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SUARE

**SOFTWARE
UTILITY FOR AGE
RESPONSIVE
EFFECTS**

Software
Utility for
Age
Responsive
Effects



SUA REE





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INTRODUCTION

INTRODUCTION

The project titled "Software Utility for Age Responsive Effects" (SUARE) is an Erasmus+ KA2 Strategic Partnership project under the coordination of Ankara Intercultural Research Association (Turkey) and is carried out in partnership with Association Culturelle Des Jeunes Turcs De Bar Le Duc (France), Compass - Beratung, Begleitung und Training Gemeinnützige GmbH (Austria), Inercia Digital SL (Spain), Galia Media (Turkey), Batman Provincial Directorate of Health (Turkey) and Psychology Society (Turkey). The project is committed to creating a mobile software (SUARE mobile application) on healthy aging and elderly care, a guidebook, promotional films, and a website where the outputs and processes of the project are exhibited.

The SUARE guidebook includes healthy aging, age-related diseases and what needs to be done for healthy aging, elderly care, centers for the elderly to apply, and the policies of partner countries on the elderly for all partner countries and in the languages of partner countries. In SUARE mobile application, there are various intelligence games that function as exercise, medication reminders, brain training, live location, and audiobook content on under the heading of healthy aging and elderly care, also available in all partner countries and languages of partner countries.

SUARE mobile application and guides can be accessed from the project website, Salto, E+ link, and project social media pages.

SUARE PROJECT TEAM

2022

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ABOUT
THE PROJECT

1. ABOUT THE PROJECT

“By 2030, 1 in 6 people in the world is expected to be 60 years or older. The number of people aged 60 and over is expected to go from 1 billion to 1.4 billion in 2020 and by 2050, it is predicted that the population aged 60 and over will double (2.1 billion). Between 2020 and 2050, the number of people aged 80 and over is expected to triple to reach 426 million.” Moreover, the rate of the population over 60 is increasing not only in developed countries but also in low and middle-income countries today (World Health Organization).

The next decade is built on the “World Health Organization (WHO) Global Strategy and Action Plan” and the “United Nations Madrid International Action Plan on Aging” and supports the realization of the “2030 United Nations Agenda for Sustainable Development” and the “Sustainable Development Goals”. ***The Decade of Healthy Aging (2021–2030)*** aims to reduce health inequalities and improve the lives of older people, their families, and communities through collective action. The reason we implement this project is to be among the collective action communities to develop our communities by promoting the digital skills and competencies of the elderly and to encourage the youth to develop software on the path to digital entrepreneurship.

The main aim of our project is to make our communities age-friendly. The project aims to encourage youth entrepreneurship, including social entrepreneurship, and a sense of initiative by conducting a needs analysis to identify and assess the needs of the elderly and their families. The SUARE project aims to improve the lives of the disadvantaged elderly people and their families, as well as the society they are a part of, by developing a digital application that can meet the needs of both the elderly and their families and make their lives easier, happier and less isolated from the society they live in.

The target group of the project, young people, will develop advanced digital skills to develop an application as the concrete objective of the project, which will lead to digital innovative work. To summarize, the needs analysis, which determines the current specific needs and problems of the elderly, and the digital innovative application for the

elderly, are the two main concrete goals of the project.

The project was implemented to benefit the increasing elderly population's problem of not being able to use technology actively and independently, which has become visible with the pandemic process. Our project has been designed to take into account the elderly's own needs and possible usage difficulties and facilitate their adaptation to technology. In this way, they will be able to use technology independently and live in today's world without alienation.

On the bright side, we see that the unexpected and sudden COVID-19 pandemic, which affected human health globally, has accelerated Digital Information and Communication Technologies, one of the United Nations Sustainable Development Goals (SDGs). By emphasizing the vital importance of having the necessary digital skills, the COVID-19 pandemic has revealed that people of all ages are more in demand for digital technologies in almost every society in the world in times of crisis. According to Johnson (2021), "... digital skills are a greater challenge for older people (digital immigrants) than the younger generation (digital natives). A good example of the challenges older people face is getting their vaccination appointments for COVID-19."

It is a fact that older people cannot adapt to using technology as easily and quickly as digital natives. The COVID-19 pandemic has also brought forward that the elderly population cannot use technology actively and independently. For this reason, the SUARE project aims to develop software (digital application) that will meet the needs of the elderly by performing a needs analysis and facilitating the adaptation of the elderly to technological innovations by overcoming the possible difficulties and contradictions that they may encounter in technology use.

Because, as Johnson (2021) said, "Older people need to be able to use digital technologies more effectively than ever before. Not only for their health and well-being, but also to stay in touch with family members, keep up to date with the latest information, and help overcome the feeling of isolation in general." he emphasized the importance and necessity of digitalization in the elderly.

SUARE aims to encourage young people to be sensitive to the needs

and problems of the elderly, to develop software for the benefit of the elderly population in society, and to encourage the elderly and their families to acquire/develop digital skills. A special platform will be developed so that our elderly individuals can establish the communication bridges they need most healthily during and after the pandemic.

The promises of the platform, SUARE software, are as follows:

- To enable the elderly to be socially active by providing an environment where they can meet with their friends and loved ones at a meeting and spend time as in the old days via video conferencing,
- Establishing a system that converts the texts displayed with the camera into voice and voice guidance as a solution to age-related vision loss and reading difficulties,
- Placing memory-enhancing and entertaining games with proven benefits for Alzheimer's and dementia patients;
- Adding the "medication reminder" feature, which reminds the elderly of the drugs they should take regularly to protect their health and at the same time, ensure that their loved ones are informed with notifications that they are taking their medications,
- And to ensure that the elderly can benefit from location services independently, without the fear of getting lost when they spend time outside, in a way that they can notify their families and loved ones with notifications thanks to live location.

In this way, it is one of our main goals for the elderly to use the digital application as independently and actively as possible, both to age healthy and to get rid of the feeling of social isolation by adapting to the digital world. The project will provide convenient, easy-to-use, and free access to innovative software by producing assistive technologies that will improve the functional skills and well-being of older people in communities.

The project was created with the idea that older individuals should use the application as independently as possible. Detailed descriptions of the application components are explained under the headings Application Introduction and Application Guidelines.

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PROJECT
PARTNERS

2. PROJECT PARTNERS

2.1. ANKARA INTERCULTURAL RESEARCH ASSOCIATION – AKAD



Ankara Intercultural Research Association was established in Ankara in 2021 to enable and develop civil society activities and to conduct research for intercultural interaction. Ankara Intercultural Research Association was established by 7 people consisting of architects, engineers, dieticians, academicians, and business managers. ANKADER has a total of 16 members, including 5 board members and 3 supervisory board members. The fact that ANKADER board members take part in various Erasmus+ projects makes them experienced in this field. ANKADER, which is the coordinator of the KA205 project named “Software Utility For Age Responsive Effects – SUARE”, also carries out many projects in different fields.

2.2. GALIA MEDIA

Galia Media is a Turkey-based media company that offers comprehensive services and consultancy in the application of various ITC technologies (3D printing, 3D modeling, etc.) in teaching, designing, manufacturing, and documentation of Installations for STEM teaching (Science, Technology, Engineering, and Mathematics) including creating different solutions for web systems (Web Design, Software) and commerce (Corporate Identity, Promotion, E-Commerce) is a Turkey-based media company that offers comprehensive services and consultancy.

As a result of direct experience in scientific activity and/or national projects, the company has expertise in many project-related areas: Industry 4.0, Innovation, Robotics, Technical Creativity, Additive Manufacturing, Product Development, Technological Entrepreneurship, Technical Education, and Vocational Education.

2.3. BATMAN LOCAL HEALTH DIRECTORATE



T.C. SAĞLIK BAKANLIĞI
BATMAN
İL SAĞLIK MÜDÜRLÜĞÜ

To use resources effectively and efficiently, services are provided by our Directorate affiliated with the Ministry of Health, primary, secondary, and tertiary health institutions affiliated with our Directorate, and our Local Health Directorate at the provincial level. There are 8 health facilities affiliated with our directorate. Community Health and Family Health services are also provided. It serves with a total of 5,700 personnel and 1,800 intern students affiliated to our institution. It aims to provide a fair health service with high quality and accessible, high education standards in the health facilities affiliated with our Directorate. In line with the guidance of the Ministry of Health, Quality, and Accreditation Department; The health facilities of our institution pass the Quality Accreditation every year. Department of Quality and Accreditation in Health is involved in our project.

2.4. PSYCHOLOGY SOCIETY



PSYCHOLOGY SOCIETY

The psychology community is a Youth Group consisting of students and graduates studying in the departments of psychology, guidance and psychological counseling, public relations, political science, and sociology at universities in Ankara. Youth group members consist of members who have taken part in TÜBİTAK, Erasmus and YTB projects. The group has previously been involved in different volunteering projects and social responsibility activities. Among the group members, there are also assessment and evaluation students who have done SPSS analysis of immigrant and refugee projects. Founder and members of the psychology community participated in voluntary social responsibility projects in Ukraine in early 2020.

2.5. ASSOCIATION CULTURELLE DES JEUNES TURCS DE BAR LE DUC



L'Association Culturelle des Jeunes Turcs de Bar le Duc was established by prioritizing the goals of “Sustainable Development” in order to support the creation of ecosystems and create an innovative effect in the “existence” and development processes of individuals and communities in the globalizing world.

The association aims to; Develop mechanisms and policies that will strengthen the development of 21st-century skills such as analytical thinking, digital skills, problem-solving at the local and national levels, creativity, and innovation to tackle critical problems such as poverty, migration, youth unemployment, social exclusion, climate change, and environmental problems.

With a holistic approach and a multicultural working/learning environment, the association carries out training and projects in coordination with a national and international professional network, adopting a design-oriented, innovative thinking lens to meet all contemporary needs from individual to organization. Our association develops programs and training modules to draw attention to global problems such as critical thinking, design-oriented thinking, game-based learning, environmental education tools, and digital storytelling, which encourage non-formal learning methodology.

We develop and implement projects in the fields of social development, education, entrepreneurship, social entrepreneurship, critical thinking, design thinking, ICT Game Development, and Digital Storytelling. At the same time, it organizes activities to support social learning at every age level of our society with cultural and artistic activities (festivals, workshops, etc.).

2.6. COMPASS - BERATUNG, BEGLEITUNG UND TRAINING GEMEINNÜTZIGE GmbH



COMPASS is a private, non-profit company with an intercultural focus, with the aim of promoting the professional and social integration and inclusion of immigrants and refugees and making a positive impact in promoting their social inclusion in the local community. Our

programs provide support to people who are oppressed by economic, social, and cultural barriers. These services increase the employability of disadvantaged groups and ensure their educational and professional empowerment.

Our Programs:

- Education and professional consultancy,
- Language training for people with a migrant and refugee background,
- Literacy training,
- Mentoring programs for youth,
- Socio-psychological support,
- Education and career counseling for refugees and immigrants
- multilingual guidance for,
- Job application training and interview coaching,
- Media workstation for young immigrants (radio, film, photography and creative writing workshops).

Our long-term goal is to draw society's attention to the needs and barriers of disadvantaged groups by developing strong partnerships with local stakeholders and implementing innovative approaches in our projects and collaborating with policymakers to find preventive and lasting solutions.

2.7. INERCIA DIGITAL SL



Inercia Digital is an Andalusian company founded in 2010 and specializes in training and innovation in digital and entrepreneurial Skills internationally. In 2017, he was elected as a member of the “Digital Skills and Jobs Coalition” of the European Commission and received the Young Innovative Company

Certificate by AENOR in 2015.

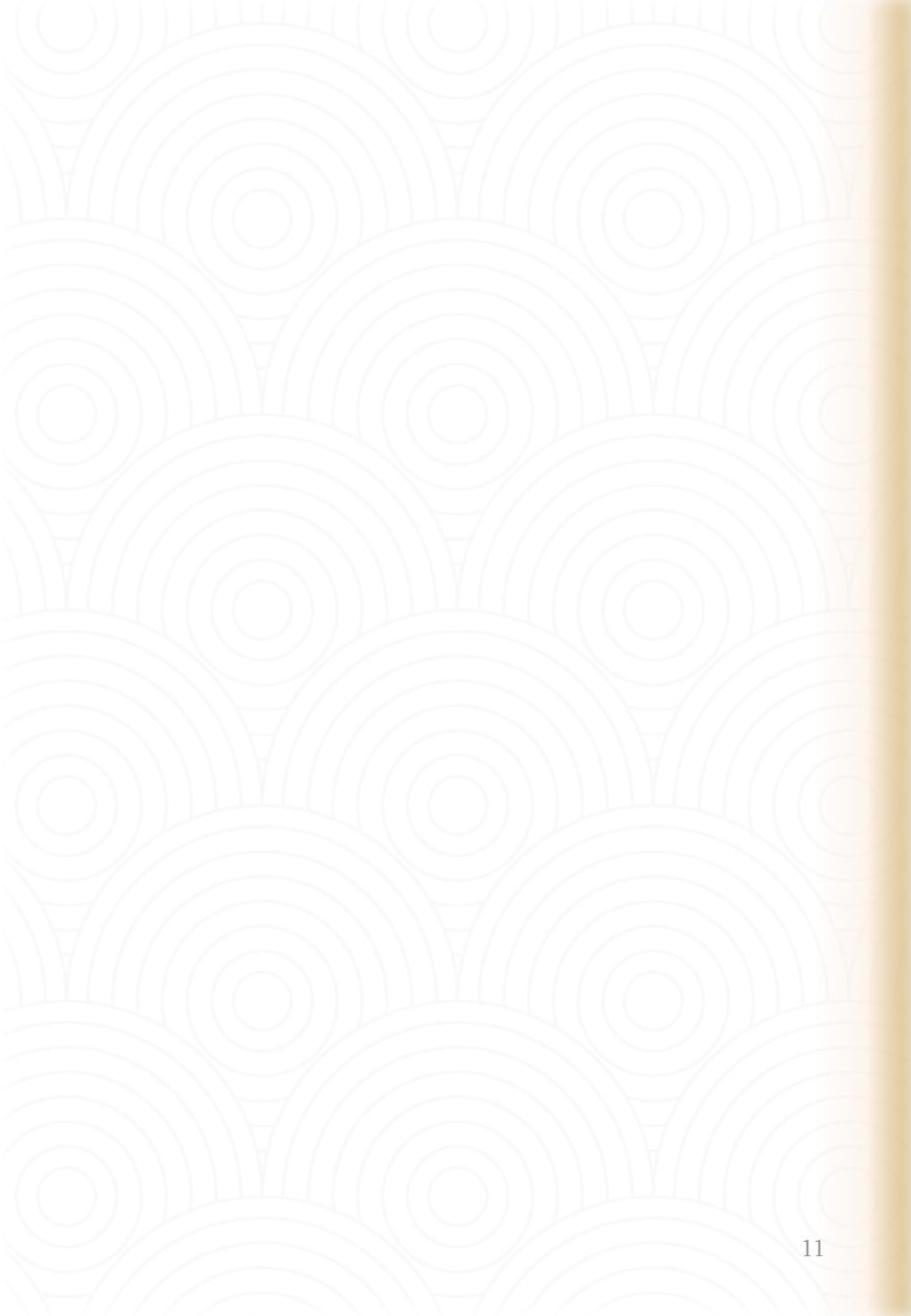
Our mission is to promote education and innovation in digital skills and entrepreneurship in education for employees and citizens in general, at an international level. Our vision is to establish a VET Center of Excellence at the international level through continuous improvement of education and innovation in digital and entrepreneurial skills in line with regional development, employment, innovation and education policies, strengthening of excellence, education and training methods, and establishing continuous cooperation. At Inercia Digital, we offer online, face-to-face and blended learning in digital and entrepreneurial skills to promote education, employment and active civic responsibility in the digital society. Today, we offer a range of courses to drive digitalization through two training programs, and digitalization through the development of skills undertaken at the educational level: Digital School and Entrepreneurship School.

We offer subsidized lifelong training for workers, enabling SME workers to learn some essential digital competencies:

- Advanced Digital Marketing for Small and Medium Scale Enterprise.
- Advanced e-Commerce for Small and Medium Scale enterprises.
- Advanced Cybersecurity for Small and Medium Scale Enterprise.
- Basic Digital Skills.

We have extensive experience in European education projects as we participate in more than 100 projects, create educational platforms, websites and pedagogical and educational content.

With the Erasmus+ programme, we offer our expertise in innovation development projects to future interested partners who invite us to participate in European training projects on innovation and good practice. We are currently running more than 60 active projects in which 33 European countries cooperate.



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LITERATURE
AND
NEEDS ANALYSIS



3. LITERATURE AND NEEDS ANALYSIS STUDIES

While there were 600 million people over the age of 60 worldwide in 2000, the World Health Organization predicts that the number of people over the age of 60 will double by 2025 and there will be more than 60 million people worldwide by 2050. It is estimated that the elderly population in Turkey will increase and the ratio of the population over 60 years old will reach 0.6% in 2050 from 6.8% in 2008. Even if the increasing elderly population is a desired development, societies need to be prepared for increasing human lifespan and the elderly population. The health, quality of life, and social and economic aspects of an aging society are at the forefront. Increasing chronic diseases with aging emphasizes the importance of quality of life. Quality of life is a term generally used as “well-being”. At the same time, by the World Health Organization, “In the culture and value system in which individuals live; “perceiving positions in life in terms of goals, expectations, standards, and concerns”. In studies on the quality of life of the elderly, some of the factors affecting the quality of life of individuals are age, gender, chronic diseases, drug use, leisure time activities, and marital status (Şahin, 2014).

The increasing elderly population has increased the interest of many disciplines on the issue of old age and has brought this issue to the agenda more frequently. This issue, which has become increasingly important all over the world, has increased the number of attempts to increase the adaptation processes of elderly individuals, to improve their mental and physical well-being, and to integrate them with society. According to the studies, it has been suggested that for a successful life model, the factors of avoidance of disease, high physical and cognitive capacity, and active participation in life should coexist. One of the factors that determine the quality of life in old age is health-related problems. For this reason, solution proposals where elderly individuals can lead a life on their own without being dependent on services are a solution supported by societies and states. In this respect, the lack of tools that enable the elderly to solve the problems they face in daily life on their own without being dependent on the outside has come to light with the increasing elderly population. For this reason, the existence of

a tool was needed to determine the needs of the elderly and to increase their quality of life by reducing the problems they face in daily life.

3.1. NEEDS ANALYSIS

3.1.1. MEASURES

In recent years, it has been recognized that quality-of-life tools are very important in the evaluation of health services. Health-Related Quality of Life (HRQOL) refers to an individual's perception of their position in life in the context of the culture and value system in which they live, and concerning their goals, expectations, standards, and concerns. It is a comprehensive concept that is intricately affected by an individual's physical health, psychological state, level of independence, social relationships, and their relationship to the salient features of their environment. There are many scales available to measure the quality of life in humans. The World Health Organization (WHO) developed WHOQOL, which examines the quality of life from different aspects. The WHOQOL-BREF is a multidimensional scale with proven reliability that has been translated into more than 40 languages and examines the quality of life in different cultures. WHOQOL-BREF, consisting of 26 items, can be applied in clinical studies where short measurements are required and in epidemiological studies where the quality of life is important. WHOQOL-BREF, which consists of 4 factors, was also validated in different cultures. WHOQOL-BREF is a 26-item scale consisting of four domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items).

It also includes QOL and general health. Each item of the WHOQOL-BREF is scored from 1 to 5 on a response scale prescribed as a five-point ranking scale. Scores are then linearly converted to a 0-100 scale. The physical health domain includes items related with mobility, daily activities, functional capacity, energy, pain, and sleep. Psychological domain measures include self-image, negative thoughts, positive attitudes, self-esteem, mindset, learning ability, memory concentration, religion, and mental state. The social relations domain includes questions about personal relationships, social support, and sex life.

The field of environmental health covers issues related to financial resources, safety, health and social services, physical environment, opportunities to acquire new skills and knowledge, recreation, general environment (noise, air pollution, etc.), and transportation. This needs analysis was carried out by the Ankara Intercultural Research Association as part of the “Software Utility of Age Responsive Effects” project. Currently, the WHOQOL-BREF scale has been used in our SUARE project to see the needs of the elderly and measure their quality of life. Reliability and validation studies were carried out for the Turkish version of the scale, in which Spanish, French, German, and Turkish were used. Its target audience is the elderly over the age of 60 living in Turkey. WHOQOL-BREF was used as the research tool, and the scale was conducted online and offline.

3.2. METHODS AND FINDINGS

3.2.1. METHOD

Within the scope of the Software Utility of Age Responsive Effects (SUARE) project needs analysis, it was aimed to reach 150 participants over 65 years of age from Turkey. The snowball sampling method was used to reach our target audience, individuals over the age of 65. At the same time, the target audience was reached directly by visiting nursing homes. The participants were informed about the study in advance and participated in the survey completely voluntarily. The questionnaire was administered both online and offline for the participants who wished. The surveys are completely anonymous and no information to identify the participants was collected. All data were collected through self-report. To increase accuracy, all participants were informed that their answers would be kept confidential.

The data were collected from 118 participants and the participants were randomly selected from all over Turkey. Since 3 of the reached participants were under the age of 65, 2 of them were eliminated by SPSS because they filled in incompletely.

3.2.2. FINDINGS

Demographic Form

While 41.8 percent of the participants were women, 58.2 percent were men (Table 1). The average age of the participants is 71.7, While 45.5 percent of the participants were primary- secondary school graduates, 14.5 percent of them had no education, 16.4 percent of them stated that they were university graduates and 12 percent of them were high school graduates (Table 2).

When we look at the results, the gender distribution is balanced, and it is seen that the majority of those who completed the survey were at the primary-secondary school level. While 43.6% of the participants stated that their spouses were not alive, 38.2% of them stated that they were married (Table 3).

Table 1

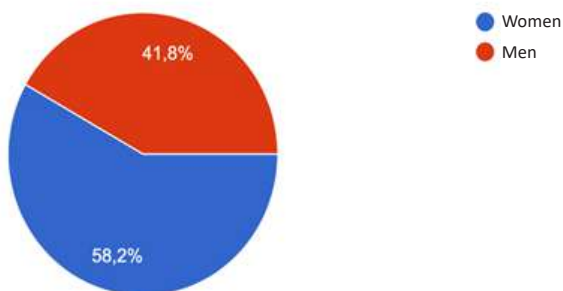


Table 2

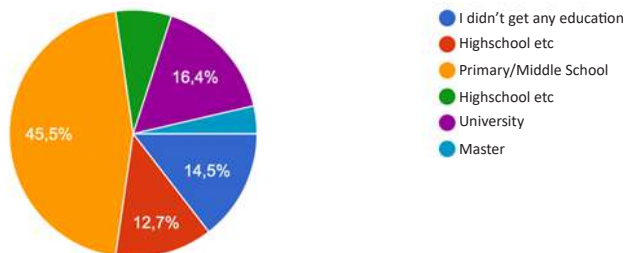
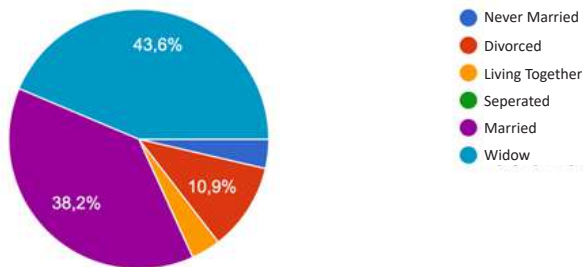


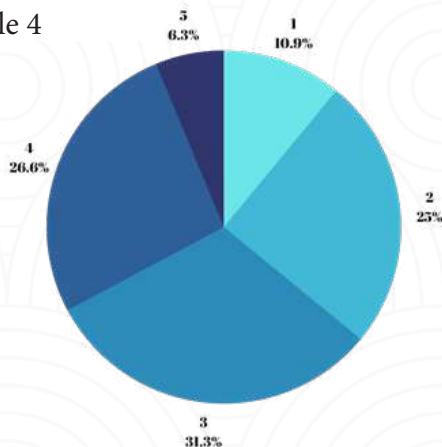
Table 3



Data Analysis

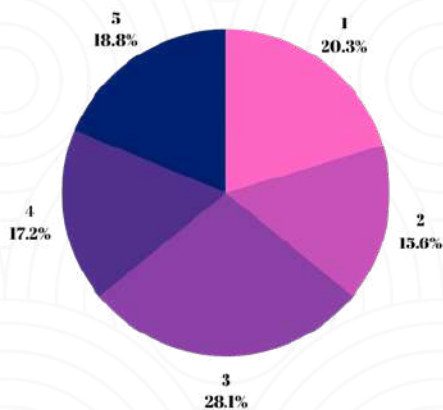
In the following lines, we will present data specific to the main purposes of the research.

Table 4



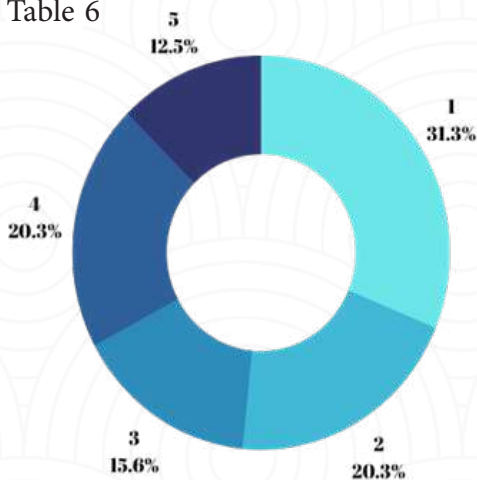
According to the survey results, **“How would you rate your quality of life”** (Table 4) While 10.9% of the participants rated the question as 1 out of 5, 25% rated it as 2 out of 5, 31.3% rated it as 3 out of 5, 26.6% evaluated it as 4 out of 5, while only 6.3% of the participants rated it 5 out of 5. According to these results, more than 66% of the participants evaluated their quality of life as 3 or below 3.

Table 5



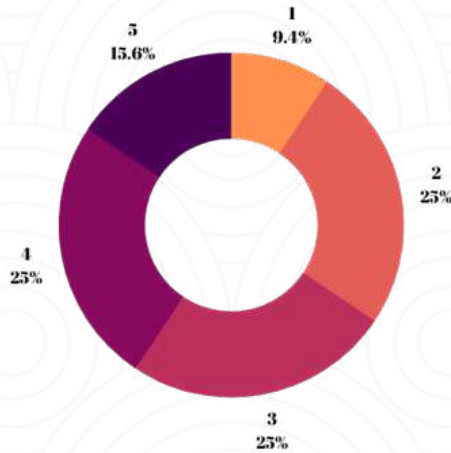
On a scale of 1 to 5, ***“To what extent do you feel pain prevents you from doing what you need to do”*** (Table 5) 20.3% of the participants answered the question as 1, 15.6% answered as 2 and 28.1% as 3; 17.2% of the participants marked it as 4 and 18.8% as 5 out of 5. According to the survey, 36% of the participants stated that their pain was an obstacle in their daily life.

Table 6



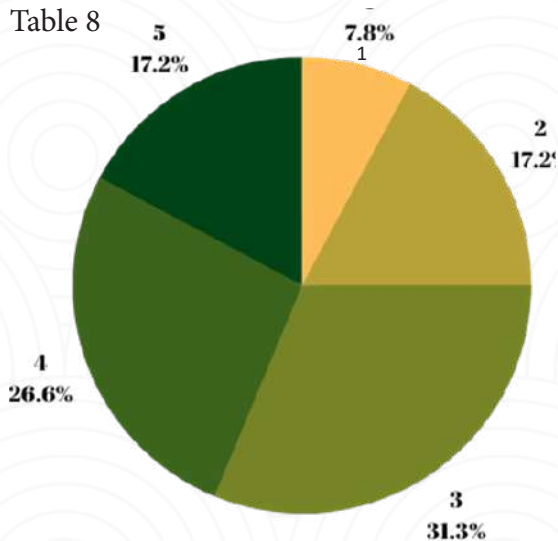
Answers to the question **“How much do you need any medical treatment to function in your daily life?”** (Table 6) 20.3% of the participants gave 4, and 12.5% marked it as 5 out of 5. The data show that nearly half of the participants needed medical treatment for their daily activities.

Table 7



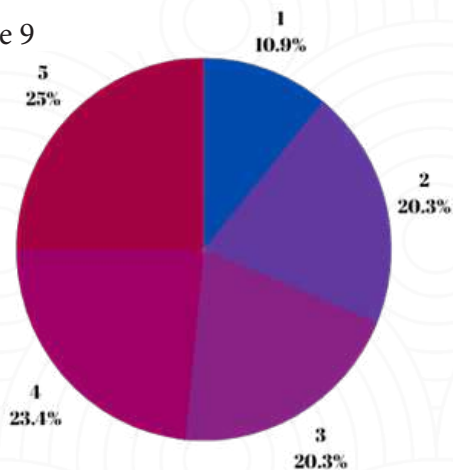
To the question **“How much do you enjoy living between 1 and 5?”** (Table 7) 9.4% of the participants gave 1, while 25% of them gave 2 out of 5; 25% rated it as 3 out of 5. According to the results, most of the participants evaluate the rate of enjoying life as 3 or below 3.

Table 8



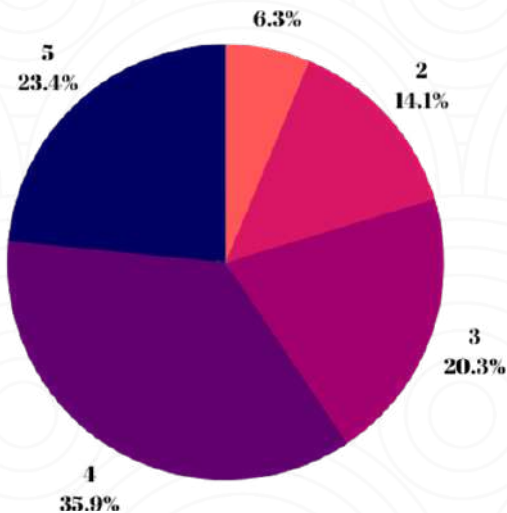
“On a scale of 1 to 5, to what extent do you feel your life to be meaningful” For the question (Table 8), 31.3% of the participants evaluated it as 3 out of 5, and 25% evaluated it as 2 or less than 2. Based on the data, 25% of the participants stated that they did not find their life meaningful, while the rate of those who did not state their idea was 31.3%.

Table 9



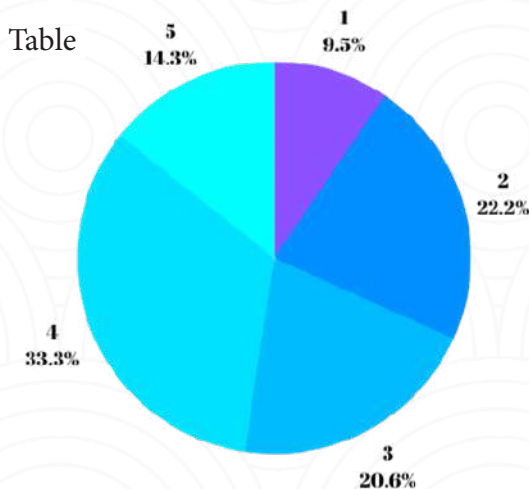
To the question *“How well are you able to concentrate?”* (Table 9) of the participants; While 61.4% rated 3 and below, more than 40% rated their attention as 4 and above.

Table 10



“On a scale of 1 to 5, how safe do you feel in your daily life?”

