical activity programs at a local fitness centre.

Older adults with mild intellectual disabilities can improve physical performance through physical training designed to improve balance and strength. Researchers found improvements in self-perceived well-being, but only in those who did balance and strength exercises. Adults with mild intellectual disabilities can improve exercise with an exercise program specific to balance and strength training. Targeted exercises can affect specific areas related to health.

Group health education programs with emphasis on the eating and exercise habits of individuals have proven to be effective, but at different degrees of intellectual development disorders.

After each training session, participants were offered the opportunity to do a brisk walk with the instructor. Participants were also offered 2 to 4 elective home visits to help design an exercise program, develop a nutrition plan, and visit the grocery store to identify healthy choices.

The average body mass index decreased significantly in individuals without disabilities, but only in 18.5% of individuals with intellectual disability. Although an educational program may benefit some individuals, those with intellectual disabilities may need more structured and individually designed program. The effects of the program are weight reduction in older adults with intellectual disability.

Special Olympics offers programs proven to promote physical fitness, self-esteem, confidence and social interaction. The initiatives are led by an interdisciplinary team of healthcare providers, for example, paediatricians and physical therapists. The Health Promotion Initiative educates individuals with developmental disabilities about the importance of maintaining an active and healthy lifestyle and the importance of physical fitness in improving long-term health (Hall & Thomas, 2008).

Another program offered by Special Olympics is Athlete Leadership Program. This program promotes athletes in Special Olympics to serve on committees as coaches, as officials and as volunteers within Special Olympics programs. This program promotes physical fitness and management and may be the ideal program for older adults with developmental disabilities be included in the program of activities when they can no longer compete. Many seniors with developmental disabilities may lack physical capacity or support services to participate in high structured programs such as the Special Olympics or a visit to the fitness centre (Temple et al., 2017). But there are available resources that may be suitable for older people who are frail or have dementia or behavioural problems.

Just like all of us, the elderly and the elderly with intellectual and other types of disabilities they must be as physically active as possible. Family members, support professionals and professional service providers had to create opportunities to encourage active and healthy lifestyle. Rehabilitation professionals, especially physiotherapists and occupational therapists are organized appropriate programs to promote physical fitness for this population. A comprehensive workout programs should include 5 basic fitness of parameters: muscle

strength, muscle and cardiovascular endurance, flexibility and body composition. That is why they encourage walking, cycling, dancing and other things activities such as running, swimming, hiking, stair climbing, rowing, and ice skating are examples of cardiovascular fitness. Older adults with developmental disabilities have less physical activity or exercise than the general population. Rehabilitation professionals need to become more involved in planning exercise programs so that the special needs of individuals with developmental disabilities can be addressed.

4.4 Ten key tips for long and healthy life

In recent years, we have started working from home and maintaining social distance as much as possible. When we stay home and are stuck with foods that have been in our fridge or pantry for a while, we are temporarily living a sedentary lifestyle with an increased likelihood of physical inactivity, overeating and sitting, stress, anxiety and depression. In particular, many of us have gained some weight during the pandemic and may have retained persistent excess weight, which can mean significant health risks for type 2 diabetes, hypertension, heart attack, stroke and other health problems.

We'd like to highlight some basic tips and resources for maintaining a healthy lifestyle, weight, and overall well-being while staying at home and practicing social distancing (Song, 2020). For elderly with intellectual disabilities is important to simplify the instructions and supplement them with visual elements such as pictures. A healthy lifestyle is important for all, the elderly with intellectual problems need support, and it is also understandable that a specialist follows them in this. If necessary, he also gives them detailed instructions.

1. Measuring and watching your weight

Daily or weekly weight monitoring help to see what you are losing and/or gaining.

2. Limiting junk food and eat healthy meals

Don't forget breakfast and choose a nutritious meal with more protein and fibre and less fat, sugar and calories. For more information on weight control foods and dietary recommendations, see the following website: www.hsph.harvard.edu/obesity-prevention-source/obesity-causes/diet-and-weight/.

3. Taking multivitamin supplements

Ensure adequate levels of nutrients. It is a good idea to take a daily multivitamin supplement, especially if you do not have a variety of vegetables and fruits at home. Many micronutrients are essential for your immune system, including vitamins A, B6, B12, C, D, and E, as well as zinc, iron, copper, selenium, and magnesium. However, there is currently NO evidence available that adding any supplements or "miracle mineral supplements" to your diet will help to protect from viruses or speed recovery. In some cases, high doses of vitamins can be bad for your health.

4. Drinking water and stay hydrated and limit sugary drinks

Drink water regularly to stay healthy, but there is NO evidence that drinking water frequently (e.g. every 15 minutes) can help prevent a viral infection.

5. Exercising Regularly and Be Physically Active

At this time, at-home workouts may be a good idea. But you can also walk your dog or run outside.

6. Reducing Sitting and Screen Time

Exercise can't immunize you from your sedentary time. Even people who exercise regularly could be at increased risk for diabetes and heart disease and stroke if they spend lots of time sitting behind computers. Practically speaking, you could consider taking breaks from sedentary time, such as walking around the office/room a couple of times in a day.

7. Getting Enough Good Sleep

There is a very strong connection between sleep quality and quantity and immune system. You can keep your immune system functioning properly by getting seven to eight hours of sleep each night. For more information, please check the CDC website: www.cdc.gov/sleep/index.html.