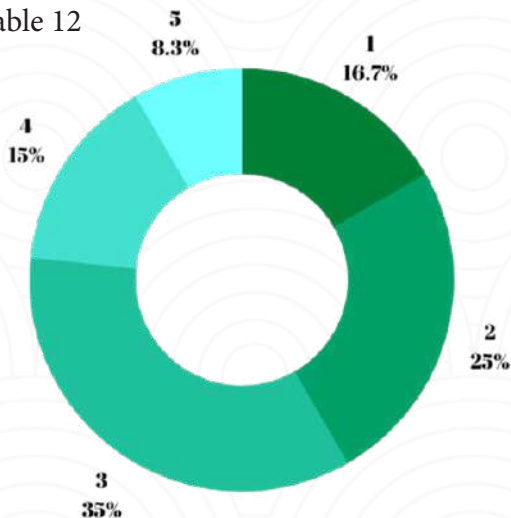
For the question (Table 10), 40.7% of the participants voted 3 or less than 3, while the majority of the participants stated that they felt safe.



“Evaluate your strength to maintain your daily life on a scale of 1 to 5” (Table 11); 14.3% of them gave the answer as 5 and stated that they had strength, 33.3% of them answered as 4 and stated that their strength was at medium-high level, 20.6% of them stated that it was at medium level, 22.2% of them said that they were weak, and 9.5% of them said that they were fragile.

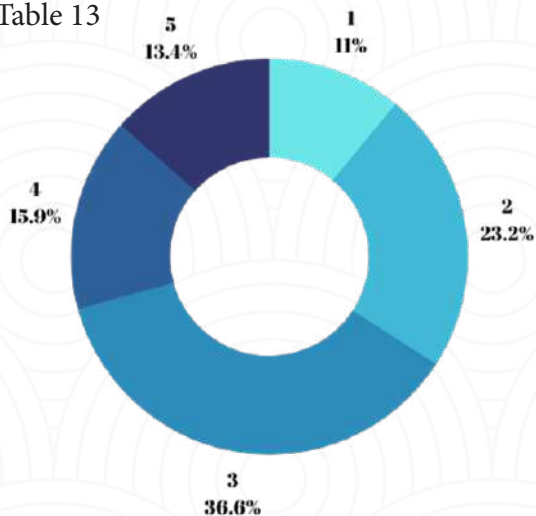
The fact that 52.3% of the participants felt moderate and weak indicates that more than half of the elderly have difficulty in maintaining their daily lives.

Table 12



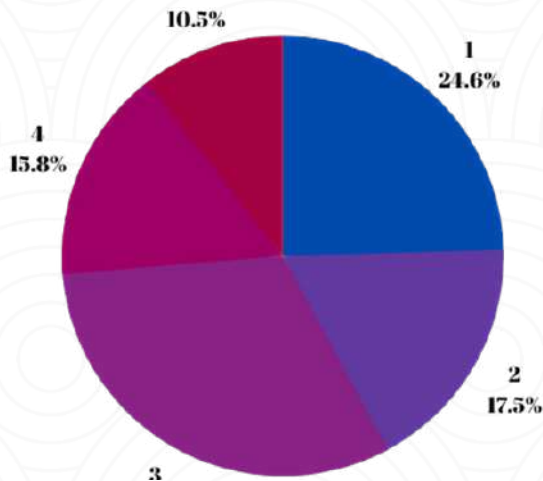
“How available to you is the information that you need in your day-to-day life” while 76.7% of the participants answered the question (Table 12) below 3 and 3, 23.3% evaluated it above 4 and 4. Based on the results, it is concluded that the majority of the elderly have difficulty reaching the necessary news in their daily life.

Table 13



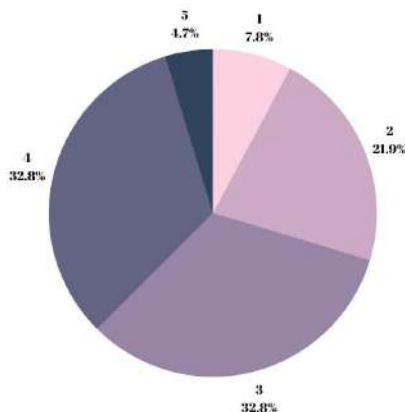
“How well are you able to get around” For the question (Table 13), 36.6% of the participants gave 3 out of 5, 23.2% evaluated it as 2 out of 5, and 11% evaluated it as 1 out of 5. According to these results, most of the participants rated their physical mobility skills below the average.

Table 14



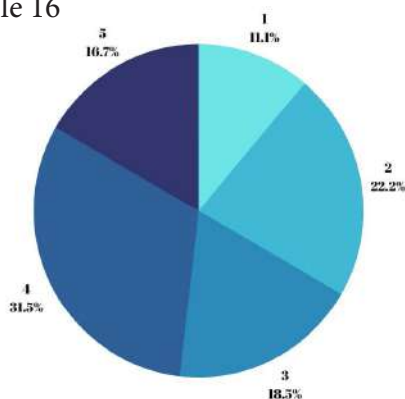
“How satisfied are you with your sleep between 1 and 5?” (Table 14), 31.6% of the participants gave 3 out of 5, while 24.6% gave 1; 17.5% gave 2. Looking at these results, it was seen that the majority of the participants had a low level of satisfaction with their sleep.

Table 15



“How healthy is your physical environment?” For the question (Table 15), 32.8% of the participants evaluated it as 4 out of 5, 32.8% evaluated it as 3 out of 5, 21.9% evaluated it as 2 out of 5, only 4.7% of the participants rated 5 out of 5. When we look at the results, the majority of the population is focused on 3 and 4, that is, on a moderately healthy physical environment.

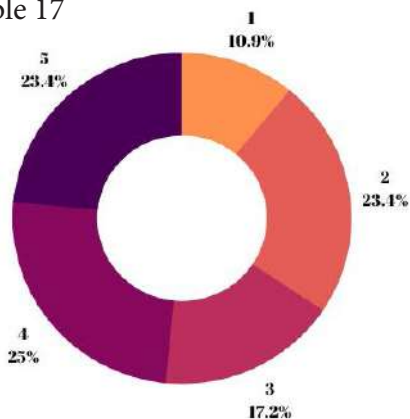
Table 16



“Are you able to accept your bodily appearance?” while 31.5% of the participants evaluated the question (Table 16) as 4 out of 5, 22.2% of the participants evaluated it as 2 out of 5, and 18.5% evaluated it as 4 out of 5; 11.1% of the participants evaluated it as 1 out of 5.

Based on the results, 18.5% of the participants stated their physical appearance as moderate and 33.3% as negative.

Table 17

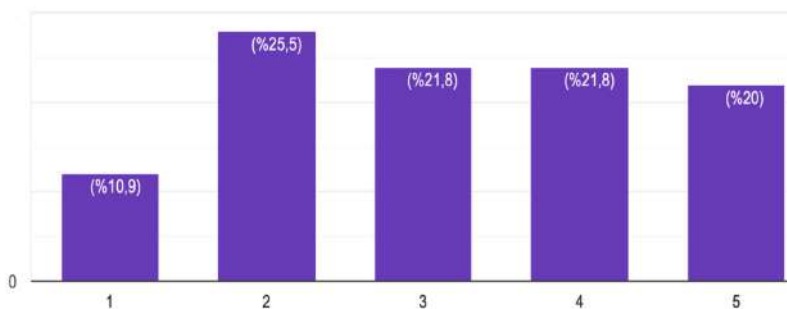


“Do you have enough money to meet your needs?” while 23.4% of the participants evaluated the question (Table 17) as 5 out of 5, 25% evaluated it as 4 out of 5; 17.2% evaluated it as 3 out of 5, and 23.4% of the participants evaluated the question as 2 out of 5.

34.3% of the participants stated that they did not have enough money.

Table 18

How often do you have negative feelings, feelin blue mood, despair, depression?

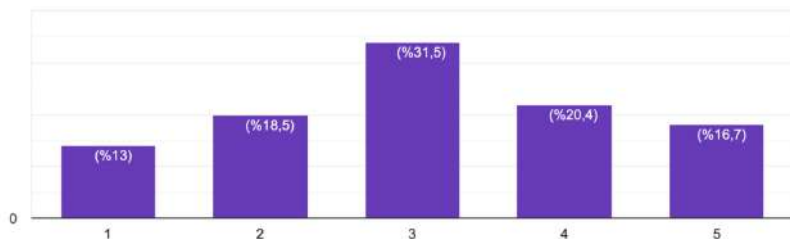


“How often do you have negative feelings, feelin blue mood, despair, depression” to the question (Table 18), 21.8% of the participants gave 3 out of 5; 25.5% evaluated it as 2 out of 5.

When we evaluated the results, 63.6% of our target group rated the rate of being caught in emotions such as sadness, hopelessness, anxiety, and depression as 3 or higher. According to these results it is possible to say that the feeling of sadness, hopelessness, depression is intense.

Table 19

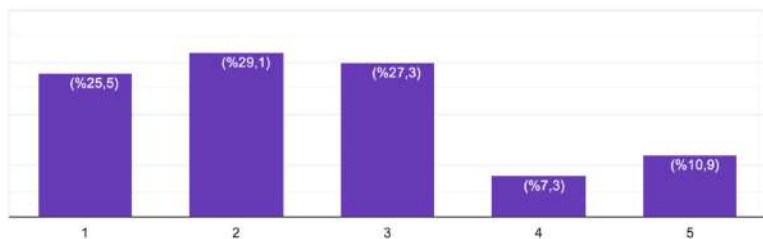
To what extent do you have the opportunity for leisure activities?



“To what extent do you have the opportunity for leisure activities?” For the question (Table 19), 31% of the participants answered 3 out of 5; 37.1% evaluated it as 4 and above. In this case, it is possible to say that the participants are evenly distributed. By looking at the data, the possibilities of the participants to make use of their leisure time with their occupations are at a moderate level.

Table 20

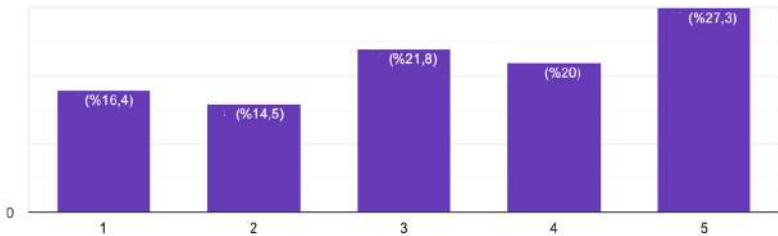
To what extent do you have difficulties with pressure and control in your relationships with people close to you (spouse, co-worker, relative) in your life?



“To what extent do you have difficulties with pressure and control in your relationships with people close to you (spouse, co-worker, relative) in your life?” 29.1% of the participants evaluated the question (Table 20) as 2 out of 5, and 27.3% evaluated it as 3 out of 5. 25.5% of the participants rated the pressure and control in their relationships with people close to them in their lives as 1 out of 5. The data show that the majority of the participants did not face any difficulties related to pressure and control from their close circles.

Table 21

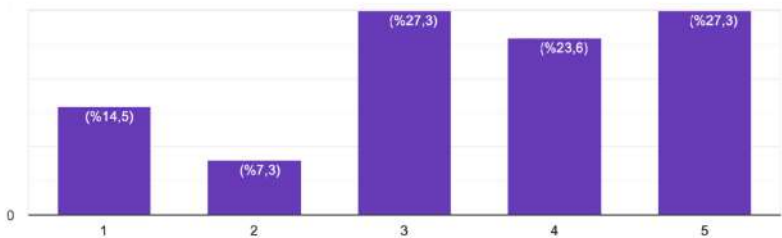
How satisfied are you with your capacity for work?



“How satisfied are you with your capacity for work?” when we look at the results for this question (Table 21), 27.3% of the participants evaluated their capacity for work as 5 out of 5, while 16.4% evaluated it as 1. The second majority of the participants evaluated their satisfaction with their capacity for work as 3 out of 5. Based on the data, 69.1% of the participants, that is, the majority of them, are satisfied with their working capacity.

Table 22

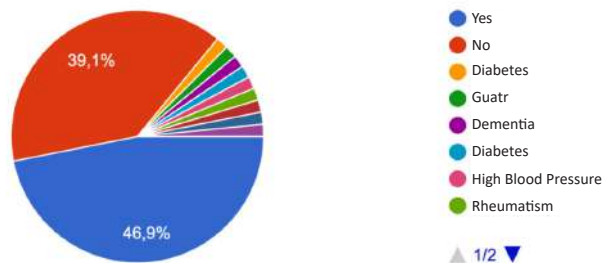
How satisfied are you with transportation?



“How satisfied are you with transportation?” while 27.3% of the participants evaluated the question (Table 22) as 5 out of 5, 27.3% evaluated it as 3 out of 5, and 23.6% evaluated it out of 5. When we look at the general distribution, it is possible to say that the participants are satisfied with the transportation facilities.

Table 23

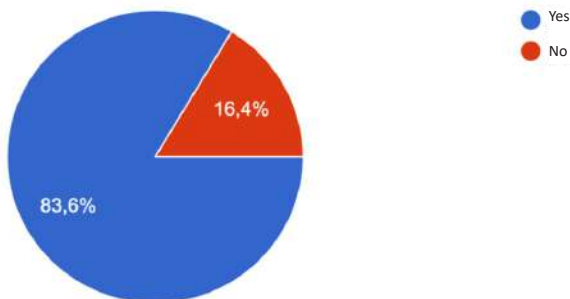
Do you currently have a disease?



To do question ***“Do you currently have a disease?”*** while 41.8% of the participants answered no to the question (Table 23), the rest answered yes; The participants stated that they had diseases such as COPD, rheumatism, asthma, diabetes, dementia, and high/low blood pressure.

Table 24

Did someone help you to fill out this form?



“Did someone help you to fill out this form?” (Table 24) 83.6% of the participants stated that there was someone who helped them fill out the form. The vast majority of respondents indicated that they needed someone else’s help while completing the form. There are three possible reasons why respondents were over 65 years old and the majority of them said they received help while filling out the questionnaire: reading comprehension, lack of digital skills (for those who participated online), or vision difficulties.

Within the scope of the needs analysis, the participants asked, ***“What should be in an application for the elderly?”*** high rate to the question; emergency support, medication control chart, alternative medical information, psychological support line, game applications and easy communication tool.

3.3. CONCLUSION AND RECOMMENDATIONS

When we examine the results of the survey and the feedback from the participants, it has been seen that the participants over the age of 60 need help in their daily work, they encounter factors that will endanger their quality of life, and a tool is needed to reduce these difficulties.

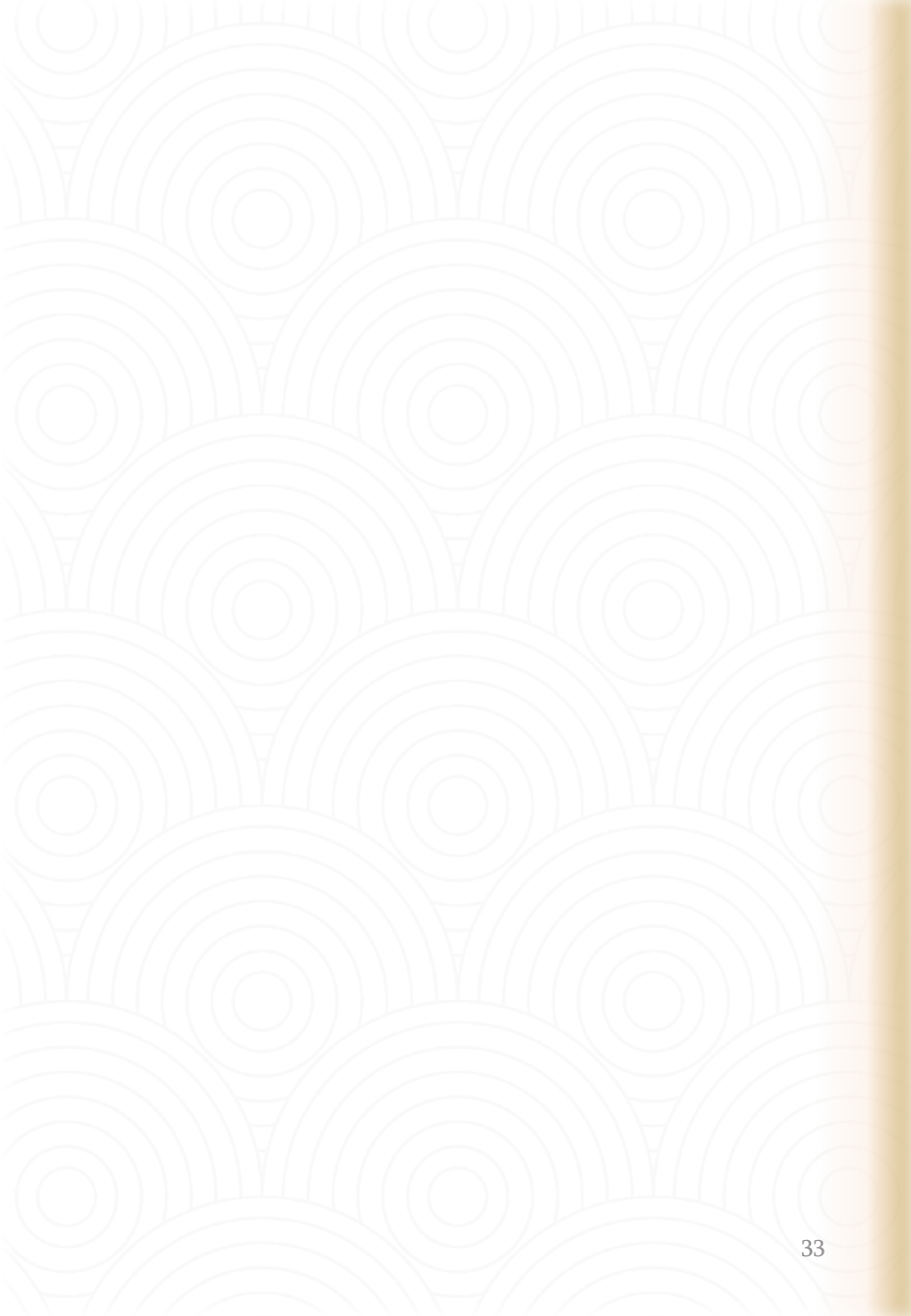
It has been seen that individuals over the age of 60 in Turkey cope with situations such as insomnia, inability to move, low meaning of life, and health problems. We can conclude that the project ***“Software Utility for Age Responsive Effects”*** has the potential to improve the quality of people over their age of 60 and to satisfy their needs in life.

3.4. SOURCE

ŞAHİN, N. E., & EMİROĞLU, O. (2014). Huzurevinde yaşayan yaşlıların yaşam kalitesi ve yaşam kalitesini etkileyen faktörler. Hacettepe Üniversitesi Hemşirelik Fakültesi Dergisi, 1(1), 57-66.

Çam, C., Atay, E., & Işıklı, B. (2018). Yaşlılarda yalnızlık ve yaşam kalitesi.

Whoqol Group. (1998). Development of the World Health Organization WHOQOL-BREF quality of life assessment. Psychological medicine, 28(3), 551-558.



SUARE

INTRODUCTION
TO MOBILE
APPLICATION
SUARE



4. INTRODUCTION TO THE MOBILE APPLICATION SUARE

SUARE (Software Utility For Age Responsive Effects) contains some suggestions for reducing/preventing the old age-related discomforts of the increasing elderly population in the world with the possibilities of the digitalized world; It is a mobile software donated by the European Commission and the Turkish National Agency within the scope of Erasmus+, which includes services such as medicine reminder, exercises, mind games, puzzles, live location services and voice text service.



EXERCISES



Increasing physical activity is very important for people of all ages. When it comes to the elderly, both the curative and preventive effects of increasing physical activity against many physical and cognitive disorders have been scientifically proven thousands of times.

There are exercises for the elderly in the **Exercises** tab. In this tab, there are sub-tabs containing which simple exercises should be done against which disease, how many repetitions or for how long.

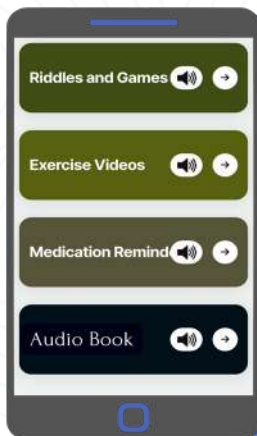
RIDDLES AND GAMES



It has been scientifically proven that mind games exercise memory, keep it vigorous, are good for all memory-related disorders, especially Alzheimer's and Dementia, and are a preventive activity.

From the **Riddles and Games** tab, you can access brain training activities such as sudoku, word games, math problems and puzzles etc.

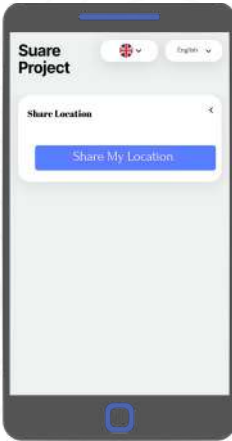
MEDICATION REMINDER



One of the biggest problems caused by the weakening of memory due to old age is forgetting the medications that need to be taken. This forgetfulness may lead to not being able to use the medicine regularly, as well as taking more of the medicine than necessary.

You can enter the medications you use and the times you need to take them on **Medication Reminder** tab, and you can have the application remind you.

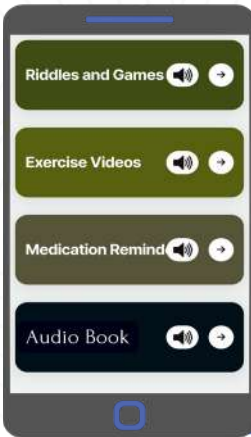
SHARE LOCATION



The weakening of memory and brain activity with age can sometimes cause the elderly to get lost even in places they know very well. Short and long-term memory losses can cause life-threatening situations.

Share Location tab provides a live location service to inform the relatives of the elderly via notification. Through this tab, relatives can follow the whereabouts of the elderly person moment by moment.

AUDIO BOOK



Reading books is one of the most powerful activities that exercise the brain. Brain functioning strengthens memory and therefore resistance to cognitive and mental diseases. However, vision difficulties that occur with age make it difficult for the elderly to see the words in books.

Along with the **Audio Book** tab, it to opportunity to listen to the texts displayed with the camera aloud.

SUARE

SUARE MOBILE
APPLICATION
GUIDELINES

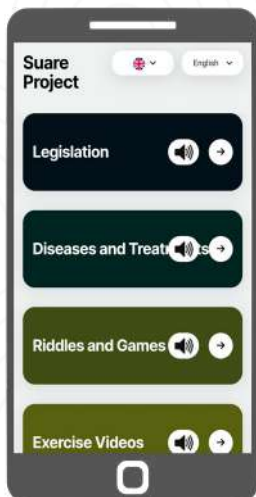


5. SUARE MOBILE APPLICATION GUIDELINES

Application Interface

Suare mobile application is designed according to the problems and needs of the elderly. Many content such as the rights of the elderly, health problems and advice, physical exercises, mental exercises, centers for the elderly and live location information have been brought together in this application.

In this part of the book, there are hints about which part or how you can access the information.

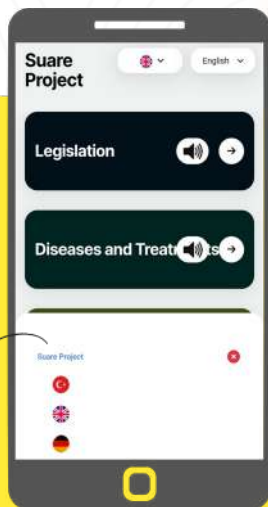


application homepage



When you start using the application, you will see a button with languages written in the upper right corner of the home screen.

When you click the button, you can choose your own language from the languages that appear on the screen.





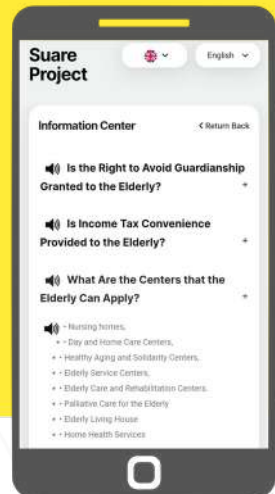
Countries

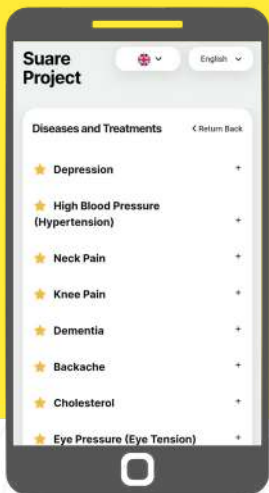
When you click on the flag button at the top of the application, the countries option opens. From this tab, you can find what you wonder about elderly care and needs in other countries.

Legislation

When you click on the “legislation” tab of the application, you can access short and clear information about the rights of the elderly and frequently asked questions.

When you click on the question, the answer tab will open.





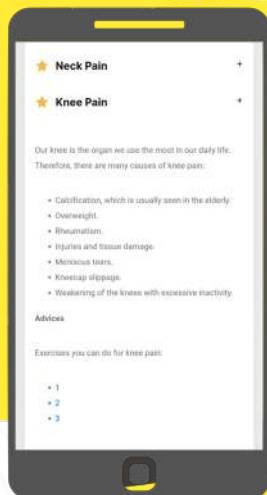
Diseases and Treatments

When you click on the “diseases and treatments” tab of the application, you can access short and clear information about the most common diseases in old age and short recommendations for their treatments.

Diseases and Treatments

You can access the information about the diseases in the “Diseases and treatments” tab by clicking on the disease you are curious about.

When you click on the disease, you will reach brief information about what the disease is, its causes, recommendations and exercises.





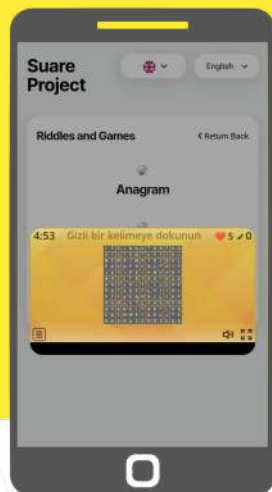
Riddles and Games

By clicking on the “riddles and games” tab of the application, you can access mind exercises such as sudoku, puzzles, intelligence questions.

Riddles and Games

Mind exercises under the title of riddles and games are activities that positively affect cognitive health for all age groups.

You can reach dozens of mind exercise activities by scrolling down the page.



Riddles and Games

You can start puzzles and/or games by clicking on the mind exercise you want to see.



Riddles and Games

To end the mental exercise you started, simply press the “back” button on your phone.



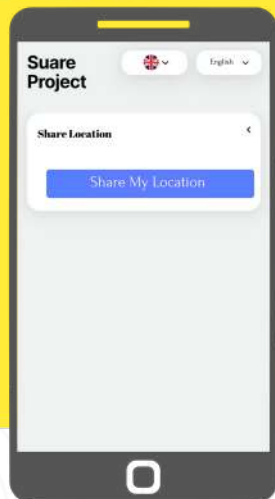


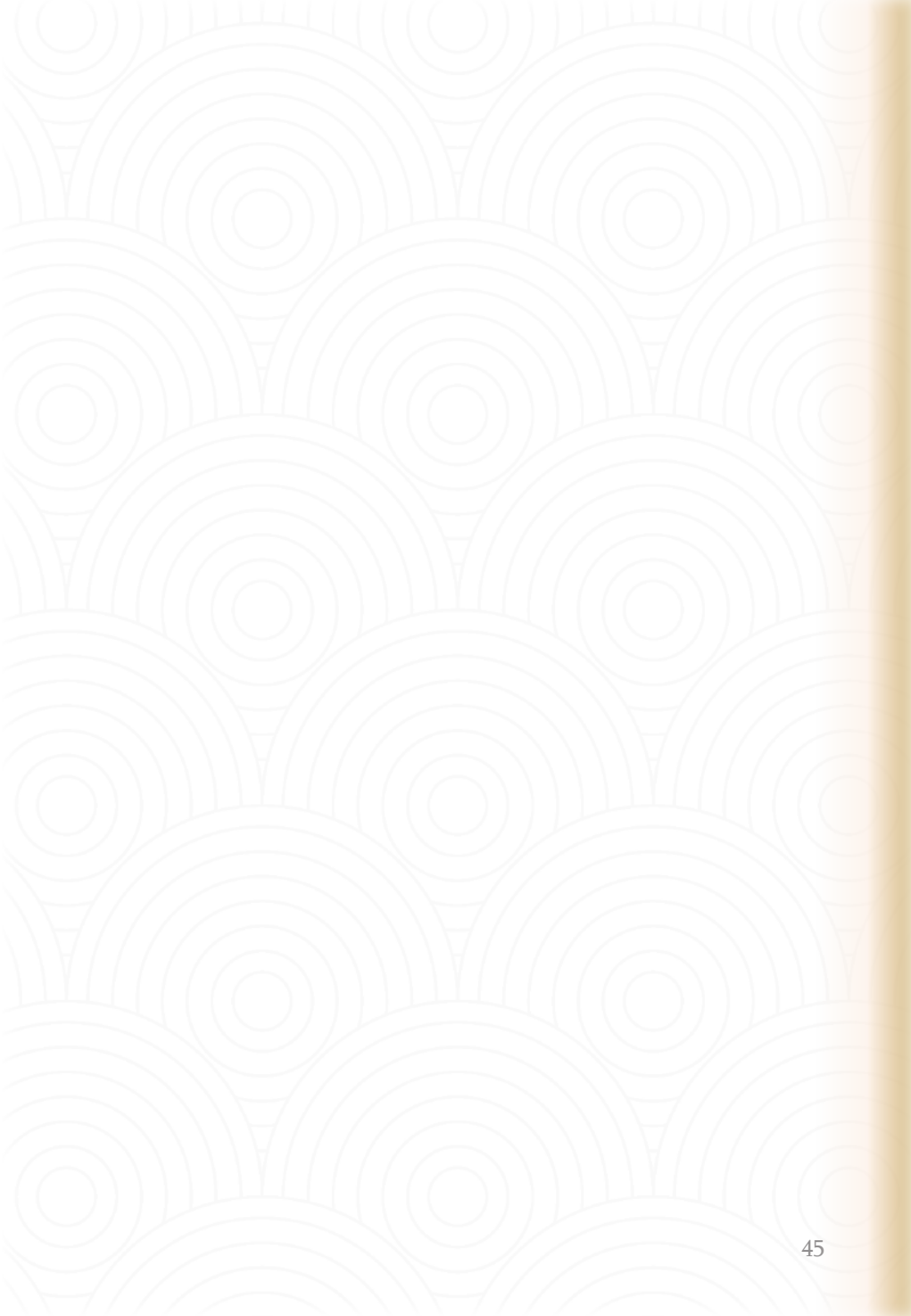
Exercises

By clicking on the “exercises” tab of the application, you can access the physical exercises that are specified in the advice section of the diseases in the application content and that should be done for a healthy aging.

Share Location

You can send your current location as a message by clicking the “share my location” button on the “share location” tab of the application.





SHARE



PROJECT
ACTIVITIES

6. PROJECT ACTIVITIES

6.1. TRANSNATIONAL PROJECT MEETING – TPM

I. TRANSNATIONAL PROJECT MEETING (I.TPM)



The first management meeting (TPM) of the project was held on 1-2 September 2022 in Ankara, Turkey, hosted by the Ankara Intercultural Research Association.

Ankara Intercultural Research Association as the coordinator of the meeting; As other stakeholders of the project, Psy-

chology Society, Inercia from Spain, Compass- Beratung from Austria, Begleitung und Training Gemeinnützige GmbH and French Association Culturelle des Jeunes Turcs de Bar le Duc participated. During the 2-day meeting, the roadmap was determined accompanied by partners, the job descriptions were detailed and the scope of the intellectual outputs was determined. Procedures and rules were determined by explaining how and where the budget would be used with the partners. The date of the next meeting (LTT) activity to be held in Diyarbakır was clarified, questions were answered about the general situation of the project, opinions were received and the meeting was ended.

II. TRANSNATIONAL PROJECT MEETING (II.TPM)



Compass GMBH from Austria hosted the second meeting held between 10-11 February 2023 in Innsbruck, Austria. Ankara Intercultural Research Association, Psychology Society, and Inercia Digital from Spain attended the meeting. The general situation was discussed at the meeting, the first

LTT meeting was evaluated, and the Turkish and English versions of the guidebook were introduced. The date for the next LTT meeting has been set with the partners. Intellectual outputs were discussed. The next actions got determined, and deadlines got set. The technical part of the application is presented and partner countries are informed of processes ahead. The date for the next LTT was set and the meeting ended.

6.2. LEARNING, TEACHING, TRAINING MEETING – LTT

I. LEARNING, TEACHING, TRAINING MEETING (I. LTT)

The first Learning, Teaching and Education Meeting (LTT) of the project was held on 25- 29 September 2022 in Diyarbakir, Turkey, hosted by Galia Media. Ankara Intercultural Research Association as the meeting or coordinator;

As project stakeholders, the Psychology Society, Inercia from Spain, and the French Association Culturelle des Jeunes Turcs de Bar le Duc participated. The prototype of the SUARE mobile application was introduced at the first LTT meeting. The scale to be used for the needs analysis was determined. Brainstorming was done to improve the interface of the application. For the guidebook to be produced, content in the languages of the partner countries has begun to be produced. Presentations were made on the situation of the elderly in partner countries and on legal, social and economic factors. Participants working in the field of geriatrics shared their experiences and suggested solutions to the problems.



II. LEARNING, TEACHING, TRAINING MEETING

(II. LTT)



The second Learning, Teaching and Education Meeting (LTT) of the project was held on 12-16 June 2023 in Huelva, Spain, hosted by Inercia Digital.

As project stakeholders, the Psychology Society, Galia Media, Akad from Türkiye, Inercia Digital from Spain, Compass GmbH from Austria and the French Association Culturelle des Jeunes Turcs de Bar le Duc participated.

The SUARE mobile application and website were introduced at the second LTT meeting. The guidebook translation has been done in all partners' languages. The group discussed and gave feedback on the mobile application.

6.3. MULTIPLIER EVENTS – MP

Multiplier events will be added in the future.

SUARE

SUARE



TÜRKİYE

7. SUARE MOBILE APPLICATION CONTENT - TÜRKİYE

7.1. WHO IS ELDERLY?

The World Health Organization (WHO) defines people over the age of 65 as elderly. Aging doesn't just mean aging in years (calendar age). However, as the calendar age progresses, the physical, psychological, social and biological age of people and accordingly their physical, social, psychological and biological needs also increase.

Along with the development of technology, the developments in the field of health and medicine, prolonging human life and decreasing birth rates cause an increase in the elderly population. The proportion of the elderly population in Turkey is 9.2%. But from another point of view, technology has now expanded its presence in every aspect of human life and has also increased people's quality of life. In this sense, the concept of "healthy aging" put forward by the World Health Organization (WHO) gains even more importance. With healthy aging, it is aimed to protect the functional capacities of the elderly population. The adaptation of elderly individuals to technological developments and the increasing rate of technology use have made it possible to use digital tools for healthy aging day by day.



The use of technological resources in terms of easier access to services, guidance and help in the physical, social, spiritual, etc. areas that they need increases the quality of life of elderly individuals compared to the past. "For example, with the use of digital technology, the elderly increase their cognitive abilities, contribute to their physical health and have an independent life."

According to the study published by the Pew Research Center in the USA in 2017 (Anderson and Perrin, 2017), 59% of those aged 65-69, 49% of those aged 70-74, and % of those over 80 years old are among

the elderly. 17% of them have smartphones and this rate is increasing day by day. Mobile applications that will help and guide the elderly to meet their increasing needs as they get older and suitable for the use of elderly individuals have also become a necessity.

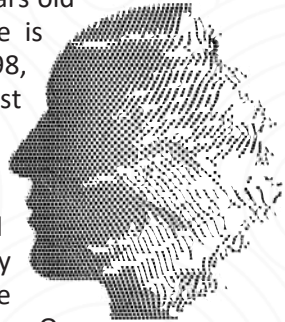
With aging, the movement capacity of individuals is restricted. Restriction of mobility;

- Brain and heart diseases,
- Ongoing diseases,
- Loss of function in the musculoskeletal system,
- Decreased balance ability and increased risk of falling due to lack of movement,
- Decreased growth,
- Bone resorption,
- to depression,
- Shortness of breath
- It causes forgetfulness and many other diseases.

Increasing discomfort affects the elderly physically as well as psychologically. Decreased mobility affects the social life of the individual negatively, causing asociality and depression. Therefore, it is important to increase physical activity and exercise for the elderly. With the exercises recommended for the elderly, healthy aging is aimed at preventing or reducing the effects of many ailments.

7.2. PSYCHOLOGY OF OLD AGE AND THE SPIRITUAL/ PSYCHOLOGICAL NEEDS OF THE ELDERLY

Today, the world population is getting older. So much so that, according to the studies carried out by the World Health Organization, while the rate of the population over 60 years old in the world was 11% in 2006, this figure is expected to reach 22% in 2050. (WHO 1998, 2007a, 2012). Statistics predict that almost $\frac{1}{4}$ of the world's population will be elderly people in the near future.



People have different needs and psychological characteristics brought on by their age in every period of their lives. As age progresses, many problems arise due to aging. One of these problems is the psychological structure of the elderly. Old-age psychology has some unique features.

When we look at the general characteristics of the psychology of old age, the picture that emerges is as follows:

- A general state of depression or misplaced, excessive optimism and elation.
- Excessive concern for the future or impulsive behavior
- Self-criticism and anger,
- Feeling of unreasonable anger towards others,
- Retrospective regret
- Feelings of uselessness and inadequacy,
- Quick temper and stubbornness,
- Seeing yourself as too big or too small,
- Blaming themselves for their surroundings,
- Feeling alone,
- Feeling aimless,
- Loss of joy and excitement and inability to enjoy anything

All of the characteristics of the aforementioned psychology of old age do not occur in every elderly person. However, as a result of factors such as the feeling of uselessness due to retirement and the decrease in financial opportunities, the death of a spouse and/or social environment, physical and cognitive diseases caused by age, and regrets about the past, the elderly individual may have a negative mood and are more prone to depression. Depression, which develops in the ongoing process, is both the cause and the result of the emotions experienced. As a result of this continuous negative mood, the elderly person may feel unmatched in life and wait for death or may face suicidal thoughts.

Carter and Mc Goldrick (1999) describe old age as the sixth and final phase of the Family Life Cycle, the “Old Age and Retirement” phase. At this stage, children left home by marrying or finding a job, retired from work; The bustle of life and the efforts of individuals to prepare their children for life have left their place to a period of calm and old people alone with their spouses and themselves.

Losses, changes and health problems experienced during this period affect individuals and cause a decrease in their motivation to enjoy life and connect to life. In the old age stage, individuals can cope with conflict if they can manage the changes in their feelings, thoughts and behaviors, show appropriate attitudes and behaviors in the face of various stress factors, and maintain their relationships in cooperation and sharing. Otherwise, it is possible that crises will dominate their lives.

According to Erikson (1963), the psychosocial crisis that occurs in old age is called “Ego integrity versus despair”. Erikson’s Psychosocial Development Theory mentions that people look back and evaluate their losses and gains as they get older. There is “ego integrity” at the positive end of the crises that occur in the old age period, and “hopelessness” at the negative end. Ego integrity is a balance between loss of body strength, memory impairment, and social loss of productivity and responsibility. Despair usually emerges as a result of constant stagnation.

There is a return to childhood in old age at the negative end, there

is humiliation and contempt, manifested either explicitly or implicitly; the individual is perceived as finished, helpless, and weak. The elderly not only grieve for the lost time and the environment but also loses the areas of identity gained in previous periods. Autonomy weakens, entrepreneurship disappears intimacy, and productivity declines.

Elderly individuals may develop attitudes such as irritability, skepticism, hoarding and excessive apprehension in order to protect themselves from the negative mood, fear and anxiety brought on by the psychology of old age.

Due to the increase in the elderly population day by day, it is important to know the unique features of the psychology of old age in order to take precautions and establish healthy communication with the elderly.

Advices

Contact with family members and close circles of aging individuals is important so that they communicate and inform each other. It is an important step to get healthy results by trying to eliminate worries and fears in open and constructive communication and to allow the elderly to live an active life at a level that does not exceed their declining abilities in order to feel useful at this stage.

One of the greatest needs of the elderly is to see their loved ones next to them. The busyness of young family members in their own work and nuclear families often prevents them from spending time with their elders. The irritability brought about by the psychology of old age may also cause the elderly to reproach the younger members of the family from time to time. The reproaches must be met with maturity by the young members. At this point, short and frequent visits make older members of the family feel valued while allowing younger members to monitor their physical and personal needs.

Elderly people need social communication more than any other person due to the declining social life quality due to retirement and the loss of a spouse/close circle. In this sense, frequent and friendly communication is important in terms of social life needs. Due to the special

circumstances of the family and/or the heavy care needs of the elderly, sometimes young family members may get help from professional care services. As a result, older individuals may feel more worthless, useless, and needy, while younger members of the family may feel guilty. However, it is perfectly normal to seek professional help, both physical and psychological, when needed. In these cases, the young members of the family should openly talk to the elder, explain the special circumstances and the reasons for professional help, and prevent the elderly from feeling “abandoned” by frequent visits and constant communication in the future. Negative emotional states caused by all these emotional and physical changes can turn into depression for the elderly. In the course of progressive depression, thoughts of death and suicide may occur in the person. It is vital to monitor the depressive mood and to get professional psychological support without delay when observed.

7.3. WHAT ARE THE PHYSICAL AND COGNITIVE DISEASES AND THE WAYS TO PREVENT/REDUCE THE EFFECT OF THE ELDERLY?

With the advancing age, some changes occur in the human body. When the physiological changes experienced exceed a certain level, they cause health problems. Physical health problems increase with aging and ways to prevent/reduce these problems are;

i. Depression

Depression is a psychological disorder that can be seen in every period of human life. However, the special conditions of each period may show different causes and symptoms from age to age.

During old age, some changes occur in the vessels, brain and chemical structure of the brain. As a result, the balance of some chemicals secreted in the brain is disturbed. Many factors such as negative mentality (perfectionism, lack of self-confidence), a person's past life history, decrease in social life, change in family structure, the loss of a spouse, dementia, low socioeconomic level and medical disorders can trigger depression.



Depression rates in the elderly go up to 20-25%.
Untreated depression may cause;

- Exacerbation of physiological diseases,
- Early deaths,
- Suicidal tendencies,
- Decreased quality of life of the patient and family members,
- Increase in admissions to hospitals,
- Deterioration in family relationships, over time.

The general symptoms of depression in the elderly are as follows:

- Discomfort, restlessness,
- Not wanting to do anything, losing enthusiasm,
- Hopelessness, pessimism,
- Sleep disorders (undersleeping or oversleeping)
- Preoccupation with bodily complaints,
- Having bodily pains that doctors cannot find a reason for (numbness, indigestion, etc.),
- Inability to concentrate, lack of attention,
- Inability to enjoy previously enjoyable activities,
- Prolonged and persistent low mood (at least 2 weeks),
- Worrying too much about economic troubles, the mind is full of unwarranted worries,
- Eating disorders (significant change in appetite and weight status),
- Neglecting daily cleaning and maintenance,
- A feeling of guilt, - Can't stop thinking about your past failures and mistakes,
- Being unusually emotional and crying often - Decreased mental abilities, slow thinking,
- Indecision

Advices

Professional psychological support should be sought in the treatment of depression. There may be some subtleties in the psychological support to be provided for the elderly. For the treatment of senile depression, psychotherapy, antidepressant medication or shock therapy can be used. But the most appropriate treatment should be decided by the psychiatrist.

In addition, the most important role in preventing and eliminating old-age depression falls on family members and the close social circle of the elderly. Depression in the elderly may be perceived as having a weak character or as a mental illness. Older people with depression may refuse it. Therefore, it would be better to try to get information only about the symptoms and listen to their complaints. Family members need to spend more time with the elderly person, to listen to him/herself, to understand some behaviors of the elderly person, to behave tolerantly, and to direct them to professional psychological support in case of suspicion of illness.

ii. High Blood Pressure (Hypertension)

If the blood pressure required in the veins for blood circulation is higher than normal, it is called 'high blood pressure' or 'hypertension'. High blood pressure causes damage to the vessels of important organs such as the brain, kidneys and eyes, in addition to the heart, leading to heart disease, stroke, narrowing of the vessels, blindness and kidney failure. Among the most common complaints include;

- • dizziness,
- • headache,
- • heartache,
- • tinnitus,
- • shortness of breath,
- • double or blurred vision,
- • nosebleeds,
- • irregular heartbeats.

However, most people may have no symptoms. In the vast majority of high blood pressure, there is no definite cause. There are multiple factors such as diabetes, obesity, smoking, alcohol, stress, excessive salt use, insufficient physical activity, unhealthy eating habits and aging.

Advices

Preventive measures against high blood pressure should be taken long before the onset of the disease, just as with other diseases of old age. They can be taken by changing the lifestyle and by gaining some habits and eliminating others. Some of the measures that can be taken are as follows:

- Reducing salt consumption to less than 5 grams per day
- Ensuring weight control
- Increasing the consumption of vegetables and fruits
- Avoiding foods containing saturated and trans fats
- Staying away from smoking and alcohol
- Being physically active and making it a habit.
- To reduce stress
- To have blood pressure measured regularly
- If the disease has developed, to use medications regularly

And the most important thing is to exercise regularly. Those with high blood pressure and those who want to be protected from the effects of blood pressure can do the following exercises:

- <https://www.youtube.com/watch?v=jSE9wDSGngA>
- <https://www.youtube.com/watch?v=lkmZeokwhww>
- <https://www.youtube.com/watch?v=ztRa35-IM50>



egzersizlerin videoları için →



iii. Neck Pain

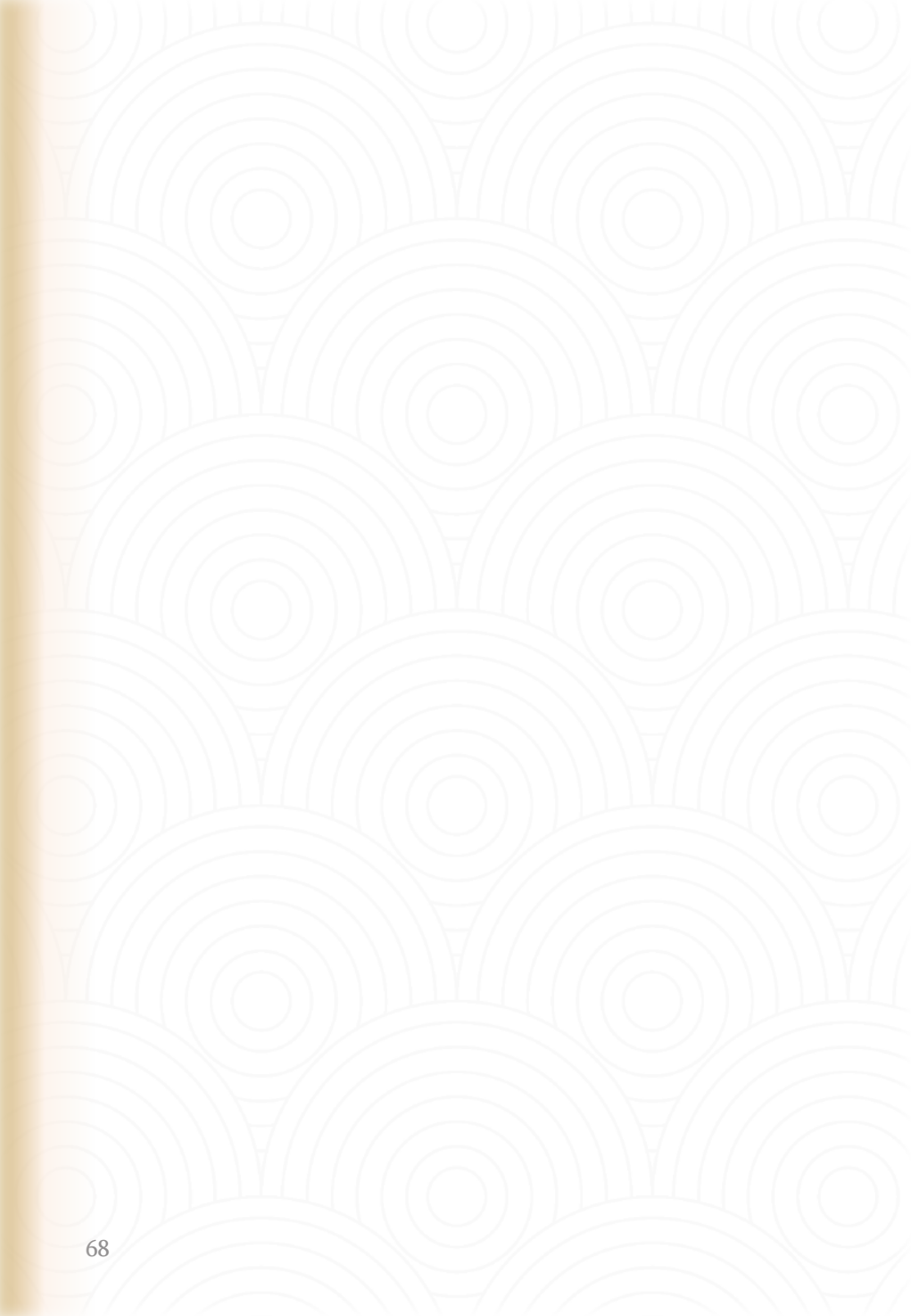
Neck pain is a fairly common discomfort. Neck pain can have many different causes such as:

- Too much time on the computer, in front of the TV or on the phone, reading a book lying down, the neck remaining motionless for a long time.
- Neck joints wear out with age. As the body ages it creates bone extensions that affect movement and cause pain.
- Hernias formed in the cervical vertebrae.
- Injuries or tissue injuries.
- Some diseases, such as rheumatism, meningitis and cancer. Calcification of the neck.

Advices

Exercises you can do for neck pain:

- <https://www.youtube.com/watch?v=UnfTuu5bqr0>
- <https://www.youtube.com/watch?v=fVm6r6PPZ1w>
- <https://www.youtube.com/watch?v=p6WyrI6EuN8>
- <https://www.youtube.com/watch?v=hAuT31hCla>



iv. Knee Pain

Our knee is the organ we use the most in our daily life. Because Knee pain has many causes:

- Calcification, which is usually seen in the elderly.
- Overweight.
- Rheumatism.
- Injuries and tissue damage.
- Meniscus tears.
- Kneecap slippage.
- Weakening of the knees with excessive inactivity
- Vitamin D deficiency

Advices

Patients should especially lose weight, if the patient is not overweight the weight control must be paid attention. Knee bandages can be used to reduce pain.

Exercises you can do for knee pain:

- https://www.youtube.com/watch?v=1X-qc0nYxuY&ab_channel=aktiFizyo
- <https://www.youtube.com/watch?v=0n3E37K-GZQ>
- <https://www.youtube.com/watch?v=27W9PrtQnx4>

v. Dementia

Dementia is a disease of old age that is often confused with Alzheimer's. Alzheimer's is a type of dementia, although most of its symptoms are similar. While Alzheimer's is a disease related to the nervous system of the person, dementia is a health problem that covers the general mind, due to the damage of cells in the brain. In other words, dementia is the loss of the mind.

Dementia: is overall a health problem that covers the general mind. It cannot simply be defined as forgetfulness. Many behavioral disorders that affect daily life can come with this health problem. These symptoms progress over time, and in cases such as Alzheimer's dementia, this period can span years.

The clearest symptom of dementia is near-to-nonshort-term memory. In other words, the person may not even remember what happened a minute ago. The disease, which starts with memory problems in the first stages, continues with the difficulty of doing physical and physiological activities over time.

Advices

There is no definitive way to prevent dementia, as there is no definitive diagnostic test for dementia, but it is aimed to take precautions and minimize the risk of dementia by making a few changes in the habits in our lives. All the precautions and advice given for Alzheimer's are the same for this name. Factors such as providing mental stimulation, physical activity and social interaction, consuming cigarettes, and quality sleep will help with dementia. In dementia, the main goal is to sustain the life they live together.

vi. Backache

Although low back pain is frequently seen in people of all ages, it can also occur in old age. Low back pain is one of the most common complaints. Common causes of low back pain are:

- Lifting heavy objects
- Making sudden movements
- Forcing the waist
- Herniated disc
- Damage to bones and joints
- Calcification
- Osteoclasia
- Injuries (falling, hitting somewhere, etc.)
- Weakening of bones with aging
- Being overweight

Advices

Taking short walks, swimming, cycling and stretching exercises can be a solution to low back pain without straining the back too much. Using a special pillow that supports the waist curve while sitting and, avoiding sitting in the same position for a long time can be good for low back pain. Patients should definitely consult to physical therapy and rehabilitation clinics in hospitals.

Exercises can be done for back pain:

- <http://www.turkgeriatrivakfi.org.tr/GetDynamic?pagelid=98432&templid=0&guid=603499e8ddaaa474#:~:text=Boyun%2C%20omuz%20ve%20kal%C3%A7a%20%C3%A7evresinde,ak%C4%B1da%20tutulmal%C4%B1%20gerekene%20bir%20hastal%C4%B1kt%C4%B1r.>

vii. Cholesterol

Cholesterol is a type of fat found in people's blood. When cholesterol levels are high in the blood, it causes the hardening of the arteries and the formation of fat deposits in the blood vessels. These deposits, which grow over time, make it difficult for enough blood to flow through the veins and cause various health problems.

The main causes of high cholesterol are:

- Lack of exercise
- Unhealthy eating
- Obesity (overweight)
- Smoking cigarettes
- Diabetes

Advices

Nutrition and exercise are the main points to be considered to prevent high cholesterol. Losing excess weight and exercising prevent high cholesterol to a large extent. Sports such as walking, swimming, jogging, and cycling for at least 30-45 minutes a day should be done.

In addition, the following exercises should be done to get rid of the following extra pounds:

- https://www.youtube.com/watch?v=HwaZYOavRRo&ab_channel=Squatgirl
- https://www.youtube.com/watch?v=epFK7DDQxeU&ab_channel=MelisYengil
- https://www.youtube.com/watch?v=-eshty_q6j8&ab_channel=GeriatriFizyoterapistlerDerne%C4%9Fi

viii. Eye Pressure

Eye pressure or glaucoma disease is caused by the pressure that rises as a result of the obstruction of the channels that drain the fluid in the eye and the inability to get the fluid out of the eye.

Advices

Glaucoma is only lowered with drugs that are produced only for this disease. To support the treatment:

- quit smoking
- lower high cholesterol
- lower hypertension
- eat healthy
- exercise

In addition to weight loss and light exercises for eye health, there are some eye exercises can be done:

- <https://www.youtube.com/watch?v=qGZX9tuxb60>
- <https://www.youtube.com/watch?v=GrOuegqKOYI&t=172s>
- https://www.youtube.com/watch?v=GZE8s_yUCYg

ix. Urinary Incontinence

One of the most common diseases with aging is urinary incontinence. There are many reasons for urinary incontinence and it decreases the quality of life of the elderly and also affects them psychologically. The main reason is that with aging, the muscles in the urinary system are weakening. Other reasons are;

- Overweight
- Hereditary factors
- Some medicine used
- Excessive alcohol consumption
- Urinary tract infections
- Bladder problems
- Prostate enlargement
- Vaginal infections

Advices

Urinary incontinence can be treated with surgery and medication. Also with some measures and exercises that the person can take on their own, the complaints can be eliminated/reduced. First, the person should eliminate the factors that can cause urinary incontinence.

Getting rid of excess weight, reducing alcohol, and stopping/reducing the consumption of medicine that can cause urinary incontinence under the supervision of a doctor are the primary measures that a person can take.

In addition, the muscles between the bladder and urinary canal should be strengthened with simple Kegel exercises that can be applied. Kegel exercises include:

<https://www.youtube.com/watch?v=ixl4nBPq4uA>

<https://www.youtube.com/watch?v=DhnYEV51Fv0>

<https://www.youtube.com/watch?v=8ZdFnozWTo>

x. Alzheimer's

Alzheimer's is a neurological disease in which a person's memory, thinking, and language skills gradually regress, and it is thought to be caused by the effect of genetic, developmental, and environmental factors, and causes the destruction of brain cells over the years. The exact cause of Alzheimer's is not known. The disease, which starts with forgetfulness in the early period, may come to a level where the person has difficulty performing daily activities on their own. For this reason, early measures should be taken and slowing treatments should be applied.

Alzheimer's, which is a very common disease worldwide, usually begins to appear with advancing age. However, it is an insidious disease that requires early action for young people and adults as well.

Gradual loss of memory, repeating the same questions and sentences over and over, forgetting the places and people that one knows well, deterioration in speech and language skills, and confusion are the symptoms of the disease.

Cognitive impairments caused by Alzheimer's cause psychological disorders by affecting the social life of the person over time.

Although the causes of Alzheimer's are not fully known;

- Genetic factors,
- Excess weight (obesity),
- Use of alcohol and cigarettes,
- Hypertension,
- High cholesterol,
- Diabetes,
- Inadequate and unhealthy diet,
- Insufficient physical and cognitive activity,
- Aging, are one of the possible risk factors that trigger Alzheimer's.

Advices

There is no definite cure for Alzheimer's. However, early diagnosis and measures to be taken at a young age help to slow down the disease and reduce its effectiveness.

At the beginning of these are the reduction of possible risk factors and a healthy diet. In addition to these, socialization, regular exercise, and mental exercises that will keep the mind active are important in slowing the disease.

Physical exercises against Alzheimer's:

- <https://www.youtube.com/watch?v=TqPOD1EUZjs>
- <https://www.youtube.com/watch?v=UQmEeJb32uM>
- https://www.youtube.com/watch?v=au3dAlZg_xg

Mental exercises against Alzheimer's:

- <https://www.youtube.com/watch?v=UZVX-DhHAWc>
- <https://www.youtube.com/watch?v=K9VKJrTkAlO>
- <https://www.youtube.com/watch?v=TqPOD1EUZjs>
- Sudoku, chess, mind games, etc.

xi. Obesity

Obesity, in short, is a person's weight being too high compared to his height, and the person's body storing more fat than usual. Although obesity invites many diseases, it also significantly reduces the quality of life of the person. As people get older, the muscle mass in their body decreases, and the fat ratio increases. With aging, there is a decrease in the speed of metabolism and the digestive system. As a result of all these, it will be inevitable for the elderly to be obese. Therefore, nutrition is of great importance in old age. In our country, the prevalence of obesity is quite high in individuals over the age of 65.

Advices

The primary goal should be to avoid obesity. Because it is much more difficult for people over a certain age to lose weight than to gain weight. For this reason, as in many other diseases, changing the lifestyle and eliminating some habits while gaining some habits is the most effective method against obesity.

- Reducing calorie intake
- Eating a liquid-based diet
- Reducing salt
- Eating little and often
- Avoiding smoking and alcohol
- Spreading physical movement in all areas of our lives
- Brisk walking
- To swim
- Exercising regularly

Here are some daily exercises you can do to prevent obesity in old age:

- https://www.youtube.com/watch?v=R_gYWsgjOds
- <https://www.youtube.com/watch?v=3HaQ22DxUQQ>
- <https://www.youtube.com/watch?v=GSUBCoYeqvc>
- <https://www.youtube.com/watch?v=rJkxtE1aEpQ>
- https://www.youtube.com/watch?v=-eshty_q6j8

xii. Osteoporosis

It is the weakening and brittleness of the bones because of the decrease in the mineral density in the bone content. The first symptom of osteoporosis, which usually starts after the age of 45, is back pain.

The main cause of back pain is minor fractures in the weakened bones of the back vertebrae. With the increase in the number of fractures, the person's body experiences;

- Spine leans forward
- A hump occurs on the back,
- The height is shortened.

Factors such as advancing age, menopause, calcium and vitamin D deficiency, chronic diseases, heredity, and sedentary life are among the reasons for the emergence of the disease.

Advices

The primary goal is to prevent osteoporosis, which is one of the main causes of many pains. To prevent osteoporosis;

- Having a diet rich in calcium at an early age,
- Increasing physical activity,
- Avoiding alcohol and cigarette consumption,
- Maintaining ideal body weight,
- A balanced and regular diet,
- Exercising,
- Going out to the sun during the day for vitamin D intake

Is important and it is crucial to have doctor's check-ups on time. Some exercises that can be done to prevent osteoporosis and reduce its effect are as follows:

- <https://www.youtube.com/watch?v=Rb2Au88CTNs>
- <https://www.youtube.com/watch?v=cVRgBjIOLY>

In addition, ways to increase physical activity should be preferred, such as going up and down the stairs instead of escalators in daily life, walking short distances, and standing for short-term public transportation use.