8. Going easy on alcohol and stay sober

Drinking alcohol does not protect you from the coronavirus infection. Don't forget that those alcohol calories can add up quickly. Alcohol should always be consumed in moderation. Please see the recommendations by the AHA: www.heart.org/en/healthy-living/healthy-eating/eat-smart/nutrition-basics/alcohol-and-heart-health.

9. Finding ways to manage your emotions

It is common for people to have feelings of fear, anxiety, sadness, and uncertainty during a pandemic. To minimize stress-related weight gain, use this information about stress and coping provided by the CDC: www.cdc.gov/coronavirus/2019-ncov/prepare/managing-stress-anxiety.html.

10. Using an app to keep track of your movement, sleep, and heart rate

People with serious chronic medical conditions, including extreme obesity, diabetes, and heart disease are at a higher risk of experiencing complications and getting very sick from the COVID-19 infection. They should talk to their medical providers and listen to their advice.

References:

- Hall, J., & Thomas, M. (2008). Promoting Physical Activity and Exercise in Older Adults with Developmental Disabilities. *Topics in Geriatric Rehabilitation*, 24(1), 64–73.
<https://doi.org/10.1097/01.tgr.0000311407.09178.55>
- Lorentzen, B. & Wikström, B. (2012). Healthy lifestyle for people with intellectual disabilities through a health intervention program. *Open Journal of Nursing*, 2, 157-164. doi:10.4236/ojn.2012.23024
- Song Y. (2020). Ten tips for maintaining healthy lifestyle and body weight, *ScholarWorks*.
- Temple, V. A., Frey, G. C., & Stanish, H. I. (2017). Interventions to promote physical activity for adults with intellectual disabilities. *Salud Publica De Mexico*, 59(4, jul-ago), 446. <https://doi.org/10.21149/8218>

Information about the partners

The Maria Grzegorzewska University (APS)/Poland

The Maria Grzegorzewska University established in 1922 is a university of 100-year-old teaching tradition. Among its biggest assets are highly qualified staff, diverse programs of study and good conditions of studying. APS provides a range of varied study opportunities including acquisition of respectful jobs which are highly demanded in the job market. Nowadays, it has approximately 6,000 students enrolled in both full-time and part-time study programmes. In addition, the University offers various postgraduate programmes which provide complementary qualifications in general and special education, as well as in other fields of social life. APS offers various fields of studies such as: Psychology, Sociology, Pedagogy, Special Education, Social Work and Artistic Education.



University Rehabilitation Institute (Uri-Soca)/Slovenia

University Rehabilitation Institute, Republic of Slovenia is the central National Health Institute for comprehensive and interdisciplinary rehabilitation of patients with functional and workplace impairments. It performs the most demanding tasks on the secondary and tertiary levels, in the field of physical medicine, rehabilitation and application of technical devices, as well as in the area of psycho-social rehabilitation and occupational and employment rehabilitation.

Thousands of patients improve their quality of life and return to a proper living environment. The Institute has acquired several quality certificates, including ISO 9001:2008 for physical and rehabilitation medicine, vocational rehabilitation, orthotics and prosthetics, European accreditation for physical medicine and rehabilitation, EQUASS Excellence – European excellence for the vocational rehabilitation field and Family Friendly Company Certificate.



ESTIA - Support and Social Care Centre for People with Intellectual Disability/Greece

ESTIA - Support & Social Care Center for People with Intellectual Disability is a recognised Charity overseen by the Ministry of Health & Social Solidarity in Greece. ESTIA was founded in 1982 by parents of children with intellectual children. ESTIA specializes in providing support and care to people with intellectual disabilities from 15 years of age with the aim of improving quality of life and supporting inclusion into the community.



Croatian Association of Societies of Persons with Intellectual Disabilities/Croatia

Croatian Association of Societies of Persons with Intellectual Disabilities is a non-governmental, non-profit network of member associations established in Zagreb in 1957 and includes 32 members in the Republic of Croatia. The Association is providing activities such as representation of parents/guardians, adults and children with intellectual disabilities, program/project activities, education, coordination, international cooperation and counseling. Its representatives participate in work groups for development of new or changes in the current legal acts and monitor their implementation. Through various activities of support, it improves quality of life for persons with intellectual disabilities and their families.



Austrian Association of Inclusive Society (AIS)/Austria

Austrian Association of Inclusive Society (AIS) is a non-governmental research organization established at Vienna, Austria. AIS aims to improve the situation of people who have social, economic, educational disadvantages (such as people in poverty, refugees, immigrants) and AIS works on adaptation and inclusion of people to social, educational, technological, and physical environment through improvement of their communication and social skills, and exchange of experience.



International Centre for the Promotion of Education and Development (CEIPES)/Italy

CEIPES – International Centre for the Promotion of Education and Development is a non-profit organisation founded in 2007 and based in Palermo, Italy. Counting on experienced staff composed of professionals with different competences and fields, it has expertise on Education, Transfer of innovation and Project management in different European programmes. CEIPES promotes Education, lifelong learning, vocational training and entrepreneurship, with the aim to improve competences, boost employability and inclusion of different target groups, from young people to adults, from women to unemployed, migrants and disadvantaged groups.