7.4. STUDIES ON THE ELDERLY IN TURKEY

As of 2022, the rate of elderly population in Turkey is 9.2%. The increasing elderly population has brought along academic studies on the elderly in the world and in Turkey. Many academic studies have been conducted on the elderly, such as improving the welfare level of the elderly, understanding them better in psychological, physiological, physical and social terms, and measuring the effect of the studies and policies followed. When we look at the studies on the elderly in the last 5 years, the issues that are emphasized are as follows:

- Abdulkadir Kaya and Zerrin Gamsızkan published the study named “Examination of the Chronic Disease Numbers of Elderly Individuals and their Applications to Family Medicine: A Single-Unit Retrospective Study” where the number of chronic diseases of individuals over 65 years of age and the frequency of chronic disease-related referral to the family doctor were examined on 31.03.2022. (Tr: Yaşlı Bireylerin Kronik Hastalık Sayıları ile Aile Hekimliğine Başvurularının İncelenmesi: Tek Birimlik Retrospektif Çalışma)
- The research titled “Restriction of Physical Activity: Differences Between Adults and Older Adults” published by Ecem Büşra DEĞER and Selma Arzu VARDAR on 01.04.2021, examines the changes in the musculoskeletal system and performance of the elderly due to lack of physical activity and the chronobiological changes. (Tr: Fiziksel Aktivitenin Kısıtlanması: Yetişkin ve Yaşlı Yetişkin Bireyler Arasındaki Farklılıklar)
- The research titled “Care Management of Elderly Persons During the Covid 19 Pandemic Process” published by Emine EKİCİ on 30.09.2020, examining the increasing care needs of the elderly during the COVID-19 period. (Tr: Covid 19 Pandemisi Sürecinde Yaşlı bireylerin Bakım Yönetimi)

- The study titled “Supportive Care Needs of Elderly Cancer Patients: Are Needs Getting Older?”, published by İrem AYVAT and Azize ATLI ÖZBAŞ on 31.03.2021, to help healthcare professionals recognize the unmet care needs of elderly cancer patients. (Tr: Yaşlı Kanser Hastalarının Destekleyici Bakım Gereksinimleri: Gereksinimler de Yaşlanıyor mu?)
- The article titled “Exercise Approach and Effects in Obese Elderly” published by Selman BÖLÜKBAŞI on 23.04.2020, in which the problem of obesity experienced by the elderly and the exercises that can be applied to this problem is explained. (Tr: Yaşlı Obezlerde Egzersiz Yaklaşımı ve Etkileri)
- A.Pınar SUMER, Mahmut SÜMER, Mesude ÇİDİR, F.Zehra BODUR, Günay GÜRAY, and Soner ÇANKAYA published on 21.11.2022, “Evaluation of the systemic status of patients aged 65 and over”, in which the medical conditions of patients aged 65 and over who applied to the faculty of dentistry were evaluated. (Tr: 65 yaş ve üstü hastaların sistemik durumlarının değerlendirilmesi)
- The study titled “Examination of the Relationship Between Caregiver Burden and Anxiety Levels of Caregivers of Elderly Patients”, published by Zeynep ÇELENK and Hatice KUMCAĞIZ on 30.10.2022, in which the care burden and anxiety levels of elderly care staff were investigated. (Tr: Yaşlı Hastaya Bakım Verenlerin Bakım Yükü ve Anksiyete Düzeyleri Arasındaki İlişkinin İncelenmesi)
- The book “Book of Internal Medicine of Uludağ, Volume 3 – Diagnosis and Treatment” was published by Uludağ University in October 2022, in which aging problems and

geriatric syndromes are also examined. (Tr: Uludağ İç Hastalıkları Kitabı, Cilt 3– Tanı ve Tedavi)

- The research titled “Investigation of the Relationship Between the Level of Physical Activity and the Level of Loneliness in Individuals aged 65 and Over” published by Şebnem ŞARVAN CENGİZ, Buse DELEN, and Nilgün VURGUN on 15.07.2022. (Tr: 65 Yaş ve Üzeri Bireylerdeki Fiziksel aktivite Düzeyi ile Yalnızlık Düzeyi Arasındaki İlişkinin İncelenmesi.)
- The technical report titled “Old Age and Social Services” published by Bülent İLİK and Arzu İÇAĞASIOĞLU ÇOBAN in November 2021 (Tr: Yaşlılık ve sosyal hizmetler)
- The study named “Depression and Treatment Compliance in Elderly Individuals with Chronic Diseases” published by Elif OK and Samet SAYILAN on 30.06.2022 (Tr: Kronik Hastalığı Olan Yaşlı Bireylerde Depresyon ve Tedavi Uyumu)
- Article on “The Effect of Exercise on Musculoskeletal System Changes in Old Age” published by Şadan TOĞAÇAR, Süreyya Yonca SEZER and Mehmet Burak DEMİR (Tr: yaşlılıkta egzersizin Kas-İskelet Sistemi Değişikliklerine Etkisi)
- Erasmus+ project on “Patient and Elderly Care Internship in the EU” carried out between Turkey-Greece-Portugal under the coordination of Anamur Valide Sultan Vocational and Technical Anatolian High School between 2018-2019 (Tr: AB’de Hasta ve Yaşlı Bakım Stajı)
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- Erasmus+ project with the theme “Erasmus+ Patient and Elderly Care Internship, We Add Value to Ourselves” between Turkey- Spain-Germany-Portugal under the coordination of ay Gevher Nesibe Vocational and Technical Anatolian High School. (Tr: Erasmus+ Hasta ve Yaşlı Bakımı Stajı Yapıyor, Kendimize Değer Katıyoruz)
- Erasmus+ project on “European Practices in the Field of Elderly Care” carried out under the coordination of Saffranbolu Vocational and Technical Anatolian High School between 2018-2019 (Tr: Yaşlı Bakımı Alanında Avrupa Uygulamaları)

The studies given above are only a few of the studies on the elderly and elderly care in Turkey. The researches also guide the policies of local and central governments and are important in gaining social awareness.

7.5. ELDERLY CARE POLICIES IN TURKEY

The aging population necessitates the creation of social policies for the elderly. With the amendment made in the Constitution in 2010, the phrase “the elderly will be protected by the state” was added and the principle of positive discrimination for the elderly was included. Therefore, social policies for the elderly have been determined as the responsibility of the state and as a fundamental right. In Turkey, the General Directorate of Disabled and Elderly Services under the Ministry of Family and Social Services and the Ministry of Health are responsible for creating social and health policies for the elderly. In addition, local governments, namely municipalities, also offer elderly policies and services related to these policies.

The General Directorate of Elderly Services is responsible for carrying out and coordinating protective, preventive, educational, developing, guidance and rehabilitative social services for the disabled and the elderly. Within this obligation, it establishes and develops social support mechanisms where the elderly and disabled people in need of care can continue their lives without leaving their homes and social environments. In this context, institutional care services for elderly individuals; nursing homes, home care services, elderly care and rehabilitation centers, elderly service centers and elderly solidarity centers provide services.

Standard, opening, operation and inspection principles of institutional care services have also been determined with the legal regulations enacted.

Karakuş (2021), gathered the services and policies of the Ministry and other public institutions under the following headings;

- **Protective and preventive development services** (Lifelong learning/Adult education/Third Age (Refreshment) university, Preparation for old age/Retirement, Active and Healthy Aging, Free/Discounted Travel, Social-Cultural Activities etc.)
- **Retirement and social security/general health insurance services**
- **Social Assistance** (2022 Elderly Pension, Disabled Home Care Support, Social assistance to women whose spouses passed away, SYDV Aids, Municipality. etc.)
- **Care Services** (Home Care, Day Care, Long Term Institutional Care)
- **Alternative models are adopted in the care of the elderly**, with a decision-making process that also includes the elderly, and which include preventive and preventive services rather than a therapeutic approach, and respond to the wishes of the elderly. In this framework, the targeted service priorities and alternatives are as follows:
 - **Support to Home Care** (ASHB/SYDV-Vefa, Municipalities)
 - **Home Care /Home Health** (Ministry of Health, AÇSHB, Municipalities, Private Sector)
 - **Day Care Services:** Care, Counseling, Solidarity (Municipalities, ASHB, NGO)
 - **Nursing Home** (ASHB, Municipalities, Other Public Institutions, NGOs, Private Sector)
 - **Elderly Care and Rehabilitation Center** (ASHB, Municipalities, Other Public Institutions, NGOs, Private Sector)

In the last 20 years, the following plans and programs have been prepared with the leadership of the public;

- **“The Situation of the Elderly in Turkey and the National Action Plan on Aging”** was prepared in 2007 by the Ministry of Development (Abolished State Planning Organization). In this action plan;
 - “Improving Lifetime Health and Increasing Well-Being”
 - “Ensuring Full Access to Health and Care Services”
 - “Training of Care Providers and Health Workers”
 - “The Mental Health Needs of the Elderly”
 - “The Elderly and the Disability”
 - “Care and Support of Caregivers” under these headings, actions have been identified to support and develop long-term care.
- **“The Situation of the Elderly in Turkey and Aging National Action Plan Implementation Program”** was prepared by the Ministry of Family and Social Policies, General Directorate of Disabled and Elderly Services, and the responsibilities of public institutions, universities, non-governmental organizations, local governments and other stakeholders were determined in this implementation program.
- The **“Elderly Support Program (YADES)”** was put into practice in 2016 by the ASPB1 General Directorate of Disabled and Elderly Services, in order to ensure that the care and support services for the elderly are primarily provided without being separated from their social environment and supported by their families.
- The **“Aging Specialization Commission”** was established for the first time within the scope of the 10th Development Plan (2014-2018) studies carried out by the Ministry of Development. Thus, urgent strategies for aging and long-term care were determined.

- The Ministry of Family and Social Services, General Directorate of Services for the Disabled and the Elderly, initiated efforts to create a care assurance model and care insurance in the social security system within the scope of the **“Care Services Strategy and Action Plan (2011-2013)”**. These studies focus on the rationale of the care assurance system (care insurance) for Turkey, the financing method in the care assurance system, and the actuarial account in the care assurance system. Thus, preliminary studies of the maintenance assurance system are carried out.
- T.R. **“Turkey Healthy Aging Action Plan and Implementation Program (2015-2020)”** was prepared by the Ministry of Health, Public Health Institution of Turkey in 2015. In this program; In general, principles and measures regarding healthy aging have been determined. (see: sbu.saglik.gov.tr/Ekutuphane/Home/GetDocument/508).
- T.R. As of 2004, **“home health care services”** are carried out by the Ministry of Health. With the **“Directive on Implementation Procedures and Principles of Home Health Services Provided by the Ministry of Health”** issued on February 1, 2010, home health care services have spread all over Turkey.
- The Ministry of Family and Social Services, the Ministry of Internal Affairs, the Ministry of Health and the Union of Municipalities of Turkey signed a Protocol on the Cooperation of Home Health Care, Care and Social Support Services on 31.03.2015.

“Active Aging Strategy Document (2017-2020)” by the Ministry of Family and Social Services, General Directorate of Services for the Disabled and Elderly, taking into account the final version of the document and the life-cycle approach for active aging, studies are continuing to determine the actions and the institutions and organizations responsible for these actions. Among the priorities of the

World Health Organization for the years 2018-2019;

- There are targets such as monitoring and evaluation of healthy aging policies,
- Strengthening the old/age-friendly environment,,
- There are targets such as monitoring and evaluation of healthy aging policies.

In this process, a report on **“System Analysis: Long-Term Care in Turkey”** was prepared by the World Health Organization Turkey Office.

- The concept and studies of the **“Age Friendly City”**, whose general purpose is to make cities more useful for the elderly population and to mobilize them to provide more opportunities for the elderly, was initiated by the World Health Organization (WHO) in 2005.

In addition to the studies mentioned above, various universities and non-governmental organizations held meetings related to the subject. The year 2019 was declared as the **“Year of the Elderly”** by the Presidency and the **“Council on Aging”** was convened in that year.

Local administrations as well as central administrations have developed different policies for the increasing elderly population. Among the services of local governments for the elderly, in-kind- cash assistance, home health care, home technical service, house cleaning, personal cleaning, food services, shopping service, companion assignment, social support, social-cultural activity, psychological support, guidance service, transportation services and the elderly clubs/centre, which are increasing in number and with different names, free and discounted transportation, arts and culture events, and patient transport services the practices are the first attention-grabbing practices.

There are 22 nursing homes owned by municipalities in 13 provinces in Turkey. In addition to this, offered by provincial and district municipalities; social life centers (living houses, retirement cafes, local), **“Healthy Aging and Solidarity Centers”** and **“Elderly Service Centers”** are centers serving the elderly.

7.6. WHO ARE THE ELDERLY CARE STAFF?

Elderly health and care are areas that require professional service. For this reason, health and care personnel related to the elderly should have education and some personal characteristics and competencies in this field.

Professional staff in the field of elderly health and care basically; **elderly care technicians, patient and elderly caregivers, physiotherapists, social workers and geriatricians**. The personal characteristics and competencies that the professional staff who provide / want to serve in this field should have are listed as follows::

- Loves to serve old people and enjoys being with them,
- Interested in human health and biology,
- Able to empathize with the elderly and their relatives and understands their feelings and thoughts,
- Loving, tolerant, patient, smiling,
- Able to plan and implement a job,
- Enthusiastic, careful, and attentive to his/her job,
- Responsible, open to cooperation and personal development,
- No mental or physical illness,
- Educated in adult pedagogy,
- Knows the first aid rules,
- Patient and communicative.

Elderly Care Technicians: These are the people who provide medical and social care services to contribute to reducing the physical, mental, and social inadequacies of the elderly that occur with aging. The working areas of the profession are hospitals, elderly care and rehabilitation centers, nursing homes and those who want to receive private home care services.

Elderly care technicians are required to take 2-year “Elderly Care” training in Health Sciences Vocational Schools of universities or to be certified by participating in the “Caregiver and Elderly Care Course” approved by the Ministry of National Education given by some universities in Turkey. However, university graduates are more advantageous in terms of education and employment. Elderly care technicians:

- Provides care services that will meet basic needs such as nutrition, general body cleaning, movement, proper bed position, etc.,
- Performs medical interventions such as injection, dressing, wound care, catheter care, etc., to ensure the implementation of the treatment planned by the physician, and administers drug treatments,
- Controls daily health indicators such as blood pressure, fever, pulse, respiration,
- Applies first aid rules in emergency situations,
- Plans, implements and ensures participation in occupational therapy programs for them to be socially supported and gain self-confidence,
- Helps to implement social and physical rehabilitation programs,
- They help increase their communication with each other and with the community.

Caregivers: Persons who accompany patients who need care, who are bedridden, elderly, or who cannot take care of themselves.

Persons who follow the patient's medications, personal care, needs and the cleanliness of the room in which they stay, according to the directions of doctors and nurses, are called caregivers or elderly caregivers. The working areas of the profession are hospitals, elderly care and rehabilitation centers, nursing homes and those who want to receive home care services in private.

The duties of caregivers are almost the same as elderly care technicians. The difference is that caregiver staff are not required to have a degree to provide caregiver services.

However, those who have graduated from the Patient and Elderly Services of Vocational High Schools, Anatolian Vocational High Schools or Anatolian Technical High Schools and those who have attended various trainings and courses in the field of Patient and Elderly Care and received a nursing certificate have an advantage in this field. As a matter of fact, the training received is necessary to gain expertise in *anatomy and physiology, basic drug knowledge, elderly and patient personal care, elderly and patient nutrition, first aid and dressing applications, chronic diseases, elderly communication and rehabilitation.*

Social Service Specialist: Social work is a field that covers all services that can produce solutions to the problems of people from all segments of society, such as the elderly, disabled, young, women, men, children, and immigrants. Social workers are also people who help in the improvement and development of the situation of the group they are interested in all aspects. They guide the people who need care, who are destitute, who are outcasts, and who are financially deprived so that they can identify their needs and receive the necessary services.

In order to become a social service specialist, it is necessary to graduate from a 4-year “Social Services” department of a university. The working areas are the Ministry of Health, the Ministry of Family and Social Services, the Ministry of Labor and Social Security, the Ministry of Justice, the Child Protection Agency, rehabilitation centers, guidance research centers, nursing homes, social service centers, courts, and various private institutions.

Physiotherapists: Physiotherapy is the field of health that is considered as auxiliary health personnel in the field of physical therapy and helps patients. Physiotherapists help patients with physical difficulties due to illness, disability, injury, or aging to improve their movement. This area does not only serve the elderly. It is the treatment area for all people who need physical therapy. But the elderly also need physiotherapy for the treatment of physical limitations caused by aging.

Graduates of 2-year Physiotherapy departments of universities work as “Physiotherapy Technician”, and graduates of 4-year Physical Therapy and Rehabilitation departments as “Physiotherapist/Physical Therapy and Rehabilitation Specialist”.

Professionally, the difference is simple: Physical Therapy and Rehabilitation specialists evaluate patients and decide which treatment method is needed and if physiotherapy is to be applied, which physiotherapy method will be applied, physiotherapists are responsible for applying these methods. Business areas are generally hospitals, the Ministry of Health, rehabilitation centers, private clinics, sports clubs, elderly care and rehabilitation centers and nursing homes.

7.7. WHAT ARE THE CENTERS THAT ELDERLY CAN APPLY TO?

Many of the elderly need to meet their needs from time to time because their financial, social and physical opportunities are limited with age. There are many institutions and organizations in Turkey that provide assistance and care to the elderly on a permanent, part-time basis or in case of need.

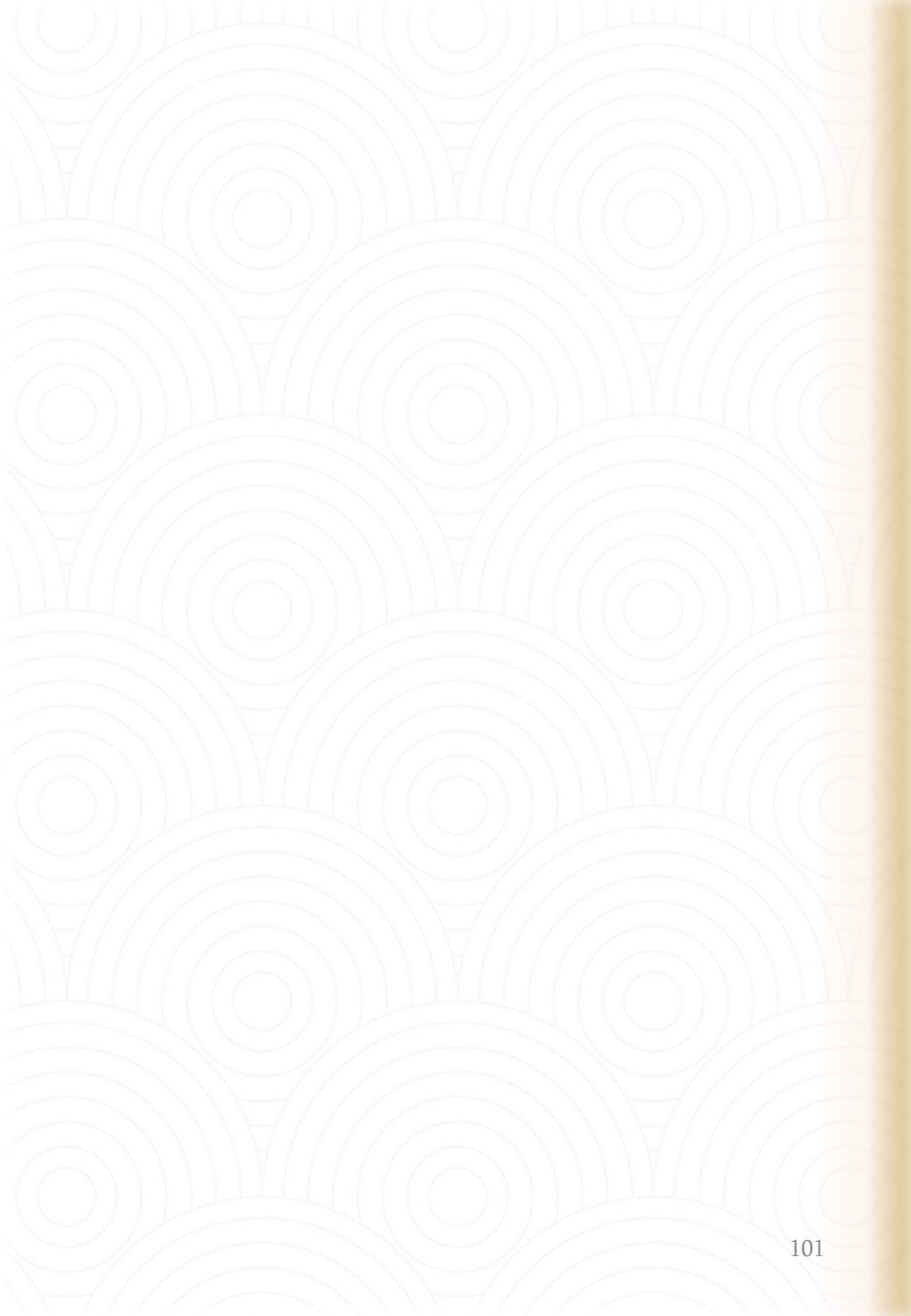
Centers and services offered to elderly individuals in Turkey;

- 1- Nursing homes,
- 2- Home Care Services,
- 3- Healthy Aging and Solidarity Centers,
- 4- Social Service Centers for Elderly,
- 5- Elderly Care and Rehabilitation Centers.
- 6- Paliative Care for The Elderly
- 7- Elderly Living home
- 8- Home Health Services

It is possible to receive the services offered by both state and private institutions and organizations. While services received from state institutions are subject to certain conditions and free of charge, services to be received from private institutions / organizations are subject to a fee. In addition to all these, there are non-governmental organizations (NGOs) that work on the rights and well-being of the elderly, services for those in need, assistance and solidarity, socialization activities and services to citizens with Alzheimer's disease or other types.

Geriatrics Specialists: “Geriatrics” is a sub-branch of internal diseases. It’s generally a branch that deals with “elderly health and diseases”. In the geriatrics department, the diseases of people aged 65 and over are diagnosed and necessary treatments are applied. A geriatrician is **a medical doctor who specialized** in the prevention and treatment of the often multiple and complex health problems of older people. They must be an internal medicine specialist and then get a minor geriatrics education for three years.

When it comes to the elderly, it is better to consult geriatricians (geriatricians) in order to better analyze their diseases and treatments. Because the most important feature of geriatrics is to determine in the early period which of the symptoms that impair health is a disease and which is the natural result of old age.



Nursing Homes: 450 nursing homes are serving the elderly in Turkey. 189 of them belong to public and 261 of them belong to private institutions and organizations. Nursing homes provide shelter, health, psychological support, nutrition, cleaning and social life services to the elderly who have insufficient economic power, who do not have the voice to care for them or who do not have the power to care for them.

What are The Facilities Offered in Nursing Homes?

In the Regulation on the Establishment and Operational Principles of Nursing Homes to be Opened under Public Institutions and Organizations, information about the units in nursing homes is given as follows:

- **Social Service:** There are social workers and psychologists for the acceptance of the elderly to the institution, their adaptation, and to perform social and psychological studies.
- **Health Service:** Consists of doctors, dentists and nurses in order to carry out health services such as examination, diagnosis and treatment of the elderly.
- **Physiotherapy Service:** Consists of a physiotherapist and a nurse to provide services to the elderly who need physiotherapy.
- **Nutrition Service:** It consists of a dietitian, a caterer and a cook to provide nutrition services for the elderly and nursing home staff.
- **Technical Service:** Consists of technicians, assistant technicians, heater repairmen, and technician assistants assigned for technical works to control, repair and maintain the facility building in terms of technical and structural aspects

Home Care Services: These the the services provided to elderly individuals, patients who need to continue their treatment after being discharged from the hospital, individuals who cannot leave the house due to chronic diseases or disability, who cannot take care of themselves or who do not have anyone to care for them at home, who have mental disorders, cannot be accepted because they do not comply with the conditions of nursing homes, who are in the terminal period and are required to spend this period peacefully at home or who only need intermittent care.

Home care services are provided free of charge by the Ministry of Health throughout Turkey to the elderly who meet the conditions. There are also various private institutions/organizations and individuals that provide this service. The cost of private home care services varies.

Within the scope of Law No. 2828, financial social assistance support is paid to the caregivers who take care of the disabled elderly by the Provincial Directorate of Family, Labor and Social Services to the persons who will manage the life of the disabled elderly at home. Elderly people with disabilities who want to benefit from this social support must comply with the following criteria:

- The disability health board report to be obtained from the hospitals that issue delegation reports, the statement of at least 50% disabled, and the phrase “yes” in the gravely disabled/fully dependent status section,
- To determine the monthly income of the household without considering the titles, and calculating the number of dependants in the house to ensure that it falls under 2/3 of the monthly net minimum wage using an income test report,
- To identify that a person with disabilities is in need of care and is not capable of maintaining their life without help from another person using the nursing services board of Assessors report that is within the scope of provincial directorates, is necessary.

Where to Apply for Nursing Home Services?

- Notices made on the Alo 183 line are accepted as applications.
- Applications can be made to nursing homes, central directorates, The Provincial Directorate of the Ministry of Family and Social Services, Social Service Centers in provinces and districts or the General Directorate of Services for the Disabled and Elderly in the place where the elderly reside.
- The application can also be made via E-Devlet

How Does The Process Proceed After Applying?

The elderly whose application process is completed are accepted, queued or rejected. The file of the elderly person whose admission is deemed appropriate is put in order by the gender of the elderly person, the type of room they want to stay in, and the application date. The elder whose turn to come is convoked. The last call is made to the elder who does not respond to the call. If not, the file is removed from the process.

For the list of nursing homes in your province, you can visit the Ministry of Family and Social Services:

<https://www.aile.gov.tr/media/57712/genel-mudurlugumuze-bag-li-huzurevleri.xls>

What are Home Care Services?

- *Technical services (simple repairs to be made in the homes of the elderly, plumbing, all kinds of repairs, paint-whitewash, renovations for the special arrangement of the house according to the needs of the elderly, etc.),*
- *Health services (dressing, blood glucose measurement, blood pressure measurement, injection, medication follow-up, etc.),*
- *Psychological support and guidance services (having the elderly to meet with a psychologist according to their needs, which are determined after the situation assessment, directing them to the health unit, individual interviews and referrals to the relevant units, if necessary, etc.),*
- *Guidance and professional counseling (guidance for the drug dosages, paying bills, procurement in the supply of diapers, wheelchairs, air flow hospital mattresses, medical supplies, etc.),*
- *Social support services (chatting, shopping, accompanying the elderly, etc.),*
- *Personal care (body cleaning, barber service, etc.),*
- *House cleaning,*
- *Support services for cooking.*

Day Care Services: Day care services are provided to the elderly who cannot continue their lives alone or despite other support elements such as family, neighbors, relatives. These are centers that operate to improve the environment, assist in daily life activities, and provide social, physical and psychological support services. In daycare homes, the elderly come to the center during the day and return to their homes in the evening.

According to the data of the Ministry of Family and Social Services, there are 161 daycare centers in Turkey, some of which are publicly owned, and most of them serve within the municipality.

Healthy Aging and Solidarity Centers: Healthy Aging and Solidarity Centers are service centers that provide an environment where the elderly can come together, spend quality time and increase their social and physical activities. In these centers, services such as historical and touristic trips, movie days, china, yoga, gymnastics, jewelry and handicrafts are offered to the elderly.

Social Service Centers for Elderly: Generally serving healthy elderly people, also known as “elderly club”, “elderly nursery” etc. In local administrations, in cases where the households can continue their lives alone but where the support from elements such as neighbors and relatives is insufficient. They are day centers where services are provided in order to improve their living environments and assist their daily living activities so that they can continue their lives in cases where they are insufficient. In addition, these centers also provide home care and home care support services (home cleaning, health, care and repair, hairdresser, etc.)

Elderly Care and Rehabilitation Centers: These are the centers where the elderly who need the help of someone else to do their jobs receive service. Elderly individuals who are mentally healthy, do not have any contagious diseases, are bedridden, and have physical, visual-hearing disabilities and dementia are admitted to these centers. The treatment of those who do not have enough financial power is provided free of charge by the state, and their needs such as medicine and prosthesis are provided free of charge. In addition, they serve as residential social service institutions where those who cannot be treated are constantly placed under special care.

Palliative Care for the Elderly: The Directive on Implementation Procedures and Fundamentals of Palliative Care Services entered into force on 09/10/2014 in order to identify and evaluate pain and other symptoms early in patients who encounter problems arising from life-threatening diseases, to alleviate or prevent their suffering by providing medical, psychological, social, and moral support to these individuals and their family members, and to act to improve their quality of life. Palliative care services are carried out by palliative care centers in inpatient health facilities, and by family physicians and home health service units outside inpatient health facilities. Palliative care services can be provided by inpatient health facilities for those living in nursing homes and nursing homes when provided that a palliative care protocol is made.

Cancer, COPD at an advanced stage, stroke (must have lost at least 50% of their functions), endstage renal failure, advanced stage heart failure, other diseases that shortens life (motor neuron and progressive neurological diseases), ALS, Alzheimer's disease, organ failures at an advanced stage (Brain, Liver diseases), HIV/AIDS, congenital/genetic diseases on kids, progressive diseases etc and other diseases that threatens one's life is treated inpatient on these centers.

When the discharged patient is in need of maintenance treatment, they are handed to Home Health Unit for their follow-ups in their home environment.

In this context, elderly individuals who need palliative care can also benefit from these services.

Note: For people aged 65 and older, the Influenza vaccine which is within the scope of preventive health services is covered once a year, and the Pneumococcal (polysaccharide) vaccine is covered once in five years within the scope of General Health Insurance by the social security institution (SGK) without seeking a health report.

Elderly Living Facility: Elderly living facilities, which are extended units attached to nursing homes, are homes where all kinds of services are provided by the institution, consisting of a room, kitchen, bathroom, and toilet where the elderly can stay with their spouses. Services offered in nursing homes are also offered in elderly living facilities. As an alternative to the barracks-type institutional care model, elderly living facilities were created. In these houses, daily household chores, kitchen arrangements, cooking, and supporting the personal care of the elderly are carried out by the care staff.

In addition to the conditions of staying in nursing homes, elderly people need to have the following conditions to stay in an elderly living home:

- Demanding a change in the environment, experiencing adaptation problems for various reasons while staying in an institution,,
- Need to stay in a more protected environment due to their health status,
- Losing his/her spouse while staying in the organization with his/her spouse,
- Able to carry out activities of daily living independently after retirement,
- Among the elderly who are in search of a safe and peaceful environment, who have not yet settled in a nursing home, or who are waiting in line for nursing home care those who are found suitable by evaluating their own or their relatives' requests can stay in the elderly living facilities.

Are Elderly Living Facilities Paid For?

Application conditions for elderly living Facilities are the same as for nursing homes, and necessary referrals are made with applications to nursing homes or Provincial Directorates of Family, Labor, and Social Services. The fees are the same as the nursing home fees. Application conditions for elderly living facilities are the same as nursing homes, and applications can be made to the Ministry or through Provincial Directorates. Fees vary according to the institution as in nursing homes. Please contact the institutions for up-to-date fee information.

Home Health Services: The Ministry of Health of the Republic of Turkey, provides “Home Health Services” to individuals in need of care who live at home with other family members or who are homeless, elderly, disabled, paralyzed, bedridden, or dependent on others, and individuals with respiratory system diseases such as COPD, cancer patients requiring home care; advanced myopathy patients who are bedridden; patients discharged from the hospital and who need to continue their treatment at home; patients who have had an accident and need short-term nursing services. Patients who want to apply for the Home Health Service can register by calling **444 38 33**. Afterwards, the patient should apply to the relevant units of the provincial health directorates, family physicians or home health units of public hospitals, together with the patient’s identity information, report and home health services application form.

Are Elderly Care Services Paid?

Nursing homes, elderly care and rehabilitation centers affiliated to the Ministry are paid. The amount of the fee varies according to the characteristics of the institution and the room, but the elderly who are economically and socially deprived, the people who have the Medal of Independence and people who are paid monthly, and the elderly who document that they have no other income than this income, together with their spouses, can benefit from the care service centers free of charge.

What are the Admission Conditions for Elderly Care Services?

Admission conditions to nursing homes:

- to be 60 years of age or older,
- To be able to independently perform daily living activities such as eating, drinking, bathing, toileting, etc.,
- To have sanity,
- Not carrying an infectious disease
- Not to be addicted to substances or alcohol that will cause addiction,
- To be found in social and/or economic deprivation with a social examination report.

Admission conditions to Elderly Care and Rehabilitation Centers:

- to be 60 years of age or older,
- Being in need of special attention and protection periodically or continuously due to physical and mental regression,
- To have sanity,
- Not carrying an infectious disease,
- Not to be addicted to substances or alcohol that will cause addiction,
- To be found in social and/or economic deprivation with a social examination report.

What Documents are Required to Apply for Elderly Care Services?

- 1- Application
- 2- Certificate of Identity Register Copy
- 3- Identification Card Copy
- 4- Certificate of residence
- 5- Income Status Certificate Copy
- 6- Social Study Report to be Issued by Social Worker,
- 7- Medical Board Report

In the conclusion section of the Health Report, the phrase “There is no harm in entering the nursing home” or “There is no harm in getting care in the Nursing Home Elderly Care and Rehabilitation Center” should be included.

Note: Service completion time is between 5-30 days.

It is possible to find the full list of institutions and organizations that serve the elderly under the heading “Organizations” on the website of the Ministry of Family and Social Services, General Directorate of Services for the Disabled and Elderly.

Click for the Nursing Homes and Elderly Care and Rehabilitation Centers affiliated to the Ministry:

(https://www.aile.gov.tr/media/118432/eyhgm_resmi_huzurevleri_ekim22.xlsx)

Click for other State (Public) Nursing Homes and Elderly Care and Rehabilitation Centers:

(https://www.aile.gov.tr/media/118185/diger_kamu_huzurevleri_eylul22.xlsx)

Click for Private Nursing Homes and Elderly Care and Rehabilitation Centers:

(https://www.aile.gov.tr/media/118187/ozel_huzurevleri_eylul22.xlsx)

FREQUENTLY ASKED QUESTIONS (FAQ)

To Whom and Which Services Are Offered in Private Nursing Homes, Nursing and Elderly Care Centers?

Private Nursing Homes are private social service institutions that provide continuous care, and social, physical, and psychological rehabilitation services for individuals over the age of 55, and provide services such as individual self-care, social support, accommodation, nutrition, and cleaning. Individuals under the age of 55 may be admitted to the establishment with the approval of the provincial directorate, after necessary examinations, in obligatory cases.

Are Private Nursing Homes, Nursing and Elderly Care Centers Paid?

Private nursing homes and elderly care centers are chargeable. The fees of these institutions are determined according to the ceiling prices of the Governorship of the province where they are located and are paid by the elderly or their relatives. Except for the organizations belonging to Darüşşafaka Associations, each organization is obliged to take care of the elderly free of charge at least 3% of its capacity. The elderly who will benefit from the free quota is determined by the Provincial Directorates of Family, Labor, and Social Services.

Where to Apply for Settlement in Private Nursing Homes and Elderly Care Centers?

Elderly individuals over the age of 55 can apply with a petition written directly to whichever institution they want to stay in by themselves, their caregiver, or a relative.

What are the Documents Required to Apply to Private Nursing Homes and Elderly Care Centers?

The following documents are required during the application process to settle in private institutions.

- Petition,
- T.C. Identity Number statement,
- The report by the infectious diseases and clinical microbiology specialist of the elderly person not having a contagious disease, and if he/she has a contagious disease, the report that there is no contagious disease that prevents him/her from living in public places,
 - To have sanity or in the case of lost sanity, a doctor's report from a health care organization's psychiatry institute stating that it will not cause a disadvantage for the other elderly in the facility,
 - A report showing the health status only from the relevant departments of private or public health institutions, proving that they are not addicted to drugs and alcohol, and stating that it would be appropriate for the elderly to benefit from the nursing home service or the elderly care center service,
 - If the elderly person has a chronic disease that requires medical follow-up, a medical report is to be obtained from the department specialist of this disease or from the relevant clinics.

No discrimination is made in terms of race, color, gender, language, nationality, religion, political thought, philosophical belief and education, and their previous convictions are not taken into account.

What Is Old Age Pension?

The old age pension is a monthly benefit provided from the elderly insurance established to support insured individuals who experience a decrease in work capacity due to advancing age and suffer income loss as a result.

Within the scope of the Law No. 2022 on Pensions to the Needy, Powerless and Lonely Turkish Citizens who have completed the age of 65:

- Having completed the age of 65,
- Does not work subject to long-term insurance branches,
- Alimony is not paid or alimony is not possible
- Not receiving pocket money within the scope of Law No.

2828,

- Not benefiting from an income or pension from social security institutions,
- Taking into account himself and his spouse, Turkish citizens whose average monthly income per capita is less than 1/3 of the monthly net amount of the minimum wage.

How to Benefit from the Old Age Pension?

- Applications for elderly pensions within the scope of Law No. 2022 are made to the Social Assistance and Solidarity Foundation (SYDV) in the province or district where the person resides.

- The income, wealth and expenditure status of the applicants and the people living together in the same household are questioned through the Integrated Social Assistance Information System and a social assistance examination is made by making a household visit. Applications are evaluated and decided by the Board of Trustees of the Foundation in line with these data and the provisions of the legislation.

- In these periods, pensions are deposited to the PTT between the 5th and 9th of the relevant month, according to the last digit of the year of birth of the beneficiary.

- Notifications are sent to people whose payments are made via SMS.

- Payment information can be inquired through the e-government portal.

- Posta ve Telegraph A.Ş. With the “Delivery at Residence” service from PTT toll booths, without paying an additional fee and without any age restrictions, optional social cards and monthly payments are made at their residences, and these cards can also be used for shopping.

- Without prejudice to the rights regarding alimony, pensions paid in accordance with the Law No. 2022 cannot be seized, transferred or assigned to another person even with the consent of the person.

- Pensions of those who received a disability pension between

40-69% before reaching the age of 65 continue to be paid in the same way.

- The pensions of those who prove with a medical board report that they are 70% or more disabled while receiving the old age pension are converted into “70% and above Disability Pension” if other conditions are met. However, the applications of people with a disability rate below 70% cannot be accepted.

Who Can Benefit From Social Assistance and Solidarity Foundation Home Care Services?

In accordance with the additional article 7 of the Social Services Law No. 2828, our citizens over the age of 65 who do not benefit from home care support for the disabled and who are in need but cannot meet their basic and essential needs with their personal care can benefit from this service.

In order to benefit from the assistance, it is necessary to apply to the Social Assistance and Solidarity Foundation closest to the place of residence. In order to meet the house cleaning, personal care, and basic and essential needs of our elderly citizens who are in need, the Social Assistance and Solidarity Foundations implement the “Home Care Services for the Elderly and Disabled” projects.

What is the Aid to Elderly Women Whose Spouses Passed Away?

Women whose spouses passed away can benefit from this support within the scope of Law No. 3294 by applying to the Social Assistance Foundation where they have their official residence. Document other than identity card is not required from the applicants. The women who lost their spouses, who have been decided to benefit from the aid program by the board of trustees of the relevant foundation, are provided with regular cash assistance in 2- month periods as long as their needs and conditions continue. (<https://www.aile.gov.tr/ss/sosyal-yardimlar-genel-mudurlugu/esi-vefat-etmis-kadinlara-yonelik-yardimlar/>)

Those who receive a home care pension are not entitled to a widow's pension. If the applicant is disabled and receives home care, they can receive a widow's pension. Persons who do not live in the same house with their children or parents, but benefit only from their health insurance, can receive a widow's pension.

Legal Right to Benefit From the General Health Insurance Free of Charge?

Individuals over the age of 65 can benefit from general health insurance free of charge.

What is the International Assurance of Elderly Rights?

Although there is no national or international Convention on the Rights of the Elderly, which only deals with the rights of the elderly, basic regulations include the rights of the elderly. As an international regulation, the United Nations Principles for Older persons provide guidance on the rights of the elderly. These principles are:

- o Independence,
- o Participation,
- o Care,
- o Self-Fulfillment
- o Dignity

In Türkiye, the principle of positive discrimination towards the elderly is guaranteed by Article 10 of our Constitution.

Accordingly: "Measures to be taken for children, the elderly, the disabled, the widows and orphans of martyrs of war and duty, the disabled and veterans shall not be considered contrary to the principle of equality."

In Article 61 of Türkiye's Constitution, the protection of the elderly and the rights to be provided to the elderly are guaranteed. Accordingly: "The elderly are protected by the State. State aid and other rights and facilities to be provided to the elderly are regulated by law."

Privileges Given to the Elderly in Turkiye?

1) Is the Right to Avoid Guardianship Granted to the Elderly?

In the Turkish Civil Code, on request, those who have completed the age of 60 have been granted the right to restrict and avoid guardianship upon proof that they cannot manage their affairs properly due to their old age, disability or serious illness.

2) Is Income Tax Convenience Provided to the Elderly?

An appointment request service is provided once a year in March, by filling out a Real Estate Capital income statement to taxpayers aged 60 and over, who only earn rental income and cannot go to the tax office, from the Call Center of the Tax Office Contact Directorate (**444 0 189**) under the Revenue Administration of the Ministry of Treasury and Finance.

3) Are Elderly People Included in Consumer Rights?

According to consumer rights, commercial advertisements cannot deceive the elderly, endanger the safety of life and property, encourage acts of violence and commit crimes, disrupt public health, and cannot be abusive.

4) Are Discounts Provided on Monthly Consumption Bills for the Elderly?

There are no general electricity, water, telephone/communications, or natural gas discounts or exemptions for the elderly. However, municipalities can provide the elderly with free or discounted services such as water, etc., in line with the decisions taken by the municipal councils. Companies that produce these goods and services can also make similar applications.

Some GSM operators apply special tariffs to elderly individuals from time to time.

5) What are Municipal Services for the Elderly?

While some municipalities provide residential care services within the scope of some services for the elderly, some municipalities provide support for home care for the elderly due to age-related health problems, physical weakness or economic inadequacies (self-care services, etc.), home health, home care, cleaning and repair, soup-kitchen/food, social assistance, social cultural activities, consultancy, etc. services.

6) Can the Elderly Enter Museums and Archaeological Sites for Free?

Citizens of the Republic of Turkiye over the age of 65 can enter museums and ruins under the Ministry of Culture and Tourism free of charge, with an ID presentation.

At the same time, those over the age of 65, in need, powerless, and outcast T.C. citizens, within the scope of Law No. 2022 on Paying Pensioners to its Citizens, individuals are provided with the opportunity to watch the performances free of charge from the opera, ballet, and theater services, when they provide a ticket number from the box office.

7) What are the Rights of Elderly Individuals in Transportation?

Persons aged 65 and over who are Turkish citizens within the scope of the second and third sub-articles of Article 1 of Law No. 736, excluding taxis, taxi-minibusses, minibusses, recreational (horse-drawn vehicles, etc), touristic and service vehicles used in urban land and sea transportation; They benefit from the urban lines of railways and seaways, as well as the urban public transportation services of private individuals or companies authorized by municipalities or municipalities, free of charge.

At the same time, people aged 65 and over have the right to benefit from the intercity lines of railways and seaways with a 50% discount. In accordance with this Regulation, the right to free or discounted travel

cannot be prevented for any reason if the documents specified in the relevant Regulation are submitted for the purpose of free or discounted use of public transportation vehicle.

In order to receive service without paying a fee, it is obligatory to issue a 65+ card. In order to get a free transportation card over the age of 65, it is necessary to apply to the card application centers or municipalities in the city. Citizens should apply for a card by going to the application centers, municipalities, and provincial directorates of the Ministry of Family, Labor and Social Services with their identity cards and 1 passport photo. In a short time, the 65+ card is given to citizens. In addition, the free transportation card fee for those over 65 must be paid. However, this fee is very small. In addition, an application can be made electronically to obtain the card.

Required documents for free card application over 65 years old:

- Identity Card
- One passport photo

8) Is It Mandatory To Appoint A Guardian For The Elderly?

It is not mandatory for the elderly to have a guardian appointed in order to receive retirement benefits or carry out their affairs. However, when elderly individuals are unable to manage their affairs properly or become dependent on care, it is necessary to appoint a guardian for the protection of their rights and interests.

9) How Is A Guardian Appointed For The Elderly?

One of the relatives of the elderly person can apply to the relevant civil court of peace and request the appointment of a guardian by obtaining a medical board report from a fully equipped hospital, stating that the elderly person requires a guardian. The court can then appoint the person themselves or someone else as the guardian based on this report.

10) What Is Old Age Pension?

The old age pension is a monthly benefit provided from the elderly insurance established to support insured individuals who experience a decrease in work capacity due to advancing age and suffer income loss as a result.

11) What Are The Conditions For Receiving Old Age Pension?

The conditions for granting an old age pension depend on the laws applicable to individuals employed under an employment contract. For employees covered by Social Insurance and General Health Insurance Law No. 5510 before the effective date of this law, the conditions specified in the previous laws, specifically Law No. 506 on Social Insurance before the enactment of Law No. 5510, will apply. Therefore, the acquired rights of these individuals will be protected.

Accordingly: For individuals who started their first employment as insured before September 8, 1999, both the conditions of the insurance period and the number of premium payment days must be met in order to be eligible for the old age pension. Individuals who have reached the age of 50 for women or 55 for men and have completed a minimum of 5,000 days of premium payment, or who have reached the age of 50 for women or 55 for men, have been insured for at least 15 years and have paid a minimum of 3,600 days of premium, or who have not reached the age of 50 for women or 55 for men but have been insured for at least 20 years for women or 25 years for men and have paid a minimum of 5,000 days of premium for old age, disability, and death insurances will be eligible for old age pension. For insured individuals who did not meet these conditions by September 8, 1999, a gradual transition period was envisaged based on their insurance periods and premium payment days according to the table provided. Depending on the period in which these conditions are fulfilled, individuals will be eligible for old age pension. Regarding individuals who started their first employment under an employment contract between September 8, 1999, and April 30, 2008: Women must reach the

age of 58 and men must reach the age of 60, and they must have paid 7,000 days of old age, disability, and death insurance premiums. Women must reach the age of 58 and men must reach the age of 60, and they must have been insured for at least 25 years and paid a minimum of 4,500 days of old age, disability, and death insurance premiums. For insured individuals who started their first employment under an employment contract after April 30, 2008, the conditions specified in Law No. 5510 will be applicable for eligibility for the old age pension

According to Law No. 5510:

Until the year 2036, women can qualify for an old-age pension at the age of 58 and men at the age of 60, provided that they have completed 9000 days of disability, old-age, and death insurance premiums. However, starting from the year 2036, if the condition of paying 9000 days of disability, old-age, and death insurance premiums are met, the eligibility for an old-age pension can be determined based on the age thresholds within the date range when the condition is fulfilled. With this regulation, the age for qualifying for an old-age pension will be 65 for both women and men starting from the year 2048.

12) Where And How To Apply For Old-Age Pension?

To be eligible for an old-age pension, individuals need to leave their job and submit a written request. Individuals who are considered insured by starting to work under an employment contract must apply to the social security provincial/central directorate to which their last workplace is affiliated. The social security center to which your last workplace is affiliated is the one you need to apply to if you are insured as an independent worker or if you are a village

or neighborhood headman. Additionally, it is possible to apply for old-age pension through e- government. <https://www.turkiye.gov.tr/>

13) When Can I Retire?

You can find out when you can retire by clicking on the “Kendi

Nam ve Hesabına Çalışanlar” link in the “Ne Zaman Emekli Olabilirim” application on the webpage provided below:

<https://uyg.sgk.gov.tr/EMEKTARWEB/hakKazanma.do>

14) What Are The Required Documents For Retirement Application?

Income/Pension/Allowance Request Form - Certificate of Termination of Employment (for those who apply within the first 10 days after leaving their job) (for individuals employed under an employment contract).

15) How To Receive Information When Pension Is Granted?

When the pension is granted, an information letter and an SMS are sent to the individual. To benefit from the SMS Notification service, click on the link below: http://www.sgk.gov.tr/wps/portal/tr/e_sgk/sms_bilgilendirme

The process regarding the pension grant can also be tracked through e-government. <https://www.turkiye.gov.tr/>

16) From Which Bank Will The First Pension Payment Be Received?

Within the scope of protocols signed with banks, income/pensions granted for the first time by the Institution under Law No. 5510 and other laws have been paid by the banks chosen by the individuals for their retirement requests since August 1, 2017.

17) Granting Pension To Destitute, Weak, And Orphaned Turkish Citizens Aged 65 And Above

According to Law No. 2022, Turkish citizens aged 65 and above who have been determined to be in need are granted a monthly allowance of a certain amount as long as they remain in a state of

need by the Social Assistance and Solidarity Foundations. Those who benefit from any income or pension rights under any name from any social security institution, those who are required to be insured in a long-term insurance branch due to working in a job, those who are receiving alimony or are eligible for alimony, or those who receive an allowance according to the provisions of the Law No. 2828 dated May 24.

18) Who Can Apply For The Age 65 Pension?

1. Individuals who have reached the age of 65
2. Those who do not benefit from income and pension rights from the Social Security Institution (SSI, Retirement Fund, BAĞ-KUR),
3. Those who do not pay premiums to the Social Security Institution,
4. Individuals with income below the destitution threshold specified in Law No. 2022 and whose destitution status is determined by Governorships/District Governorships can apply for the age 65 pension.

19) How To Apply For The Age 65 Pension?

The process of granting the elderly pension to individuals aged 65 and above under Law No. 2022 for destitute citizens is as follows:

- Citizens first obtain APPLICATION DOCUMENTS from the Revenue Office or Treasury Directorates affiliated with the Governorate or District Governorship.

- Documents certifying destitution decision issued by the provincial or district administrative board are obtained.

- The obtained documents are submitted to the Social Security Institution (SSI)

- General Directorate of Premium-Free Payments.

- The SSI examines the submitted documents and decides whether you are eligible for the old-age pension.

- In order for someone else to apply for the age 65 pension on your behalf, a guardianship decision must be obtained from the court.

20) How And When Is The Age 65 Pension Received?

The process of granting the pension is carried out by the Treasury Directorates/Revenue Offices when all the required documents reach the General Directorate and are placed in the order of arrival. In case of missing information, the pension granting process may be prolonged due to correspondence.

- The first payment is made through any T.C. Ziraat Bank branches nationwide, and subsequent payments are made through any PTT branches nationwide.

- The pensions paid under Law No. 2022 are not a result of service or premium contributions but are considered social assistance. These pensions are paid in quarterly periods, namely March, June, September, and December.

21) Can A Person Receiving A Retirement Pension Also Receive The Age 65 Pension?

An individual receiving a retirement pension is not eligible to receive the old-age pension. If your spouse is eligible for a retirement pension, you cannot receive the age 65 pension. If there is a retired individual in the household, the per capita income is calculated.

22) Can A Person Receiving Care Allowance Receive Old Age Pension?

A person receiving a care allowance cannot receive an old age pension. The individual is ineligible for an old age pension because their income exceeds the threshold for dependency.

23) Is The Residence Of The Old Age Pension Recipient Taken Into Account In The Calculation?

When calculating the pension under the provisions of Law No. 2022, the residence of the individual, where they live without paying rent, is not taken into account. In the calculation of pensions provided under Law No. 2022, if the household of the applicant owns land or fields, one 240th of the assessed value of the land and fields owned by the household is considered, along with the total income generated. Other rental and income sources are also considered using this calculation method.

24) Is The Private Vehicle Owned By The Household Of The Old Age Pension Applicant Taken Into Account?

Under the provisions of Law No. 2022, when applying for the pension, one 120th of the assessed value of the private vehicle owned by the household of the applicant is taken into account. If the vehicle was purchased with a reduced tax rate, one 120th of the reduced amount is considered.

25) Process Of Applying For Old Age Pension?

To apply for the old age pension, you need to meet the necessary requirements and submit an application through social assistance and solidarity foundations. The only documents required for the application are your ID card and the application form for the old age pension.

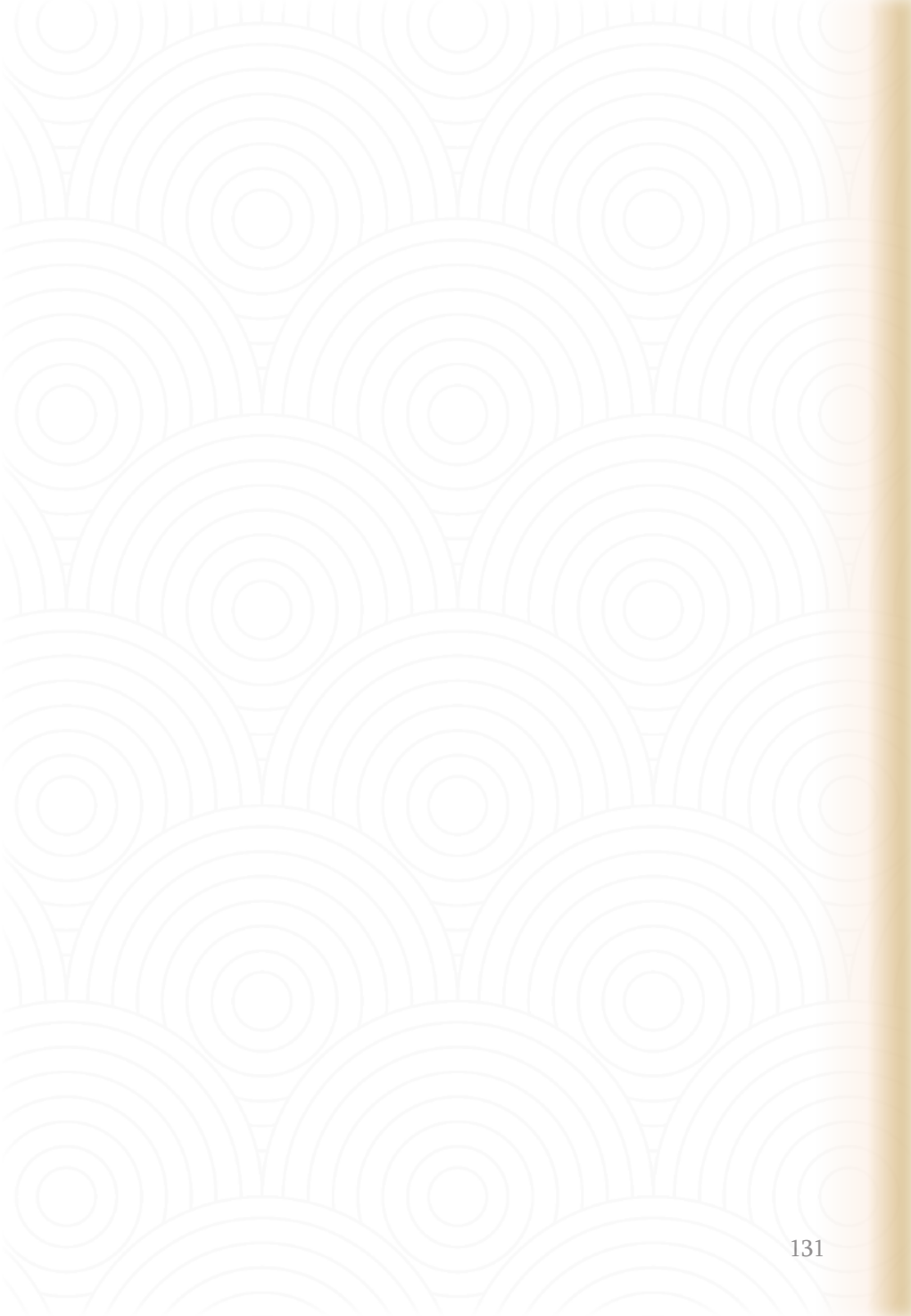
26) When Is The Old Age Pension Terminated?

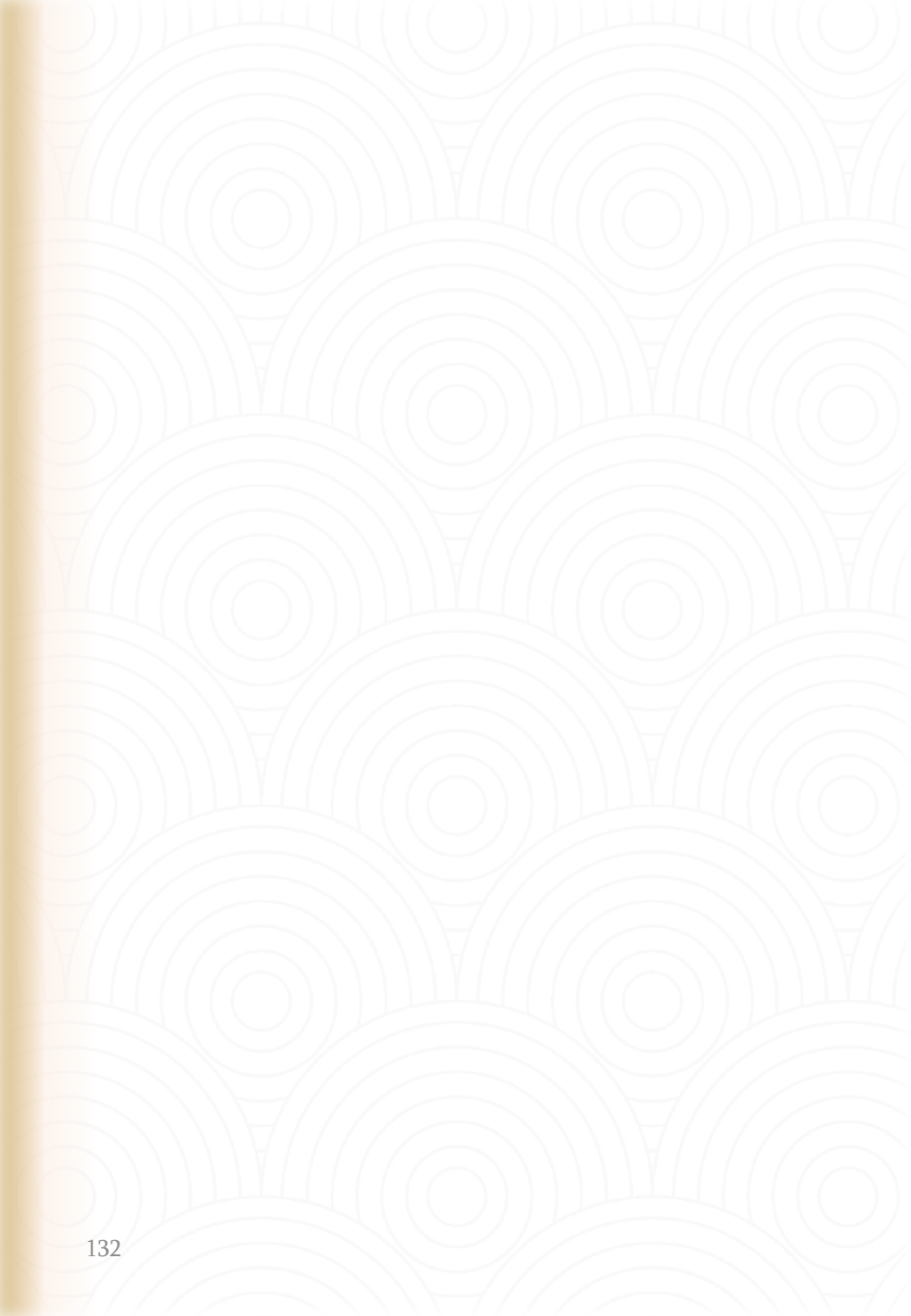
Termination of the old age pension occurs in rare cases due to changing circumstances. These terminations are usually related to changes in income. The reasons for termination of the old age pension are as follows: - Decease of the recipient - Not receiving disability benefits - Not withdrawing the pension for a period of 10 months - Incre-

ase in income level - Having SSK registration (related to social security)
When any of these situations occur, the old age pension is terminated, and the recipient will no longer receive the pension. It is important to pay attention to these factors to avoid the termination of your pension. The pensions are terminated starting from the period following the date when the conditions are no longer met.

27) What is ALO 183 Social Support Line?

Through the Call Centers of the Ministry of Family, Labor and Social Services, Alo 183 Social Support Line, calls for services to family, women, children, disabled, elderly, martyrs, veterans and their relatives are evaluated and guidance and counseling services are provided. Service is provided on a 24/7 basis.





USAREE



MIND
EXERCISES

8. RIDDLES AND GAMES (MIND EXERCISES)

ANAGRAM ACTIVITIES

Creating a new word by changing the letters of a word is called "anagram". Anagram, one of the easiest and most entertaining mind exercises, strengthens memory and is good for attention deficit.

You can also try to find new names by changing the places of the letters below:

o n D v i e t o

m i e S L

a s i n g W h

s i u c M

a h W t c

y a P L

WORD HUNT ACTIVITIES

The word hunt activity is a type of puzzle. It is a type of puzzle in which you have to find meaningful words in a series of letters, words given on the side, or synonyms of the words given on the side. Word hunt style puzzles are very successful activities to improve focus and attention skills and keep them vigorous.

You can also exercise your brain by finding and circling the words in the word hunt puzzle below as requested:

“Months” are hidden in the word grid. Find the months and circle them.

H	Ç	O	J	U	N	E	S	Ş	M	E	Ü
L	P	Ç	V	P	İ	O	O	A	I	P	Ç
I	F	N	D	Ç	Ü	C	Ğ	E	İ	T	T
J	E	E	E	M	J	T	O	R	M	E	A
U	B	G	C	A	A	O	U	F	A	M	Z
L	R	A	E	Y	N	B	F	G	R	B	İ
Y	U	P	M	Ğ	U	E	B	N	C	E	D
T	A	R	B	K	A	R	G	T	H	R	B
D	R	I	E	A	R	A	J	H	R	O	K
B	Y	L	R	B	Y	F	V	Ö	Ş	B	K
T	Ü	Ç	N	O	V	E	M	B	E	R	M

Fruits

Y	A	A	Y	P	N	L	N	N	A	L	I	APPLE
R	B	E	A	N	Y	G	O	E	R	Y	R	LEMON
R	A	E	K	K	A	I	M	Y	E	A	M	BANANA
E	P	S	B	I	R	A	E	R	N	Y	B	LIME
B	P	T	P	W	K	B	L	E	R	Y	L	ORANGE
P	L	E	T	I	B	E	P	R	R	Y	A	WATERMELON
S	E	E	R	P	P	A	E	R	S	R	C	GRAPE
A	R	S	L	R	R	B	E	B	Y	A	K	KIWI
R	L	I	B	G	E	B	B	Y	Y	A	B	STRAWBERRY
A	M	M	E	U	W	O	R	A	N	G	E	PAPAYA
E	A	R	L	A	B	P	P	I	L	Y	R	BLUEBERRY
A	B	B	R	E	B	A	N	A	N	A	R	BLACKBERRY
C	B	T	R	W	P	U	P	I	A	O	Y	RASPBERRY
C	S	N	O	L	E	M	R	E	T	A	W	

Find the words above in the word grid and circle them.

Types of Fruit, 2

P	R	E	C	H	E	R	I	M	O	Y	A
R	A	A	A	N	O	G	K	N	D	C	P
I	S	Y	P	N	I	P	A	B	A	N	A
C	P	A	U	I	C	A	K	H	C	F	W
K	B	P	V	O	R	S	T	L	O	F	P
L	E	A	L	P	A	S	F	N	V	Y	A
Y	R	P	O	E	N	I	E	F	A	A	W
P	R	I	N	A	B	O	I	V	N	L	A
E	Y	I	G	C	E	N	J	A	A	L	P
A	R	L	A	H	R	F	O	F	I	G	A
R	I	G	N	P	R	R	A	O	R	E	O
H	P	U	I	C	Y	U	O	N	U	C	A
N	E	C	T	A	R	I	N	E	D	E	E
M	A	N	G	O	S	T	E	E	N	H	V

NECTARINE
PASSION FRUIT
PEACH
PLANTAIN
FIG
PRICKLY PEAR
RASPBERRY
CRANBERRY
UGLI
PAW PAW
KAKI
LONGAN
MANGOSTEEN
FEIJOA
DURIAN
CHERIMOYA
PAPAYA
AVOCADO

Find the words above in the word grid and circle them.

MATCH ANTONYMS

Matching exercises are simple and effective exercises for using memory.

You can exercise and strengthen your memory by matching words with their opposite meanings:

wrong	unhappy
unclean	easy
happy	noisy
unkind	hard
old	untidy
alive	hot
open	clever
fast	slim
full	beautiful
early	near

<input type="checkbox"/>	late	<input type="checkbox"/>	quiet
<input type="checkbox"/>	sad	<input type="checkbox"/>	empty
<input type="checkbox"/>	closed	<input type="checkbox"/>	dead
<input type="checkbox"/>	happy	<input type="checkbox"/>	different
<input type="checkbox"/>	stupid	<input type="checkbox"/>	clean
<input type="checkbox"/>	right	<input type="checkbox"/>	tidy
<input type="checkbox"/>	slow	<input type="checkbox"/>	ugly
<input type="checkbox"/>	new	<input type="checkbox"/>	cold
<input type="checkbox"/>	far	<input type="checkbox"/>	kind
<input type="checkbox"/>	fit	<input type="checkbox"/>	soft

happy	alive	noisy	rich	same	easy
old	wide	slim	hard	early	high
fast	full	clever	hot	near	true
big	beautiful	wrong	open		

<input type="checkbox"/>	late	<input type="checkbox"/>	false	<input type="checkbox"/>	fat
<input type="checkbox"/>	sad	<input type="checkbox"/>	difficult	<input type="checkbox"/>	dead
<input type="checkbox"/>	new	<input type="checkbox"/>	closed	<input type="checkbox"/>	empty
<input type="checkbox"/>	narrow	<input type="checkbox"/>	small	<input type="checkbox"/>	poor
<input type="checkbox"/>	soft	<input type="checkbox"/>	slow	<input type="checkbox"/>	stupid
<input type="checkbox"/>	cold	<input type="checkbox"/>	different	<input type="checkbox"/>	far

SENTENCE COMPLETION AND SENTENCE FORMATION ACTIVITIES

In order to complete the blank space in a sentence appropriately, it is necessary to pay attention to the subject of the sentence, the idea and the flow of thought. Sentence completion and formation activities allow the brain to work in multiple directions in response to attention deficit.

You can also participate in creating meaningful sentences by placing the following words in appropriate places:

04 < 1 of 10 >

noisily quiet quietly

We were sitting during the show. We didn't say a word

Submit Answers

0:14 < 2 of 10 >

fantastic brilliant brilliantly

Bob, you performed in our school play last night!

Submit Answers

0:22 < 3 of 10 >

easy easily hard

Anna is very good at acting. She won the competition .

Submit Answers

They out of the home.

She basketball.

The bird

Carol and Jenny with each other when I arrived to the home.

Ali TV while Jenny her homework.

I with the phone when he came to the home.

Submit Answers

0:02

Moussa is 13 years old and he lives on a small in Mali, West Africa. There are only two rooms in his house; one for his parents and the other for Moussa and his little brother, Sekou. Moussa gets up early and looks Sekou while his mother makes the breakfast. The family has breakfast together. They usually have bread with milk and a little sugar to it. Moussa walks to school with his friends. It them about twenty minutes. When they get to school, they have to clean the classroom. At noon, Moussa goes home for lunch. For lunch the family often has vegetables which they have themselves. When lunch is finished, Moussa to school for the afternoon lessons, and then he goes home again for dinner in the evening.

Submit Answers

used to use didn't use

I to play the guitar, but I do now.

Submit Answers

pool fire station bakery

I go to the to buy bread and muffins.

Submit Answers

RIDDLES

According to research, it has been revealed that puzzles add meaning to time. In addition, puzzles provide many benefits for mental and physical peace. Research lists the benefits of puzzles to the human brain as follows:

- Since the puzzle creates unity, it creates a satisfying effect on people.
- Solving puzzles has been proven to help prevent age-related neurological disorders such as Alzheimer's disease.
- Activities that exercise the brain, such as solving puzzles or chess, have been found to have relaxing effects, as do watching television and shopping.
- People who combine words through puzzles have seen an increase in mental function.
- It strengthens attention skills.
- It improves hand-eye coordination.
- It reduces the risk of memory loss due to aging.

You can also strengthen your mind by exercising your brain with the following puzzles:

1



SUDOKU

In the Sudoku game, numbers from 1 to 9 must be arranged only once in each row and column.

1

				8				9
			4	2	6	1	3	
			9		1	5		6
2			8	3		9	7	4
3		9		6			8	
			2	9	4			
	5	6	3	1				
						8		7
	8	4		5	2		1	

2

			8	4		3	9	7
3					5			
	7		2					5
	2	4	5				3	9
		3	4	7	6		1	
8			9		3	4	5	
					2	8		
5		6	3			9		1
7		2						

3

7		4	9	5	1			2
				6	7	5		4
1	2	5					9	6
		7				2		
9			4			3		5
			1	3	5			
			3	2	4			
	9				8		6	
4	5					1		3

4

8	3			1	6			
			8	3	5	4		
	5			4		9		8
9	7	5			3			
					9		5	1
			6	5				2
		9	3		4	2	7	5
3	2				1			9
5	4	8			7			

5

3			9		4		5	7
			3		5		8	
4	7						1	
	9		7					5
5				8		6		2
7	8		5	4			3	
		7		2	3	1		4
8	1	2						3
		3			1	7		8

6

	9		3	2	8		1	
	8			5		7		
	3	1	7	9			5	
9		7				8	4	3
		8			2			6
5		6		7		1		
1								
			1	6	4			
8	5	9	2				6	1

7

		7	2	8				
						5		6
4	1	3			6		8	
7	2		3	9				
3	4					8	1	
6	8		1		7			2
			6	7	4		2	3
					5	7		
1		6		2	3		4	

8

	1		2		6	9		7
8		6		4	3	1		
7			8			3		4
2	4	7	9		8	5	1	
			4	2	5			
		9						6
		8						
	5			3	9	8	7	
					2		4	9

9

		3		9	2	4	8	
8		4				2	7	
1		7	3				9	
		6	8	5	3		1	
	1					8		5
7	5	8						9
4		9	1	2			6	
			9			1		
2			4	8	6			

10

2	8	5					3	
			5	8			1	2
					9			8
9	3				7			1
4	5	1	8		3		9	
								6
6	4							3
			4	7	8	6	2	
		8		3	2	1		5

11

		3					5	8
	4		8		2		9	
6								3
	3	6					2	5
9			3	2	8			
1			6	5			3	
3		5		8	7	1	4	6
		8	4		5			
4			9	6				

12

			1	7	8			
	3	5	2					
8		1		5	3	6		7
9			6		7	2		
4	1					7		5
	6				5		4	
		6	9	2			8	
						4	9	6
	4	9	5		6	1		

SUDOKU
ANSWERS

1

6	1	2	5	8	3	7	4	9
5	9	7	4	2	6	1	3	8
4	3	8	9	7	1	5	2	6
2	6	1	8	3	5	9	7	4
3	4	9	1	6	7	2	8	5
8	7	5	2	9	4	3	6	1
7	5	6	3	1	8	4	9	2
1	2	3	6	4	9	8	5	7
9	8	4	7	5	2	6	1	3

2

2	6	5	8	4	1	3	9	7
3	9	8	7	6	5	1	4	2
4	7	1	2	3	9	6	8	5
6	2	4	5	1	8	7	3	9
9	5	3	4	7	6	2	1	8
8	1	7	9	2	3	4	5	6
1	3	9	6	5	2	8	7	4
5	4	6	3	8	7	9	2	1
7	8	2	1	9	4	5	6	3

3

7	6	4	9	5	1	8	3	2
3	8	9	2	6	7	5	1	4
1	2	5	8	4	3	7	9	6
5	3	7	6	8	9	2	4	1
9	1	6	4	7	2	3	8	5
8	4	2	1	3	5	6	7	9
6	7	1	3	2	4	9	5	8
2	9	3	5	1	8	4	6	7
4	5	8	7	9	6	1	2	3

4

8	3	4	9	1	6	5	2	7
7	9	2	8	3	5	4	1	6
6	5	1	7	4	2	9	3	8
9	7	5	1	2	3	6	8	4
2	8	6	4	7	9	3	5	1
4	1	3	6	5	8	7	9	2
1	6	9	3	8	4	2	7	5
3	2	7	5	6	1	8	4	9
5	4	8	2	9	7	1	6	3

5

3	6	8	9	1	4	2	5	7
1	2	9	3	7	5	4	8	6
4	7	5	2	6	8	3	1	9
2	9	1	7	3	6	8	4	5
5	3	4	1	8	9	6	7	2
7	8	6	5	4	2	9	3	1
6	5	7	8	2	3	1	9	4
8	1	2	4	9	7	5	6	3
9	4	3	6	5	1	7	2	8

6

7	9	5	3	2	8	6	1	4
6	8	2	4	5	1	7	3	9
4	3	1	7	9	6	2	5	8
9	2	7	6	1	5	8	4	3
3	1	8	9	4	2	5	7	6
5	4	6	8	7	3	1	9	2
1	6	4	5	8	9	3	2	7
2	7	3	1	6	4	9	8	5
8	5	9	2	3	7	4	6	1

SUDOKU
ANSWERS

7

5	6	7	2	8	9	4	3	1
8	9	2	4	3	1	5	7	6
4	1	3	7	5	6	2	8	9
7	2	1	3	9	8	6	5	4
3	4	9	5	6	2	8	1	7
6	8	5	1	4	7	3	9	2
9	5	8	6	7	4	1	2	3
2	3	4	9	1	5	7	6	8
1	7	6	8	2	3	9	4	5

8

3	1	4	2	5	6	9	8	7
8	9	6	7	4	3	1	5	2
7	2	5	8	9	1	3	6	4
2	4	7	9	6	8	5	1	3
6	3	1	4	2	5	7	9	8
5	8	9	3	1	7	4	2	6
9	6	8	1	7	4	2	3	5
4	5	2	6	3	9	8	7	1
1	7	3	5	8	2	6	4	9

9

5	6	3	7	9	2	4	8	1
8	9	4	5	6	1	2	7	3
1	2	7	3	4	8	5	9	6
9	4	6	8	5	3	7	1	2
3	1	2	6	7	9	8	4	5
7	5	8	2	1	4	6	3	9
4	7	9	1	2	5	3	6	8
6	8	5	9	3	7	1	2	4
2	3	1	4	8	6	9	5	7

10

2	8	5	7	1	6	9	3	4
3	6	9	5	8	4	7	1	2
1	7	4	3	2	9	5	6	8
9	3	6	2	5	7	4	8	1
4	5	1	8	6	3	2	9	7
8	2	7	9	4	1	3	5	6
6	4	2	1	9	5	8	7	3
5	1	3	4	7	8	6	2	9
7	9	8	6	3	2	1	4	5

11

7	2	3	1	9	6	4	5	8
5	4	1	8	3	2	6	9	7
6	8	9	5	7	4	2	1	3
8	3	6	7	4	1	9	2	5
9	5	4	3	2	8	7	6	1
1	7	2	6	5	9	8	3	4
3	9	5	2	8	7	1	4	6
2	6	8	4	1	5	3	7	9
4	1	7	9	6	3	5	8	2

12

6	2	4	1	7	8	3	5	9
7	3	5	2	6	9	8	1	4
8	9	1	4	5	3	6	2	7
9	5	8	6	4	7	2	3	1
4	1	3	8	9	2	7	6	5
2	6	7	3	1	5	9	4	8
1	7	6	9	2	4	5	8	3
5	8	2	7	3	1	4	9	6
3	4	9	5	8	6	1	7	2

CROSSWORD PUZZLE

1

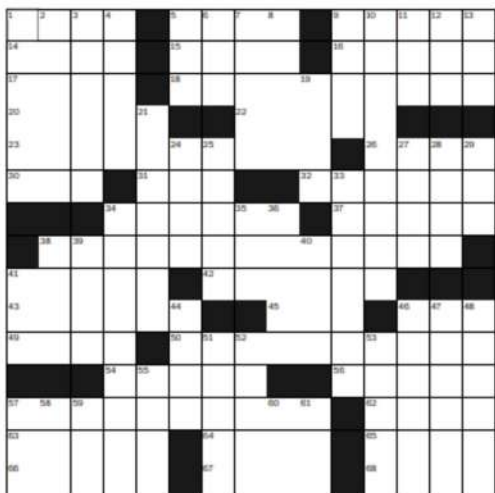
ACROSS

- 1 Skyline obscurer
- 5 Slight fabrications
- 9 Lengthy exam answer
- 14 Afghanistan's ___ Bora region
- 15 Wrinkle remover
- 16 Teatime treat
- 17 Condo division
- 18 *Food stalls offering filled tortillas
- 20 Liberated
- 22 Meaner than mean
- 23 *Kits that include pots for melting cheese or chocolate
- 26 Verdi opera about an African princess
- 30 As of now
- 31 Rodent that followed the Pied Piper
- 32 Finalized, as a deal
- 34 Relishes
- 37 Indiana NBA player
- 38 *1933 comedy starring Marie Dressler and John Barrymore
- 41 Treasury secretary Yellen
- 42 ___ Berry Farm: Southern California amusement park
- 43 High regard
- 45 "Let's call ___ day"
- 46 Heat in the microwave

- 49 Norse god of thunder
- 50 *Ingredient amount in a recipe for paella or risotto
- 54 Barnett of CBS News
- 56 Therefore
- 57 Unexpected charges, and a feature of the answers to the starred clues
- 62 Over again
- 63 Relating to birds
- 64 Rights org. since 1920
- 65 Checkout queue
- 66 Marriott rival
- 67 Car roof with removable panels
- 68 Life partner

DOWN

- 1 In need of some fresh air
- 2 "Some Like It Hot" star Marilyn
- 3 Get situated
- 4 Like some private communities
- 5 In shape
- 6 Nest egg letters
- 7 Italian bowling game
- 8 Pig sound
- 9 East, in Spanish
- 10 Rascals
- 11 Prodigal ___
- 12 "Wait, there's more"
- 13 "You bet!"



- 19 Figure (out)
- 21 Vaudeville legend Jimmy
- 24 Roof edge
- 25 Bird on birth announcements
- 27 Snowfall accumulation unit
- 28 Song for two
- 29 Tax-paying mo.
- 33 Words set in stone?
- 34 Looked down on
- 35 Competed in a sprint, say
- 36 Unflappable
- 38 Sprinter's race
- 39 Enamored of
- 40 Caesar's rebuke
- 41 Airport arrival
- 44 Eve's opposite
- 46 Colorful annual
- 47 Regional manner of speech
- 48 Baseball Hall of Famer Reese
- 51 Like some lean dairy products
- 52 Put into office
- 53 Domain
- 55 Landlord's income
- 57 "A likely story!"
- 58 Climbing vine
- 59 Day in Durango
- 60 "Xanadu" rock gp.
- 61 "How's it goin'?"

CROSSWORD PUZZLE

2

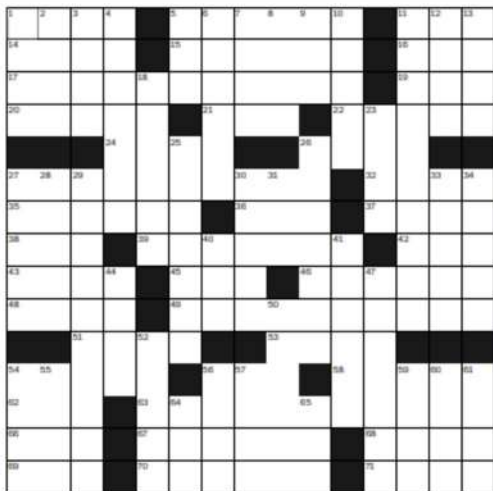
ACROSS

- 1 Say "I'll be there," maybe
- 5 Officers-to-be
- 11 In the past
- 14 Aspire laptop maker
- 15 Firenze locale
- 16 Break in continuity
- 17 Primatologist who wrote "The Chimpanzees of Gombe"
- 19 Draw upon
- 20 Jungian inner self
- 21 Photographer Goldin
- 22 Provo resident
- 24 Cream ingredient
- 26 Double ___ Oreos
- 27 Plaything made from a clothespin, perhaps
- 32 Liberated
- 35 Fictional gentleman thief Lupin
- 36 Brazilian port
- 37 Locally organized lecture series
- 38 Minor issue
- 39 Accomplish
- 42 Gather dust
- 43 Cartoon girl whose best friend is Boots
- 45 Director Ang
- 46 Spanish "precise"
- 48 Sweater spoiler

- 49 Actress/entrepreneur whose son is Lorenzo Lamas
- 51 Study feverishly
- 53 Fish sought by Marlin and Dory
- 54 Like udon, ramen, and pho
- 56 Play a part
- 58 Goats
- 62 Moroccan cap
- 63 Lentil dish from western India
- 66 Issa of "Barbie"
- 67 Trapped
- 68 Short letter
- 69 Meditation sounds
- 70 High-calorie cakes
- 71 Alum

DOWN

- 1 Punjabi prince
- 2 Virus check
- 3 "___, vidi, vici"
- 4 Put together early
- 5 Tech-focused exec
- 6 Paid for one's sins
- 7 Absurdist art movement
- 8 Joie de vivre
- 9 "How Long ___ Black Future Month?": N.K. Jemisin collection
- 10 Port ___; creamy French cheese
- 11 Taqueria drink with



- 12 Deep cut
- 13 Vulnerable
- 16 Lead-bearing ore
- 23 Feathery cluster
- 25 Buck
- 26 Eastern European language
- 27 Mascara applicators
- 28 Film production company named for a constellation
- 29 Shuns
- 30 Cantilevered window
- 31 Stretch the truth
- 33 "Downton Abbey" sister
- 34 Laud
- 40 "How Stella Got ___ Groove Back"
- 41 Not subject to taxes
- 44 Taj Mahal city
- 47 Loving lots
- 50 Main course
- 52 Fretful feeling
- 54 Hairstyle for Diana Ross and Bob Ross
- 55 Baseball gripping point
- 56 Not closed all the way
- 57 Links transport
- 59 Aroma
- 60 Spreadsheet input
- 61 Downhill racer
- 64 ___ dos, tres
- 65 Some internet search results

CROSSWORD PUZZLE

ANSWER

2

ACROSS

- 1 Say "I'll be there," maybe
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INTELLIGENCE QUESTIONS

While playing mind games or solving intelligence questions, all unused areas of the brain are used. These types of brain exercises:

- Improves problem solving skills,
- Increases attention and concentration,
- Improves reasoning and logic skills,
- It prevents the brain from becoming lazy,
- Provides mental fitness.

Research shows that those who start mind and intelligence games in the early stages of Alzheimer's or before it reaches this point can postpone the disease and it is possible to transfer the transition to later stages years later. You can also exercise your brain by looking at the following intelligence questions:



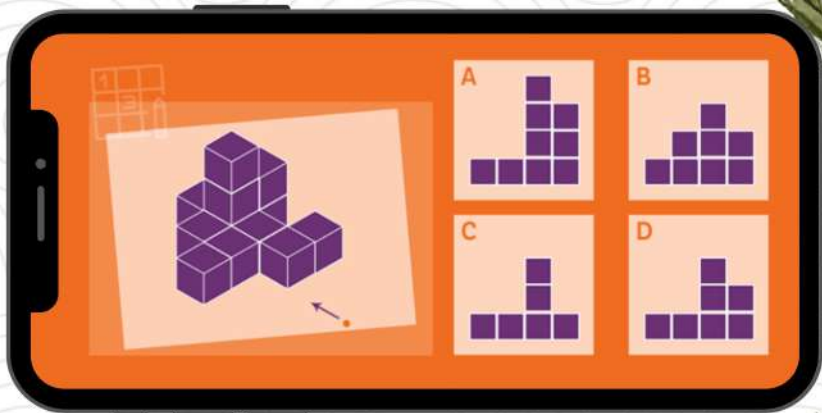
Which balls do you place in the holes and add up to get 30?

This question cannot be solved mathematically. Because the sum of 3 odd numbers cannot be an even number.

But what you need to measure here is your attention!

If you place balls 11 and 13 in the holes, you get 24.

Then, if you place ball number 9 upside down in the hole, you get $24 + 6 = 30$.



Which of the options does a person looking in the direction of the arrow from the orange dot see?



Let's answer the question step by step...

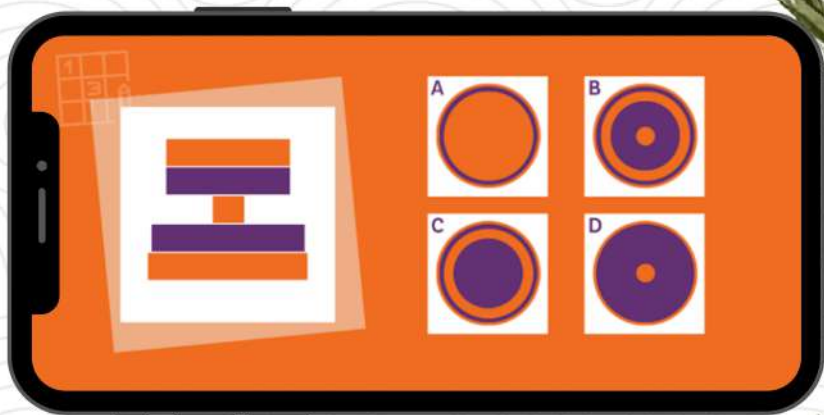
Let's imagine we are at the orange dot and looking at the blocks.

It is clearly obvious that there are 4 blocks at the base.

On the upper floor, two blocks stand out on the right. This means that option C is eliminated.

If we go up one more floor, we see that there is only the second block from the right.

So the answer is: option D



What is the top view of the tower on the left?



First of all, let's consider that we are looking at the picture on the left from above. The layer we will see at the top is orange. We can directly eliminate the option from here.

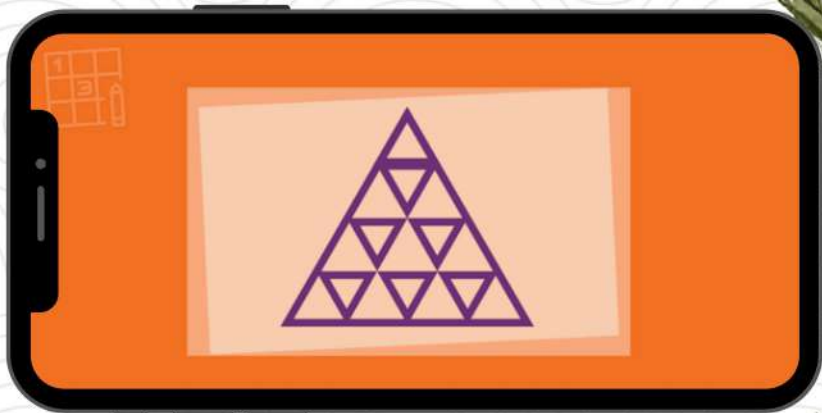
The purple layer underneath will not be visible because it is the same size as the top one.

The small circle just below it will remain in between and will not be visible from above.

The large purple circle below the small orange circle is the second circle that will appear after the first orange circle and will appear as a thin purple line.

Just below that, there is an orange circle, slightly larger than the purple one. This will appear as the widest circle on the outermost part of our picture.

If we list them accordingly, the answer will be option A.



How many 'triangles' are there in the figure?



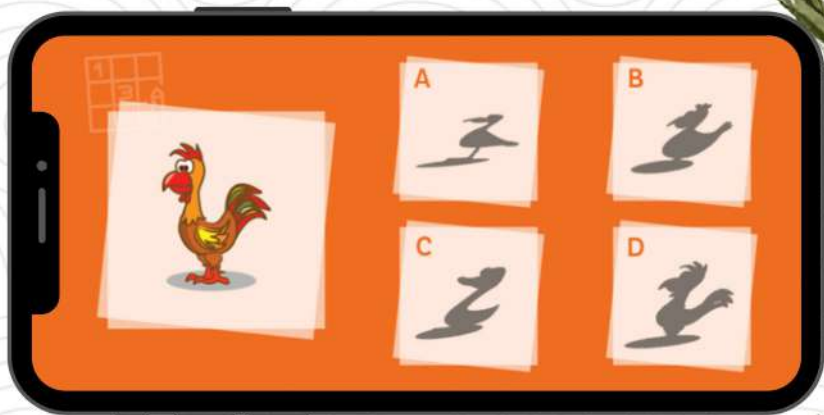
Number of triangles consisting of 1 unit: 16

Number of triangles consisting of 4 units: 7

Number of triangles consisting of 9 units: 3

Number of triangles consisting of 16 units: 1

It consists of a total of 27 triangles.



Which is the shadow of the rooster you see in the big picture?



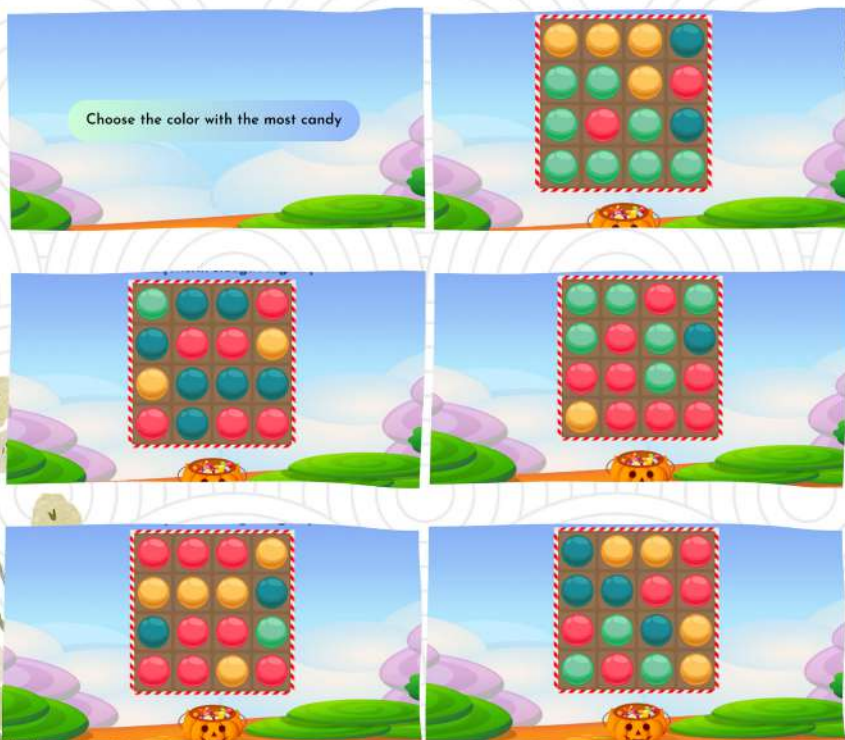
Right Answer is: option D

INTERACTIVE MIND GAMES

Interactive activities provide more benefits by making the person more active. Playing mind and intelligence games interactively will also provide more benefits.

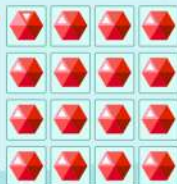
You can access the interactive intelligence games we have compiled for you through our mobile application. You can see examples of interactive intelligence games below:

EXAMPLE - 1



EXAMPLE - 2

find the different one



All Same



All Same



All Same



All Same



All Same



All Same



All Same

Simple mental activities help keep the mind healthy and clear in old age. Scientists proved the connection between mental pursuits and mental health by presenting the results they obtained with a special brain scanning method at the Radiological Association of North America conference. This study is of great importance as it supports the information that simple activities such as reading newspapers, writing letters, going to the library, intelligence games, simple sports exercises, brain training and chess make the brain healthier. Research results reveal that older people who engage in more mental pursuits have brain characteristics similar to young people.

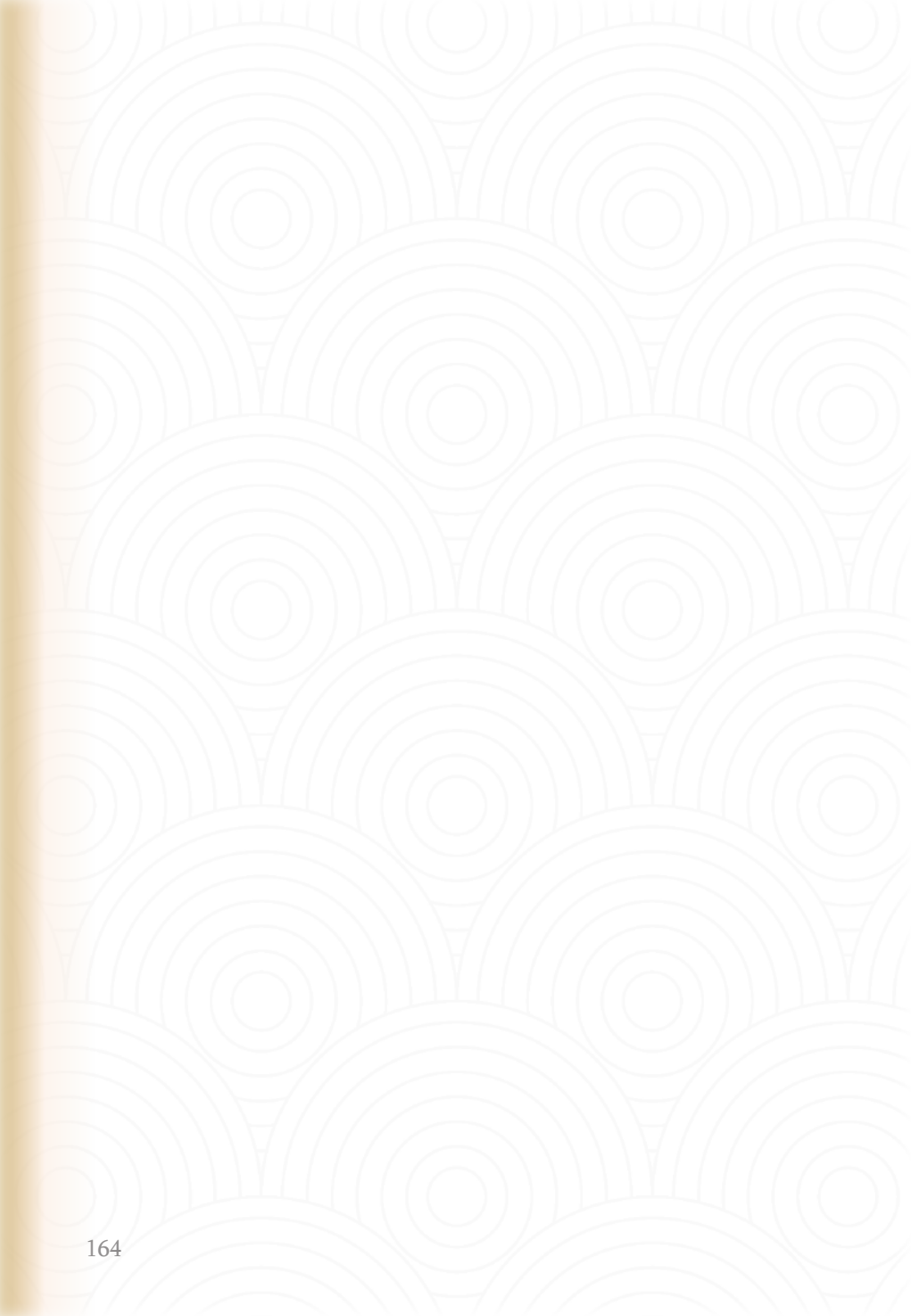
Additionally, many years of research prove that regular brain exercises can slow down mental deterioration. Puzzles, cards, chess and video games are also recommended to help increase memory skills, reaction time and attention span.

Researchers say that the benefits of this type of activity will keep the brain happy, healthy and busy, reducing the likelihood of, slowing down or reducing the impact of diseases such as Alzheimer's, dementia and depression.

**Scan the QR code to access mind exercises
on mobile!**



Kitaptaki zeka sarulari ve
ayuntari
www.mentalup.net
sitesinden alınmiştir.



US ARE



EXPERT
OPINIONS

9. EXPERT OPINIONS ON THE SUARE PROJECT

9.1. HEALTH PROBLEMS RELATED TO OLD AGE

HEALTH PROBLEMS RELATED TO OLD AGE

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In the last century, there has been a rapid increase in the identification of possible factors that cause disease in human life, the search for solutions to diseases, the production of protective, preventive, and therapeutic vaccines and drugs, and the opportunities to reach humanity. Increased access to clean water and clean food has ensured healthy nutrition. The increase in human knowledge and the rapid increase in technological advances have led to an increase in the average life expectancy of humanity. On the one hand, the increase in life expectancy is desirable and common and can be achieved through long efforts and endeavors, but on the other hand, it causes new problems related to aging on a global scale. The increase in the average life expectancy of humanity continues to cause a series of problems due to the aging of the world population. The World Health Organization (WHO) estimates that by 2050 there will be 2 billion older adults, with at least 125-434 million of them over

the age of 80. The World Health Organization classifies old age into three categories.

65-74 years of age is considered young elderly, 74-84 years of age is considered elderly, and 85 years and older are considered very old (1).

According to TurkStat's 2021 data, there are 8 million 245 thousand 124 elderly people in Turkey. It was reported that the elderly population in Turkey increased by 24% in the last five years. While the ratio of the elderly population to Turkey's population was 8.3% in 2016, it was determined that this ratio increased to 9.7% in 2021. It was determined that 64.7% of the elderly population was in the 65-74 age range. The «elderly dependency ratio», which expresses the number of elderly per hundred people of working age, was calculated as 14.3%. It was reported that 561,398 elderly people lived alone in Turkey (2). In almost every country, the elderly population places heavy burdens on the public sector in terms of size, transportation, health, social security, family structure, and intergenerational relations. Physiological and cognitive changes that begin with old age increase the prevalence of the need for long-term care and hospitalized care. Due to this increase in the proportion of elderly patients, health professionals are needed to provide this care. Meeting the healthcare needs of the elderly population is a branch that requires specialized knowledge and skills.

Meanings Attributed to Old Age

Humanity has explained the meanings attributed to old age with some theories.

Activity Theory: According to this theory, the activity status of an elderly person is determined by past lifestyle, socio-economic level, and health status. In general, it is accepted that the activity of the elderly individual in society decreases with age, and the rate of decrease in interaction increases with distance from the individual. In old age, some social roles disappear in cases such as retirement due to the inability to work or widowhood as a result of the death of the spouse.

Role Release Theory: According to this theory, the roles that the elderly individual loses as a result of his/her inability to adapt to his/her role in society and his/her socially lost status negatively affect the individual's existence towards his/her family and society.

Disengagement Theory: According to this theory, aging as a process of withdrawal takes time and is defined as withdrawal from society over time. As the physical abilities of elderly individuals diminish, they withdraw from society over time and return to their own world. This is also associated with the loss or reduction of roles in society. It also reduces the opportunities that make the individual socially useful over time.

Social Change Theory: According to this theory, the development of technology, which older individuals in developing societies can 'do' and cannot adapt to the pace of change and therefore cannot be equated with those who are not old. As a result of this change individuals who cannot renew themselves, cannot keep up with the pace of change or meet their expectations are considered old-fashioned. This situation results in the elderly individual's safety, love, respect, threatening their needs such as belonging and being considered. However, in societies that do not lose their traditional characteristics, elders benefit from their experiences because of their wisdom. and, however, they are considered to have a higher social status (3).

Values Regarding Age in Society

Social values and attitudes towards aging; although they can be positive or negative and mixed in all societies, it has a higher tendency to be negative. Determining these attitudes towards elderly individuals in society and influencing factors; lifestyle, educational status, motivation status in the individual's past, patterns, and values that he/she considers sacred. One of the factors affecting the respect of an elderly individual in the society and the continuation of this respect is the values of society. In society, many value judgments exist about old age that are passed on from generation to generation.

One of the social prejudices is, '***Your elderly are not productive***'. However, the productive characteristics of some individuals in their past lives can continue into old age. Another social prejudice is, '***Your age increases chronologically, and aging cannot be prevented***'. However, social, psycho-social, and technological developments have changed the chronological perception of '***old age***'. Real bio-psychosocial aging is a concept that should be handled individually, not according to chronological aging. Today, the concept of '***individuals are as old as they feel***' is accepted. Therefore, it is difficult to determine exactly when aging begins. However, the aging and biological aging that occurs in tissues and organs with aging is a situation that should be well known. There is a view in society that the elderly do not get along with the young because of this understanding. It is possible. However, older people have the opportunity to transfer their experiences to younger people, and younger people have the opportunity to renew older people. If the physical energy and dynamism of the young person are combined with their wisdom, a more productive society can be formed. Another social prejudice is that '***older people are not tolerant and flexible***'. Life may become a little more stagnant in older people, but the belief that tolerance and flexibility are reduced is wrong. On the contrary, tolerance and flexibility can be increased in older people.

Being tolerant and flexible should not be seen as a characteristic of old age but as a characteristic of personality. Another social prejudice is that 'old age is a static and unchanging period'. However, this perception of old age is a social misconception. The interaction of various forces acquired throughout life can make an older person dynamic. Another social prejudice is that 'old age is a barrier to good health', but old age is not a barrier to good health. It is known that it is possible to be healthy even at the age of 80-90 with a regular activity program. Although an active lifestyle does not guarantee longevity, regular activity ensures an active, productive, happy, and enjoyable life.

Today, social prejudices about aging are gradually changing. Maintaining physical health, being ready for possible future losses, developing coping strategies, acquiring new roles, and fulfilling them, give individuals a new philosophy of life. Thanks to the perspectives of individuals on aging and old age, each one lives his/her life and old age differently (3).

Retirement and Role Loss in Elderly Individuals

Although old age varies according to the job of the individual, it can impair working performance. For this reason, elderly individuals may prefer to retire, even in jobs such as workers and civil servants, retirement is a necessity rather than an option at an advanced age. Old age is a period in which the individual experiences the retirement process. If the individual is not prepared to

retire, he may feel empty. Loss of individual productivity and job status can lead to financial problems in addition to a decrease in individuals' interpersonal relationships. Elderly individuals are physically or financially dependent; it makes them feel useless and worthless, and their self-confidence deteriorates. Adapting to retirement is related to how an individual perceives retirement. Although many people perceive retirement as not having to do tedious mandatory chores and taking time to do their hobbies, this perception can change over time. These positive emotions can be replaced by negative emotions such as meaninglessness, emotional and physical exhaustion, and loss of roles. Elderly individuals who can maintain their productive and constructive powers and continue to produce despite the deterioration in their health can lead a meaningful, happy, satisfying life in positive relationships with their environment (3).

Elderly Individual and Family Concept

Families are the main social support structure for the elderly. Modern life and technological advances have changed the family structure and way of life in our society. In fact, this change has also changed the traditional roles of elderly individuals in society. Social change, the COVID-19 pandemic, which we have recently experienced, has increased the rate of elderly individuals living alone and weakened kinship ties.

However, the need for love, which is strengthened by family ties,

is valid at all stages of life. Unfortunately, this need exists in all societies. It is not met as sensitively and appropriately as in childhood. The understanding that the elderly does not have such a need leads to loneliness and depression at a higher rate. Reorganization of relationships within the family because of aging may be necessary. Generally, after the loss of the spouse of the elderly individual, it may be necessary to decide where, how and with whom the rest of his life will be spent. While making this decision, the preferences of the elderly individual should be kept in the foreground. In traditional societies that protect their cultural values, it is seen as an important norm and value that the care of elderly individuals by their children is provided. Parallel to global developments, the fact that women, who are responsible for doing housework in the society in Turkey, are more involved in working life, has led to an increase in the workload in the family. This situation has accelerated the conflicts in the family with the elderly individual and the transformation of the family structure from the extended family to the nuclear family. Due to these reasons, the number of elderly individuals living alone has increased (3).

PSYCHOLOGICAL CHANGES DUE TO OLD AGE

A series of psychological changes occur in elderly individuals. Psychological changes affect the individual's activities of daily living, work, addiction status, and interaction with the environment. Of course, psychological changes in older individuals there is not always an increase in age in its etiology. Adoption of a sedentary lifestyle, environmental conditions, a high-stress life contributes to psychological changes in older individuals can be found. The longing for the old is increasing day by day, young people generational differences and conflicts between psychological deficiencies in older individuals it may be an indicator of changes (4).

Depression & Care

Depression is one of the most common problems in the elderly. Causes of depression in the elderly include children leaving home to start their own lives, being alone due to the loss of a spouse, living alone, status and financial losses due to retirement, care dependency due to physical and chronic illnesses, and deterioration in activities of daily living. Therefore, age-related physical changes and subconscious symptoms should be carefully considered for the diagnosis of depression in the elderly. The prevalence of depression in the elderly can be as high as 25%. The etiology of depression in the elderly should be determined by considering biological, psychological, and psychosocial factors. Biological risks include genetic predisposition, female gender,

the presence of additional medical illnesses, and medication use. Individual characteristics, cognitive status, and history of psychiatric illness are examples of risk factors. Problematic life events, loss of a loved one, grieving, low socio-economic status, being single, and living alone can also be categorized under social causes. Depression is only a part of the aging process. Decreased quality of life and difficulties in social functioning are the consequences (4).

Delirium & Care

Delirium is defined as the sudden loss of attention and cognitive abilities. Delirium is a common condition in individuals with a disease requiring internal and surgical treatment. In the etiology of delirium, although there are physical causes, it occurs with psychological changes. The reason why delirium is more common in elderly people is health problems, multiple drug use and hospitalization associated with longer residence times. Delirium can also be confused with the common signs of dementia in elderly people. Both delirium and dementia in an elderly individual can be found at the same time. There are three subtypes of delirium: hypoactive, hyperactive, and mixed (karma). Due to the fact that health problems are more common in the elderly than in the young, delirium or acute confusion may develop in the elderly within hours or days (4).

Dementia & Care

Dementia affects more than 46 million people globally, and this figure is estimated to exceed 131 million by 2050. Dementia is an important public health problem for the elderly. Dementia is seen as an increase in the emotional perspective of elderly individuals towards events, susceptibility to behavioral problems, and a progressive disease that weakens physical health. In other words, dementia; Impairment in memory, thinking, understanding, and learning capacity is a disease that affects many areas of cognitive functions. The increase in cognitive disorders in elderly individuals with dementia causes a severe course of the disease and prolongs the hospital stay. Aging increases the risk of dementia. While the risk of dementia is 5% in individuals aged 65 years, this rate rises to 50% in individuals over the age of 85. Studies have shown that the risk of delirium increases five times in individuals with dementia. Nutritional deficiency and fluid and electrolyte imbalance, disruption of sleep and wakefulness balance, and forgetfulness are common in dementia patients (4).

Fear of Death & Care in the Elderly

Fear of death is the feeling of destruction, burnout, and helplessness in elderly individuals. The perception of death in older individuals is different from that in young people. While death is an abstract concept for young individuals, it is a concrete concept that can be encountered at any time in older individuals. For this reason, the concept of death gains a different meaning in

elderly individuals and its emotional response is fear. As peers of older individuals die, the individual begins to feel death closer to himself/herself. If there is no belief in life after death in elderly individuals, the fear of death is felt more intensely. The fear of death is milder in elderly individuals who live with an extended family, spend a long time with their family members, realize their own hobbies, and do not have the opportunity to think about death. Elderly individuals, who do not think of death as annihilation and see it as a normal part of life and as a natural consequence, do not feel the fear of death very much (4).

PHYSIOLOGICAL CHANGES DUE TO AGE

While planning the care of the elderly individual, special and general health care needs should be determined by evaluating the patient's physiological, socioeconomic and psychological aspects. While determining the care needs of the elderly, the existence of physiological changes brought about by aging should be kept in mind. In the evaluation of an elderly individual, It should include past health and medical history, functional state of physiological systems, loss of function, level of ability to perform activities of daily living, physical condition, capacity to move, cognitive and mental adequacy, social and psychological status.

Cardiovascular System & Care

Cardiovascular system diseases in the elderly; is the most common cause of death in the world and in Turkey. Studies have reported that the frequency of hypertension in the elderly varies by 50-60%. Structural and functional changes in the heart and physical inactivity are the leading risk factors for heart failure due to aging. In old age, cardiac output decreases due to reasons such as deterioration of heart flexibility, growth of heart cells, enlargement of heart muscle, and stenosis in atrial and mitral valves. This situation impairs the tolerance of the elderly person towards exercise and postural hypotension may develop. Atherosclerosis is the stenosis in the inner layers of the arteries caused by the combination of fat, cholesterol and inflammatory wastes associated with the deterioration of the vascular structure.

As a result of atherosclerosis, the risk of stroke (stroke) and disease in the vessels feeding the heart tissue (coronary artery) increases in the elderly. $\frac{3}{4}$ of the deaths due to diseases in the vessels feeding the heart tissue are seen in individuals over 65 years of age (5). Because there are structural changes in the heart in older individuals, the heart works harder and gets tired to maintain normal heart function. Evaluation of elderly individuals in terms of cardiovascular system diseases should be documented with objective tests and monitoring. Cardiovascular tolerance can be regulated by making appropriate exercises for elderly individuals. Regular exercise for the elderly can eliminate the negative effects on the cardiovascular system. Elderly individuals should be protected from situations that cause an increase in heart rate, excessive stress and fatigue, and long-term inactivity. In order to increase their adaptation to this situation, elderly individuals should be informed in a way they can understand. Elderly individuals should be informed that as well as fluid losses, excessive fluid intake will strain the heart of elderly individuals (6).

Respiratory System & Care

As age progresses, lung flexibility deteriorates, chest wall stiffness increases, respiratory muscles weaken. These structural changes in the respiratory system of elderly individuals reduce lung functions. These changes: includes the maximum amount of air that will enter the lungs of the individual when he takes a deep breath (vital capacity), the exchange of oxygen and carbon dioxide (diffusion capacity), the amount of air reaching the lungs

in each breath (ventilation), and progressive significant decreases in respiratory system sensitivity. The rate of these changes increases in older individuals who smoke. In addition, depending on this situation, the frequency of Chronic Obstructive Pulmonary Disease (COPD) increases. In a recent study, the prevalence (frequency) of COPD was reported as 16% in non-smokers, 29% in individuals aged 50-74 who smoked, and 37% in those aged >75 (7). Respiratory system infections, especially pneumonia, are an important cause of death in individuals over the age of 65, both in developed and developing countries. Pneumonias (inflamed collection of water in the air sacs of the lungs) are important because they have a high risk of death, as well as their difficult and costly treatment. As age progresses, the risk of aspiration pneumonia increases due to decreased ciliary activity in the lungs, decreased coughing, and weakening of the body's immune system. Susceptibility to respiratory tract infections may increase with age due to decreased immune response to antigens such as influenza virus and streptococcus pneumoniae. For this reason, it is very important to vaccinate the elderly, especially against these antigens. Tuberculosis is also among the most common life-threatening diseases among the elderly (8). In the care of elderly individuals, respiratory rate, rhythm, and depth should be monitored and appropriate breathing exercises should be performed. The effect of smoking habit on respiratory tract infections should be explained to the elderly person and they should be encouraged to quit smoking. Especially for bedridden elderly individuals, deep breathing and coughing exercises should be performed at least

two hours apart. It should be kept in mind that frequent position changes in bedridden individuals can prevent the development of lung problems and pneumonia (9).

Musculoskeletal System & Care

As the age progresses, the density of the bones decreases, the bones become weaker and more fragile, and the normal posture of the body deteriorates. Bone loss accelerates in women due to menopause. The most important reason for this situation is the decrease in calcium absorption because of the decrease in serum vitamin D. Due to the decrease in the amount of growth hormone and testosterone hormone with aging, muscle thinning and atrophy occur. Significant losses in bone and muscle tissue, shortening of stature, tooth loss, bone fractures, hunching, curvatures in the legs, and a decrease in muscle strength and coordination may occur. Due to the decrease in the cartilage tissue of the joint, which extends like a thin line under the bones, it cannot move as easily as before and becomes prone to trauma. These repetitive traumas in the joint and cartilage tissue often cause acceleration of osteoarthritis in the elderly (10).

Elderly individuals should exercise and rest at a level that will not get tired on a daily basis. In order for the elderly to be able to move safely into the house, arrangements should be made in and around the house, they should be encouraged to do their own daily activities and functions, and they should be encouraged to do appropriate physical exercises, walks, breathing exercises, and

posture exercises. Exercises suitable for the capacities of elderly individuals should be a part of their lives.

Nervous System & Care

Increasing age slows down the number of cells in the brain and the rate of interaction. Sensory loss may develop due to the decrease in the number of cells in the spinal cord. Some mental functions such as vocabulary, short-term memory, learning, storing information, remembering, and perceiving words may decrease. Due to differentiation in thinking processes, emotional and perceptual changes, how long it takes to respond to stimuli should be carefully examined and how the elderly feel should be determined. It should be recognized that he needs a longer time to eat, bathe, dress and answer questions, and family members should be informed about this. In addition, attention should be paid to memory impairment, changes in sleep habits, hypothermia, and issues (11).

Digestive System & Care

The amount of mucus in the digestive tract due to aging and changes may be seen in the decrease in absorption, decrease in the contraction of the esophagus (esophagus) muscles, deterioration in the elastic structure of the stomach, increase in gastro-esophageal reflux, decrease in lactase, slowdown of bowel movements, decrease in blood flow and efficiency of some enzymes. Although the WHO recommends that elderly individuals consume adequate protein daily, lipids and carbohydrates may

need to be limited in the presence of old-age cardiovascular diseases and diabetes (12). Due to some changes in the digestive system of elderly individuals; It can be seen in problems such as decreased appetite, indigestion, diarrhea, constipation, extreme weakness (cachexia) and obesity. In elderly individuals with decreased appetite, nutritional problems may occur if problems related to the use of dental prostheses are added. Inappropriate dental prostheses cause mouth sores. These wounds cause avoidance of foods that are difficult to eat but necessary for health. In order to solve the digestive system problems in the elderly, in cooperation with the family; eating habits should be learned, the foods he likes should be prepared, and he/she should eat foods that contain enough fiber, vitamins and minerals. Constipation should be ensured and consumption of foods that prevent constipation should be encouraged. The appearance of nutrients should be made appetizing and should be served frequently and in small portions. Fecal incontinence (fecal incontinence) may occur due to impaired control of the anal sphincter. Disorders in the sense of taste can lead to excessive intake of salt and sugar. Missing, broken, decayed teeth, which are common in an elderly person, cause deterioration of the health of organs such as the heart and kidneys, as well as disrupting oral health and nutrition. Important causes that contribute to the deterioration of oral health make it mandatory to implement measures and care aimed at protecting oral health. In order to ensure oral hygiene in elderly people, thick-handled toothbrushes and dental prostheses should be provided using a brush, cleaning tablet or cleaning solution. Elderly

individuals and their families should be informed about denture cleaning and dental check-ups (13).

Elimination & Maintenance

With increasing age, the tissue shrinks, blood flow to the kidneys decreases, the filtration rate decreases in the glomeruli, secretion and absorption properties decrease, and progressive loss of nephrons is observed. Deterioration of fluid and electrolyte (mineral) balance is observed due to the deterioration of the kidneys' ability to filter the urine, retain sodium, and perceive thirst. Bladder volume decreases, bladder muscle contractions last longer; creating a feeling of spontaneous urination, urinary incontinence can be seen at night, as well as weakening of the bladder muscles, the frequency of urinary tract infections increases by causing the bladder to not be fully emptied. The incidence of asymptomatic bacteria increases by 1% every ten years, in which urinary tract infections increase with increasing age, and the annual frequency can reach 7-8% in the ages of 70-80 (14). In women, the contraction of the urethra after menopause and the increase in the thickness of its inner surface, the deterioration of the sphincter tone of the urethra, and the weakening of the abdominal structure due to frequent and multiple pregnancies are counted among the causes of urinary incontinence (15).

In men, due to the enlargement of the prostate gland, difficulty in initiating urine output, increased need to urinate, the need to urinate frequently, especially at night, late emptying of the bladder,

feeling as if there is urine in the bladder, dripping after urination, increased frequency of urinary tract infections, bladder stones are seen (16).

Bowel movements with increasing age; slows down due to chronic diseases or multiple drug use. Elimination such as decreased fluid intake, decreased physical activity, changes in eating habits, constipation and diarrhea due to nutritional deficiencies disorders can be seen. To the elderly who have urinary incontinence in their care; Bladder emptying every 2 hours should be encouraged, fluid intake should be regulated, and exercises to strengthen the perineum muscles (kegel) should be taught. Measures should be taken to increase the intake of watery and pulpy foods to prevent constipation and to gain regular toilet habits every day. If necessary, laxative drugs can be used with the recommendation of the physician. Education and counseling should be given to the elderly person for fecal incontinence, on gaining regular toilet habits, doing exercises that strengthen muscles, lifestyle, and meeting hygiene needs.

Immune System & Care

As age progresses, the susceptibility to infections increases due to the decrease in immune system functions and the infections are much more serious. In the elderly, the reaction of immune cells to bacteria and other foreign substances is delayed. Pneumonia and influenza infections, bacterial increase, inflammation of the inner

lining of the heart (endocarditis), infectious diarrhea, inflammation of the brain and spinal cord (meningitis), joint inflammations, fever of unknown origin, tuberculosis, autoimmune diseases increase the frequency and have a much more deadly course. The slowdown in immune system functions is an important cause of the increase in cancer incidence in the elderly. The known positive side of the changes in the immune system is the decrease in the severity of allergic complaints in elderly individuals. It should be kept in mind that elderly individuals become more prone to immune system changes and infections, and care should be taken in meeting hygiene requirements and administering the necessary vaccines for diseases at appropriate times, and family members should also be concerned in this regard (17).

Skin & Care

With the increase of age, the thinness and elasticity of the skin increases, and it becomes dry, hard, and wrinkled, in connection with the decrease in subcutaneous fat tissue. Reduction of subcutaneous fat tissue increases wrinkles and decreases tolerance to cold. Sensitivity decreases due to the reduction of nerve endings under the skin. Therefore, injuries increase, and recovery is slower. The decrease in the number of melanocytes in the skin due to aging makes the skin vulnerable to sunlight (18). Due to the changes in the skin of elderly individuals, it is important to take care of the skin hygienically. It is recommended

to take a bath 1-2 times a week using soaps and shampoos with suitable pH that will not dry the skin. Bath water should not be too hot. Taking care to dry the armpits, under the breasts and between the toes after the bath is very important in terms of preventing the development of fungal infections on the skin. After the bath, the skin should be moistened with products such as petroleum jelly or lanolin. Special attention should be paid to foot care in the elderly with circulatory failure and diabetes. Warm water should be used for foot care. Calluses should be softened in warm water, cleaned by rubbing with a pumice stone, and vaseline should be applied to them. Nails should be cut straight after soaking in warm water. It is recommended that elderly individuals do not walk barefoot and use cotton socks that are not tight. It is recommended to use slippers or house shoes that grip the foot to prevent home accidents and falls.

Rest, Sleep & Care

The definition of sleep disorders in older individuals is complex. The causes of sleep disorders in older individuals are more related to physical causes rather than anxiety and depression. While the rate of sleep disorder in the society is estimated to be 10-12%, this rate has been reported as 20-25% in the elderly (19). Sleep disorders lead to disability in elderly individuals. While the sleep time at night is shortened, the daytime sleep time increases during the day. Sleeping less than 7 hours a night in the

elderly causes falls, walking difficulties and cognitive imbalances. It has been reported that the risk of death is high in individuals with a sleep duration of more than 30 minutes. Long or short sleep duration in elderly individuals is associated with increased mortality from all causes. Long sleep duration is associated with death due to cardiovascular system diseases (20). Excessive sleep can cause an increase in work and home accidents, a decrease in daily performance, and a decrease in social skills. The increase in daytime sleepiness in elderly individuals is daytime sleepiness, sleep-related movement disorders and obstructive sleep apnea (stopping breathing during sleep) syndrome. In elderly individuals, first, the definition of sleep-related complaints, their onset, duration, and their relationship with accompanying factors should be defined. Providing sleep hygiene alone can increase the sleep quality of individuals with mild sleep problems. In order to increase sleep quality, it is important to ensure that the elderly person stays awake and standing for as long as he or she sleeps. In necessary cases, drug treatment can be applied, but one should be very careful about the use of drugs.

Vision & Care

With increasing age, lens flexibility and corneal sensitivity are lost in elderly individuals. The visual position and reaction to light should be evaluated by sitting in front of the elderly person. The presence of sufficient light should be evaluated, the

presence of diabetes should be investigated, and the presence of cataracts should be evaluated. The drugs he/she uses should be checked and it should be evaluated whether he is taking it correctly. In order to ensure safety in the environment, it is recommended to have sufficient light level, to have coloured signs, and to use glasses if necessary. Coloured and illustrated medicine boxes can be used to tell the time and feature of the medicine in order to take the medicine correctly and to ensure the safety of the medicine. Although the use of glasses is extremely necessary for the elderly, the elderly often lose their glasses frequently. In order to prevent the glasses from getting lost, a chain or a cord that they can hang around their necks may be recommended. To improve the quality of vision, the glasses should be cleaned by washing and drying with a soft cloth (21).

Hearing & Care

With the increase in age, hearing ability in both ears deteriorates symmetrically. Especially in noisy environments, hearing loss becomes evident. Hearing difficulties can also be experienced in connection with an increase in earwax. In order to facilitate hearing, it should be spoken in a voice that is not too loud. It should be determined whether he can lip read or not, and if necessary, communication should be provided by this method. Elderly individuals should be spoken face to face in short, short sentences. Shouting with the elderly person both makes it difficult for him/

her to hear and increases his anxiety and prevents communication. Elderly people using hearing aids should be removed at night and washed with soapy water (22).

Drug Use in Elderly Individuals

The rate of drug use by elderly individuals is higher than the general population globally. Although the ratio of individuals over the age of 60 to the total population constitutes 1/5 of the total population in England, it has been reported that they use 59% of the total prescribed drugs, and individuals over the age of 70 use 5 or more drugs (23). In a systematic review, drug use rates of elderly individuals in different provinces of Turkey were determined. The average number of drugs per person in elderly individuals was calculated as 3.25. It was determined that the rate of drug use in women was higher than in men.

In addition, it has been reported that elderly patients are not adequately informed about their medications, their prescriptions are not written properly, the rate of over-the-counter drug use in the elderly is high (14%), the rate of inappropriate drug use (9.8%), and one-third of them experience drug-related side effects (24).

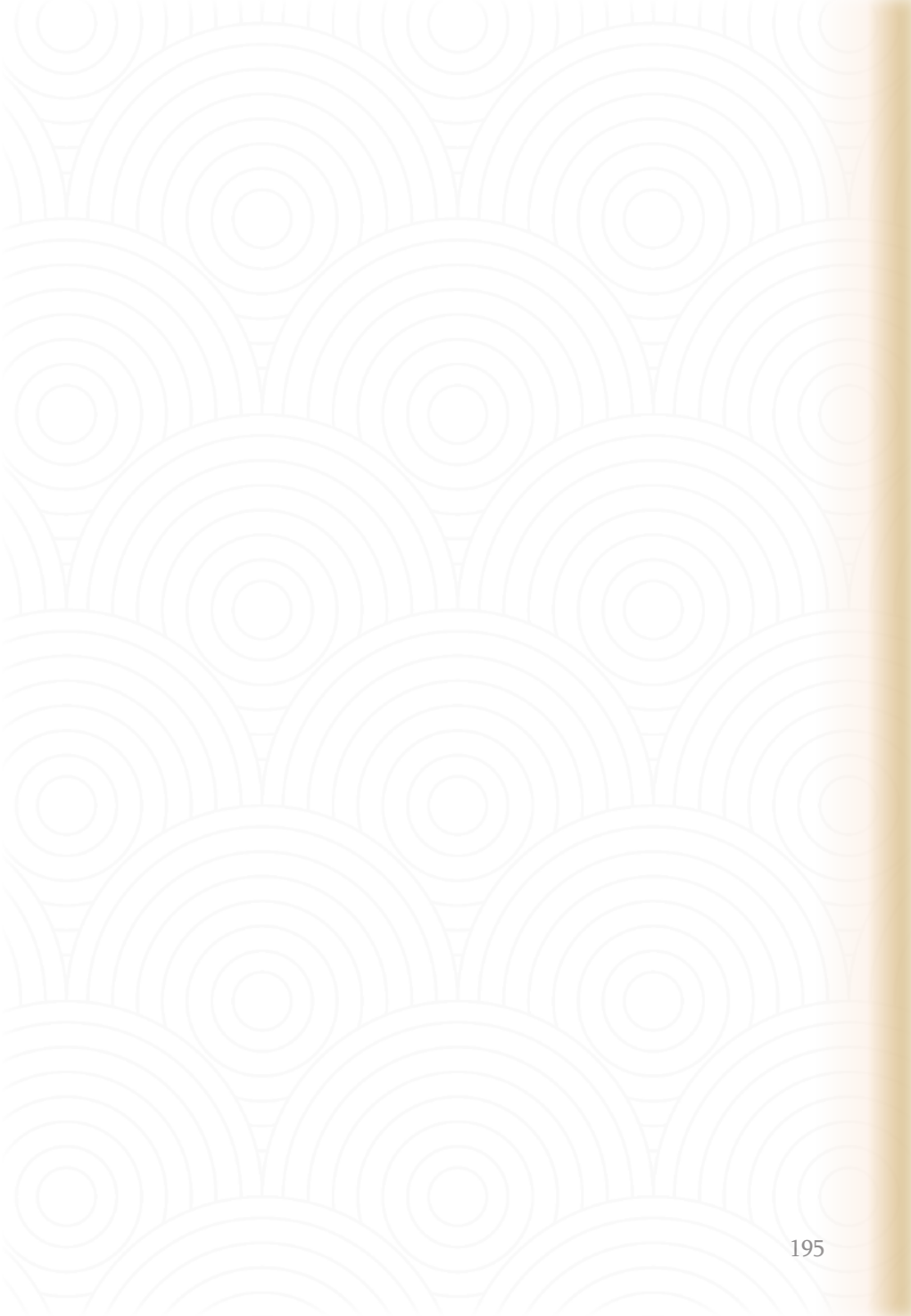
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9.2. OPINIONS AND RECOMMENDATIONS ON PHYSIOTHERAPY STUDIES IN THE ELDERLY

OPINIONS AND RECOMMENDATIONS ON PHYSIOTHERAPY STUDIES IN THE ELDERLY

(The study was carried out between 19 FEBRUARY 2023 – 30 APRIL 2023)

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The Most Common Health Problems in Geriatrics and Preventive-Rehabilitation Exercises

The World Health Organization defines biological aging as “a condition in which the gradual accumulation of molecular

and cellular damage results in a decrease in physiological reserve capacity and in a general individual capacity, resulting in many diseases and an increased risk of death". The age limit is generally 65 years old. (1).

When the elderly person is mentioned; In the documents of the World Health Organization (WHO), individuals aged 65 and over (2) and in the documents of the United Nations (UN) individuals aged 60 and over are mostly examined (3). These definitions mostly distinguish elderly individuals from other age groups in terms of chronological and physiological aspects. In addition to these definitions, old age is also defined in terms of sociological, economic, etc.

The share of elderly individuals in the total population is increasing in Turkey. According to the Turkish Statistical Institute (TÜİK) data, 8 million 245 thousand 124 elderly individuals live in Türkiye as of 31 December 2022 (4). The change over the years is presented in Table 1. As of December 2021, the share of the population aged 65 and over in the total population was 9.7% (4). It is known that the percentage was 3.4% in 1945. (4).

Year	Female	Male	Total
1945	4,0	3,1	3,5
1955	4,2	2,6	3,4
1965	4,6	3,3	4,0
1975	5,1	4,1	4,6
1985	4,7	3,7	4,2
1990	4,8	3,8	4,3
2000	7,6	5,8	6,7
2010	8,2	6,3	7,2
2015	9,3	7,2	8,2
2021	10,9	8,6	9,7

Table 1. Change in the percentage of the elderly population in the total population for the selected decade. (1945-2021) (4, 5)

According to TUIK, some of the statistics that stand out as gender-specific in 2021 are (4):

- According to the assessment made for the 60-year-old and over group in Turkey; The share of the female population in the total population is 52.3% in the 60-74 age group and 73.2% in the 90-year-old and over group. (6).

- Older men outperform older women at all levels of completed education.

- 16.8% of men and 4.6% of women participate in the workforce. The participation rate in total is 10%.

- Male elderly people use the internet more frequently than female elderly (40.0% and 25.9%).

- The life satisfaction rate is 56.2% among all elderly. 51.2% of men and 60.1% of women say they are satisfied with their lives. “The family” was the most frequently cited source of happiness.

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Health Problems in Old Age

Elderly people may get sick very often, and they can experience a lot of chronic discomfort problems. Such chronic diseases are non-infectious diseases that progress slowly and continuously, do not heal completely, cause crippling as a result and create personal and economic problems (1). Among the most common chronic diseases globally; heart diseases, hypertension, stroke, asthma, chronic bronchitis-emphysema, cancer, diabetes mellitus, and arthritis take part (2).

Chronic diseases occur in 70-90% of the elderly in Turkey. The emergence of chronic diseases in the elderly means the emergence of care needs (3).

Studies have shown that 90% of the elderly living in our country have one chronic disease, 35% have two, 23% have three, 15% have 4 or more chronic diseases. It has been determined that these chronic diseases are mostly related to eye, hearing and orthopedics. Most of the diseases seen in elderly individuals can be prevented with early diagnosis, therefore the role of preventive health services is important. (4).

According to Turkish Health Investigation results, the obesity rate in the population over 65 was 22.9% in 2010 and 29.0% in 2019, when looking at Body Mass Index calculated using height and weight values. Looking at the obesity rate in the elderly population by gender, it was found that in 2019, the rate was 19.9% for elderly men and 36.2% for elderly women. (5). When these ratios are taken into account, a decrease in mobility and exercise tolerance is observed in individuals with aging. In this case, the factors that cause health problems in elderly individuals or an increase in symptoms of health problems are as follows: increased body mass indexes, sleep problems and falling.

The deterioration of the quality of night sleep of the elderly can cause a number of problems during the day. These are: excessive daytime sleepiness, fatigue, risk of accidents and falls and decreased performance in attention, concentration and cognitive functions. (6). Falls are a major medical problem and an important public health problem in the elderly. In the elderly, death and disability due to falls are quite high. With old age, problems in vision and hearing, balance and coordination problems, and falling due to loss of strength occur. It is very important to determine the problems that cause falls, to eliminate these problems, to provide rehabilitation, and to organize the order in the house for the elderly. (1).

According to 2016 data, the most common diseases among the elderly in Turkey are mainly:

1. High blood pressure
2. Problems in lumbar legion
3. Problems in neck region
4. Osteoarthritis
5. Rheumatoid arthritis
6. Ankylosing spondylitis
7. Fracture (falling)
8. Diabetes
9. Cardiac insufficiency
10. Arteriosclerosis (Vessel stiffness)
11. Asthma
12. COPD
13. Osteoporosis
14. Urinary incontinence (bladder problems)
15. Prostate cancer
16. Chronic kidney failure
17. Depression

18. Myocardial infarction (heart attack)
19. Alzheimer's Disease
20. Obesity
21. Stroke
22. Parkinson's Disease
23. Multiple Sclerosis
24. Problems with vision vb.

In the prevention of these diseases and symptoms seen in individuals over 65 years of age, it is recommended to be done under the control of a doctor with a multidisciplinary approach as physiotherapy and rehabilitation in slowing the progress or in the rehabilitation process.

The information shared is for informational purposes and the exercises should be tailored to the individual and must be done under the supervision of a doctor and accompanied by a physiotherapist. Suggested exercises are shared for general information and example.

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Safety Precautions To Be Taken When Starting To Exercise

- People over middle age **should definitely undergo a doctor's check** before starting an intense exercise program.
- Regardless of the state of their physical capacity, the majority of the older age group have no problems in increasing their physical activity level to the moderate level.
- However, those who have any chronic diseases such as **heart disease, hypertension, diabetes or those who smoke** should definitely go through a doctor's control before starting to exercise.

General Safety Precautions

- If you have been living a sedentary life for a long time, if you feel weak and powerless, you **should start exercising slowly**. You should **gradually increase** the duration and intensity of the exercise.
- During exercise, you should wear **comfortable clothes suitable for the season** that will not cause excessive sweating and restrict your movement, and **orthopedic-soled shoes** that will support your feet.
- You should not hold your breath while exercising, you should continue to breathe **comfortably and regularly**.
- Physical activity increases the body's need for water. Especially in hot weather, you should be careful **not to dehydrate the body**. Therefore, from the moment you decide to increase physical activity, you should start drinking water without being thirsty.

Problems To Be Considered During Exercise

- If you feel pain in chest area,
- If palpitations or irregular heartbeat occur,
- If you feel shortness in breath,
- If you experience staggers (dizziness and blackout),
- If you experience nausea and vomiting,
- If you lose weight markedly and out of your control,

You need to stop exercising and consult to a doctor.

Which Exercises Should Be Done, How Often, And At What Intensity?

- Exercise programs usually consist of three parts: warm-up, work and cool-down.
- The purpose of warming up is to prepare the body for the work it will do. Movements should be rhythmic and natural, smoothly transitioning from one movement to the next. An ideal warm-up period should last about 20 minutes.
- In cooling, it is aimed to return the body to its pre-exercise state. It is ideal for this period to last about 10 minutes and the heart rate to decrease to 110-120 per minute.

For a healthier life, there are 4 types of exercises that you should do constantly and regularly:

1. Aerobic (durability)
2. Strengthening
3. Flexibility
4. Balancing Exercises

1) Aerobic Exercises

- These are movements that require large muscle groups to work rhythmically for a certain period of time.
- **Exercise type:** Although the most recommended aerobic exercise in the elderly is walking, swimming, cycling, forest bathing, jogging, trekking, **swimming and cycling** may be preferred for those who have difficulty in performing movements that put a load on the joints due to musculoskeletal diseases.

Exercise frequency and duration;

- For a healthy life, **5 days a week, 30-60 minutes** of moderate-intensity or
- **High-intensity aerobic exercise for at least 20-30 minutes, 3 days a week is recommended.**
- By combining moderate and high-intensity activities, exercises can be carried out 3-5 days a week.
- **The degree of perceived strain is scored between 0 and 10.**
- **In moderate-intensity exercises, the level of strain is 5-6 and there is a noticeable increase in heart rate and respiration.**
- **In high-intensity exercises, the perceived strain level is 7-8 and there is a significant increase in heart rate and respiration.**
- The duration of exercise should be increased gradually and walking should be done for **20-30 minutes at least 3 times a week.**
- If you feel weak, start with 5-minute walks a day and increase the time by 5 minutes as you feel stronger.

- This activity causes an increase in breathing and heart rate, but it would be appropriate to adjust your walking speed at a pace that **'is not be out of breath, able to talk to the person next to you'**.

2)Flexibility Exercises

- Flexibility exercises should be done **at least 2 days a week, for at least 10 minutes** each time.
- For each exercise, **3-5 stretching repetitions** lasting **30-60 seconds** are necessary.
- Stretching exercises can be done during the warm-up and cool-down periods of aerobic and strengthening exercises.
- **Avoiding rapid stretching and exercising slowly are best practices.** A slight pulling sensation is normal, but should not cause pain.

3)Balancing Exercises

- Balance activities (Tai Chi - Otago exercises - Tango - Tandem Exercise, etc.) are recommended for **those who are at a high risk of falling**, as falls and related injuries become more common as people get older.
- It is useful to **hold on to a solid place at first**; as the elderly becomes stronger, the quantity of holding is reduced. These workouts may necessitate supervision.
- Balance exercises performed **2-3 times per week** reduce the frequency of falls. For example:

*Gradually reducing the area of support (e.g. standing, tandem stance, standing on one leg)

*Dynamic movements to change the center of gravity (e.g. tandem walking, circular rotation)

*Strengthening of the postural muscles (ex: standing on the heel or on the toes)

*Reducing sensory input (e.g. standing with eyes closed)

4)Strenghtening Exercises

- In order to maintain their physical independence, it is recommended for the elderly to do resistant exercises to increase muscle strength **at least 2 days a week.**

- A total of **8-10 exercises** should be performed using large muscle groups.

- Use enough resistance to allow **10-15 repetitions** of each exercise (weight, elastic band, sandbag)

- The same muscle groups should not be exercised two days in a row.

Most Common Disorders for Individuals Over 65 and Recommendations

1. Hypertension

Hypertension is when the pressure exerted by the blood carried from the heart to the body is above normal values. An adult over the age of 18 should have a resting blood pressure of 120/80 mmHg. Symptoms of hypertension include frequent urination, edema of the legs, blurred or double vision, nosebleeds, and arrhythmia. Hypertension, which reduces life expectancy and quality, can lead to diseases such as stroke, heart attack, and kidney failure.

Factors that increase the risk of hypertension;

Genetic predisposition, sedentary lifestyle, obesity, diabetes, smoking and alcohol consumption, excessive salt consumption and stress are the main factors.

Lifestyle changes, regular exercise, weight control, and regulation of salt intake are very important during the treatment of high blood pressure. Early diagnosis is very important to prevent serious conditions caused by hypertension such as stroke, heart attack and kidney failure. Early diagnosed and controlled hypertension does not affect the quality of life.

Typically recommended exercises;

1- Moderate-intensity dynamic aerobic exercise (walking, cycling, swimming)

2- Stationary cycling

3- Sitting on a chair with resistance equipment

4- Climbing stairs with resistance equipment

5- Warrior Pose (yoga)

2. Lower Back Problems

A person can feel low back pain for three reasons. These are: lumbosacral region, radicular and referred pain. Pain in the lumbosacral region refers to the pain felt in the region between L1- L5, in the sacral region, and in the S1 and sacrococcygeal region. Radicular leg pain reflects dermatomal radiating pain throughout the extremity due to nerve or dorsal nerve root irritation. Referred pain is pain felt in a non-dermatomal region far from the source of pain. Even in a painful condition, it is important to minimize bed rest and keep the patient active within the available possibilities. At the same time, psychosocial and emotional factors are important in the experience of pain. The fundamental component of treatment is evaluation. When evaluating a patient with symptoms in the lumbar region, it may not always be possible to identify a definitive cause; because approximately 85% of patients are diagnosed with non- specific low back pain at the initial evaluation. It is important to question the duration of the patient's pain, its location, and the factors that increase or decrease the pain. It is important to question how the feeling of pain is in order to better define and express the feeling of pain. For example, in the form of burning, electric shock. It is also important to question the severity of pain, evaluate it in terms of red flags, and evaluate it from a social and psychological point of view.

Treatment should be planned individually for the patient. Physiotherapy is important in pain management and increasing functionality.

Typically advised exercises:

- 1- Lumbar spine mobilization
- 2- Gaining flexibility by pulling the knee to the chest
- 3- Bridge exercise
- 4- Exercises in the crawling position
- 5- Straight leg raise

3. Neck Problems

Neck Pain is defined by the Global Burden of Health 2010 Study as “pain in the neck with or without pain referred into one or both upper limbs that lasts for at least one day.” Neck pain ranks fourth highest for disability among the 291 conditions examined in the Global Burden of Disease 2010 Study, and 21st overall in terms of YLDs. Risk factors for neck pain are similar to other musculoskeletal conditions such as genetics, psychopathology (eg, depression, anxiety, poor coping skills, somatization), sleep disturbances, smoking, and a sedentary lifestyle. Unique risk factors for neck pain include a history of neck pain, trauma (eg, traumatic brain and neck injuries), and some sports injuries. Although some studies have found a higher incidence of neck pain in some occupations, such as office and computer workers, manual workers, and healthcare workers, the main workplace factors associated with the condition are low job satisfaction and perceived work. As physiotherapy, we have more than one application method and after a detailed evaluation, personalized therapeutic exercise, manual therapy, patient education, electrotherapy, etc. applications are made.

Typically advised exercises:

- 1- Neck vertebra mobilization exercises
- 2- Shoulder extension with scapular retraction
- 3- Brugger exercise
- 4- Chin-tuck exercise
- 5- Neck exercises with resistance bands

4. Osteoarthritis

Osteoarthritis (OA), also known as degenerative joint disease, is typically the result of wear and progressive loss of articular cartilage. It is most common in the elderly and can be divided into two types, primary and secondary:

Primary osteoarthritis - joint degeneration with no apparent underlying cause.

Secondary osteoarthritis - either the result of an abnormal concentration of force throughout the joint, as in post-traumatic causes, or abnormal articular cartilage, such as in rheumatoid arthritis (RA).

Osteoarthritis is typically a progressive disease.

The intensity of clinical symptoms can vary from person to person. However, they typically become more severe, more frequent, and weaker over time. The pace of progression also varies for each individual.

Common clinical symptoms include:

- Gradual knee pain that initially gets worse with activity
- Early morning stiffness
- Loss of range of motion,
- Pain felt by touch on the joint,
- Knee stiffness and swelling
- Pain after sitting or resting for a long time.

OA is the most common disease of the joints worldwide, and the knee is the most commonly affected joint in the body. It mainly affects people over the age of 45. About 13% of women and 10% of men age 60 and older have symptomatic knee osteoarthritis.

Among those over 70 years of age, the prevalence rises to 40%.

The primary treatment for OA knee conservatively is exercise therapy within physiotherapy. Patient education, Exercise therapy, Activity modification, Weight loss, use of kneepad, etc.

Typically advised exercises:

- 1- Hamstring ve gastro stretching exercise
- 2- Stationary cycling
- 3- Squat exercise on wall
- 4- Strengthening the Quadriceps muscle, strengthening knee extension
- 5- Strenghtening hamstring facing down

5. Rheumatoid Arthritis

Rheumatoid arthritis is a chronic autoimmune inflammatory disease that typically presents as symmetric polyarthritis involving small proximal synovial joints. It occurs in 1% of the total population and its main symptoms are pain, joint stiffness and swelling, fatigue, and seriously affect the quality of life of patients. RA patients are also prone to develop systemic conditions such as cardiovascular diseases.

Regular exercise of moderate to high intensity has proven effective in improving muscle strength and cardiovascular fitness in healthy populations and patients with chronic diseases, including RA.

As in the general population, regular physical activity in patients with RA may provide general health gains as well as disease-specific benefits such as reduced pain, improved muscle function, and delayed onset of disability. Interestingly, moderate-intensity physical activity exerts anti-inflammatory effects in both healthy individuals and those affected by various chronic diseases.

Typically advised exercises:

- 1- Tightening and loosening a ball on your palm
- 2- Compressing the knee by placing a towel under it
- 3- Raise and lower your arms overhead
- 4- In the side-lying position, lift the foot to the side.
- 5- Toe raise

6. Ankylosing Spondylitis

Ankylosing spondylitis (AS) is an inflammatory disease that affects the axial skeleton, causing low back pain and functional impairment. The disease causes inflammation and pain in the spine and joints, which reduces physical activity and spinal mobility and causes fatigue, stiffness, sleep disturbances and depression. Exercises are important for maintaining or improving spinal mobility and physical fitness as well as reducing pain and are included in evidence-based recommendations for the treatment of AS. Affected joints become increasingly stiff and tender due to bone formation at the joint capsule and cartilage level.

It causes a reduced range of motion and in its advanced stages can give the spine a bamboo-like appearance, hence the alternative name is “bamboo spine”. Early diagnosis and treatment helps control pain and stiffness and can reduce or prevent significant deformity. Physiotherapy is an important part of AS treatment. It aims to relieve pain, increase spinal mobility and functional capacity, reduce morning stiffness, correct postural disorders, increase mobility and improve the psychosocial status of patients. The main aspects of rehabilitation include education, a personalized exercise program and outline of physical activities to be completed. It is done at home or in a group-based setting.

Typically recommended exercises:

- 1- Chest expansion exercise
- 2- Neck exercises
- 3- Cat-Camel Stretch
- 4- Arm-Shoulder exercise
- 5- Leg-hip exercise

7. Fractures (Fall)

Falls are a significant public health issue in aging countries because of an increase in chronic diseases, functional dependence, fear of falling, poor quality of life, reliance on others, and premature deaths.

Falls are one of the top causes of death from unintentional or accidental injuries worldwide. Falls are one of the most critical issues that the elderly face on a daily basis, with one out of every three old individuals aged 65 and up, and half of those aged 85 and up, falling at least once a year. According to World Health Organization statistics, falls account for 40% of all accidental deaths.

Identified causes of falls; balance and gait disorders, polypharmacy, fragility, cognitive problems, vision problems, and a history of previous falls. The decrease in physical functions in elderly individuals due to age-related changes (loss of muscle strength, decreased flexibility and resistance) increases the risk of falling.

According to a study conducted in Türkiye, 48.7% of the elderly have fallen before, 53.9% have fallen more than once, 31.8% have fractures as a result of falling, and 51.1% have a fear of falling. One out of every ten elderly people who fall sustains a serious injury (hip fracture, subdural hematoma, serious soft tissue injuries, head injuries, etc.), necessitating hospitalization.

Typically recommended exercises:

1. Assisted-unassisted tandem stance
2. Assisted-unassisted single leg stance
3. Assisted-unassisted squat
4. Assisted-unassisted back walking
5. Assisted-unassisted sitting and standing
6. Lateral walk
7. Assisted unassisted tandem walking
8. Combined walks with rotations

8. Diabetes Mellitus

Diabetes, which is at the forefront of the diseases of the age, is a type of disease that is very common all over the world and plays the first role in the formation of many deadly diseases. Fasting blood glucose levels in healthy people range between 70 and 100 mg/dl. If the blood sugar level rises above this range and remains elevated for an extended period of time, it usually indicates diabetes. Individuals with diabetes experience three distinct symptoms. These include eating more than usual and feeling saturated, frequent urination, dryness and sweetness in the mouth, and a desire to drink a lot of water.

Diabetes is classified into two types: Type 1 Diabetes and Type 2 Diabetes. The factors that cause the disease differ depending on the type. While genetic factors play a role in the causes of Type 1 Diabetes, viruses that damage the pancreas, which produces the insulin hormone involved in blood sugar regulation, and malfunctions in the body's defense system are among the factors that cause the disease. Furthermore, the following are the causes of Type 2 diabetes, which is the most common type of diabetes: Obesity (excess weight), a family history of diabetes, advanced

age, sedentary lifestyle, stress, gestational diabetes during pregnancy, and giving birth to a baby weighing more than normal.

Diabetes treatment methods differ according to the type of disease. In type 1 diabetes, medical nutrition therapy along with insulin therapy, lifestyle changes and exercise should be applied meticulously. In individuals with type 2 diabetes, in addition to providing the treatment diet, the use of oral anti-diabetic drugs to increase cell sensitivity to insulin hormone or directly increase insulin hormone secretion should be carried out through a multi-faceted evaluation in conjunction with nutritional therapy, lifestyle changes, and exercise.

Exercise training programs have emerged as an effective therapeutic regimen for diabetes mellitus management. The development of aerobic and resistance exercise programs that have been shown to reduce the incidence of Type 2 diabetes is one of the primary effects. Secondary effects include aerobics and resistance training's ability to help control diabetes. There is mounting evidence that combining aerobic and resistance training is more effective than either model alone.

Exercise is not advised for diabetics who have complications such **as retinopathy, nephropathy, or diabetic foot**. If you exercise when your blood sugar level is less than 100 mg/dl before you begin, you run the risk of hypoglycemia. If you exercise while your blood sugar level is higher than 240 mg/dl, your blood sugar level will rise even more.

Typically recommended exercises:

1. Wall squat take-off
2. Going up and down stairs
3. Throwing weight balls overhead
4. Turkish get up exercise
5. Rowing exercise

9. Hearth Failure

Heart failure is a syndrome of cardiac ventricular dysfunction in which the heart cannot pump enough to meet the body's blood flow requirements. Heart failure is a major public health problem in countries around the world. Many conditions can cause HF, including systemic diseases, various cardiac conditions, and some inherited defects. More than two-thirds of all HF cases can be attributed to ischemic heart disease, COPD, hypertensive heart disease, and rheumatic heart disease.

Many risk factors for heart failure exist, including advanced age (65 years and older), male gender, a family history of heart disease, or certain underlying conditions, particularly myocardial infarction, heart valve failure (leakage), or stenosis. Certain lifestyle factors also increase the risk of developing heart failure, such as tobacco smoking, alcohol consumption, physical inactivity, and a diet that predisposes individuals to high cholesterol and high blood pressure.

In addition to treating the underlying cause of heart failure, symptoms are managed with diet and lifestyle changes, medical treatments, surgical procedures, and exercise.

Patients are also advised to limit their salt and fluid intake, avoid alcohol and nicotine, optimize their body weight, and do aerobic exercise as much as possible. Physiotherapy is important in the treatment of heart failure. The cornerstone of physiotherapy management is cardiac rehabilitation. In patients undergoing heart surgery, physiotherapy can also assist post-operative recovery.

Typically recommended exercises:

1. Diaphragmatic breathing exercises

2. Rowing
3. Thoracic mobilization and balance
4. Lunge exercise
5. Elliptical bike

10. Venous Insufficiency (Varicose Vein)

Venous valves act as barriers that prevent the backflow of blood through the body's normal function. As a result of these valves deteriorating or closing, the return of blood to the heart is impaired and the resulting condition is known as venous insufficiency. A bulging vein in this direction is called a varicose vein.

Venous insufficiency causes blood to flow through the veins in the opposite direction, not toward the heart. Because the valves cannot function in the varicose vein, blood escapes through the damaged venous valves and cannot reach the heart. The most common causes of venous insufficiency are:

- Cigarette consumption
- Aging
- Presence of blood clots in the veins
 - In cases of sedentary life, long-term inactivity or standing, there is an increase in blood pressure in the legs and this situation brings along venous insufficiency.
 - Obesity (excessive physical structure causes pressure on the valves in the leg veins to cause damage)
 - Weakness of the muscle structure
 - Deterioration of the inner wall of blood vessels after superficial or deep vein occlusion

Leg pain is the most common symptom of venous insufficiency. The throbbing pains in the legs are severe and affect daily life badly. Swelling occurs in the legs and ankles due to fluid collection in the leg lymph. This is a sign that edema has begun to form. Progressive stages of pain; Conditions that can lead to ulcer formations on the ankles, feet or under the legs follow. In this regard, it is necessary to consult a doctor when persistent pain, numbness or persistent wounds are observed in the legs. The treatment should be evaluated with a multidimensional approach, and the main source of the problem should be determined and then treatment should be started. Necessary medical treatments can be listed as nutrition regulation, lifestyle changes, exercise and auxiliary clothing that can be used.

Typically recommended exercises:

1. Stretching exercises
2. Standing Calf Raise
3. Deep diaphragmatic breathing exercise
4. Squatting
5. Hip-knee resistance flexion-extension, rotation exercises

11. Asthma

Asthma is a hypersensitivity of the airways to environmental influences. The airways and the mucous membranes lining the airways are swollen. This swelling can block airflow and cause shortness of breath. Such periods are called asthma attacks. Asthma manifests as attacks caused by airway obstruction. Symptoms of asthma are usually: Cough. Shortness of breath. Wheezing. Chest tightness. Features of asthma symptoms that

can help diagnose asthma include: Symptoms are recurrent, occurring at night and in the morning, and triggered by exposure to some allergens or after exercise. These symptoms do not occur between attacks, and asthmatics are fine between attacks.

With aging, there is a decrease in the elasticity of the airways, increased stiffness of the chest wall due to stiffening of the rib components and costal cartilage, and at the same time weakening of the diaphragm and a decrease in respiratory muscle strength. On the other hand, age-related changes develop in the lung parenchyma. With age, changes occur in innate and acquired immune responses. This leads to increased susceptibility to airway infections in the elderly and to both asthma attacks and late-onset asthma.

Objective follow-up, avoidance of asthma triggers, pharmacotherapy and patient education, and physiotherapy are essential for symptom relief. Protection from active and passive smoking is also very important. Decreased respiratory muscle strength in the elderly is closely related to malnutrition, decreased peripheral muscle strength, and heart failure. Strengthening of extremity muscles with exercises has been shown to prevent reduction in respiratory muscle strength. (5). Not only respiratory muscles but also skeletal muscles have an impact on respiratory muscle function. An independent and strong relationship was found between MIP and MEP values and peripheral muscle strength such as hand grip in the elderly. (7). In their study, Bassey and Harries showed that there was a 2% annual decrease in hand grip strength in 620 healthy individuals over the age of 65 (10). With increasing age, mucociliary activity also decreases and excretion of bronchial secretions becomes insufficient. At the same time, the decrease in the cough reflex causes an increase in the risk of pulmonary infection (13).

Typically recommended exercises:

1. Diaphragmatic breathing exercise and the ZET cycle
2. Taking and squeezing ball in palm
3. Strengthening the back extensors
4. Thoracic mobilization
5. Strength training with peripheral body weight

12. COPH

COPD is defined as a common, preventable, and treatable disease characterized by persistent airflow limitation and respiratory symptoms due to airway and/or alveolar abnormalities, usually caused by severe exposure to harmful particles or gases. COPD is a multicomponent and variable disease. For this reason, it is often not possible to define COPD with precise lines, and it is not always successful to try to treat the disease with a standard approach, which is mostly formed by the guidelines (4).

COPD is usually asymptomatic at the beginning, but as it progresses, the following symptoms occur;

- Shortness of breath, especially when moving
- Wheezing sound when breathing
- Cough with phlegm
- Chest tightness
- Tiredness

Reduction in exercise capacity, deterioration in body composition and quality of life associated with COPD requires a multidisciplinary holistic approach. Pulmonary rehabilitation is the gold standard of treatment for patients with COPD. Pulmonary rehabilitation is a well-equipped program that includes exercise training, health education and breathing techniques for people who are exposed to lung diseases due to COPD and its derivatives. Purpose of pulmonary rehabilitation; to reduce symptoms

and complications related to the disease, to enable the person to use his/her maximum capacity in daily life activities, to increase the person's exercise tolerance, to provide self-confidence and independence, and to eliminate negativities such as depression and stress.

Typically recommended exercises:

1. Diaphragmatic breathing exercise - Forced expiratory cycle
2. Knee extension and straight leg raise
3. Taking and squeezing ball in palm
4. Posture exercises
5. Shoulder-arm elevation exercises

13. Osteoporosis (Bone Thinning)

Osteoporosis is a disease; Over time, bones lose calcium and become perforated, weak and easily brittle. The internal structure and quality of the bone deteriorates, the bone framework of the body weakens. Osteoporotic bone is bone that has lost mass. People with osteoporosis either have less developed bone tissue in the early stages of life, or bone loss seen in older ages is faster in these people compared to others. Many men and women over the age of 65 have fractures of the hip, spine, wrist and other bones around the world.

Untreated osteoporosis can lead to bone pain and deformities. In addition, the person gradually becomes more dependent on those around him and moves away from a productive life. Their quality of life is impaired and they may experience depression-like psychological problems. Another feature of osteoporosis is that it is a disease that progresses silently and insidiously, as it does not cause pain unless there is a fracture.

General risk factors in osteoporosis:

- Early menopause or surgical (artificial) menopause following surgical removal of the ovaries.
- With the decrease in testosterone, the male sex hormone, in men, bone mass can also decrease.
- Low-calcium diet and vitamin D deficiency.
- Less physical activity, mobility and exercise (exercise has been proven to increase bone mass and strengthen bone).
- To smoke
- Consuming too much alcohol and caffeinated beverages

Replacing the lost bone is a difficult, expensive and time-consuming event, so it is easier to identify risk factors and prevent osteoporosis than to treat an advanced osteoporosis.

In the treatment;

1. Taking measures to reduce falls by making lifestyle changes,
2. Trying to implement the exercise programs recommended by your doctor,
3. Organizing your diet as recommended,
4. To use your medicines regularly and to go to regular doctor checks again,
5. It is necessary to know that osteoporosis is a preventable and treatable disease.

Typically recommended exercises:

1. Jumping rope
2. Going up and down stairs with weights
3. Leg press
4. Toe rise
5. Cobra exercise

14. Urinary Incontinence

Urinary incontinence (UI) is a common health problem in men and women, and is more common in the geriatric population. UI is often the involuntary incontinence of urine and it has been suggested that it may be associated with other urinary, intestinal or pelvic floor symptoms. UI can often be associated with non-genitourinary causes, including chronic conditions such as aging of the lower urinary tract, urinary tract infections, diabetes mellitus, cognitive disorders, neurological conditions, and obesity. These factors are seen among the temporary and reversible causes of UI when a geriatric patient presents with UI, and all of these factors should be considered and should not be overlooked. Physiological changes in the urinary system with aging facilitate

the development of UI. These changes:

- Tendency to decrease in urethral pressure,
- Estrogen, which decreases with menopause in women, causes vaginal atrophy and a decrease in the supporting tissues around the urethra and weakening of the pelvic floor muscles,
- Presence of benign prostatic hypertrophy in men,
- Decreased ability to prevent urination,
- Decreased detrusor contractility
- Decreased total bladder capacity
- Detrusor overactivity
- Increase in the amount of postvoiding residual
- Decreased renal concentration ability
- Disruption of the normal diurnal rhythm of ADH

In the geriatric population, UI is a common and distressing symptom that significantly affects patients' quality of life. Treatment options include lifestyle changes, bladder training, pelvic floor muscle exercises, medical and surgical treatments. Patients should be examined in all aspects, the treatment should be evaluated in terms of benefit and harm, and the management should be tailored according to individual needs and conditions.

Typically recommended exercises:

1. Breathing exercises
2. Pelvic floor stretching exercises
3. Trunk control exercises
4. Bladder training
5. Exercises for transversus abdominis muscle

15. Prostate Cancer

Today, geriatric oncology cases are more common as a result of the gradual increase in life expectancy and the positive developments in cancer treatment in recent years. Studies have shown that all cancers are more common in the elderly population than in the young population. Although cancer is a serious health problem at all ages, it is of greater importance in individuals over the age of 65, especially with the physiological and pathological changes and comorbidities brought about by aging.

When we look at the urological problems of the aging man, it is seen that the problems related to the prostate have an important place. The underlying problem may be benign enlargement of the prostate gland, that is, benign prostatic hyperplasia (BPH), and prostate cancer is one of the problems that increase in frequency with age and may cause the same complaints. Prostate cancer is one of the most common types of cancer in men. With a high mortality and metastasis rate, microscopic changes in the prostate may progress slowly or cause no signs or symptoms.

Prostate cancer symptoms:

- Urinary incontinence or other urinary complaints
- Low back pain, inner thigh or perineal pain
- Hematuria (blood in the urine)
- Blood in the semen
- Feeling of under belly button or pelvic pain/discomfort
- Sexual dysfunction

Definitive treatment of localized prostate cancer includes radiation therapy, radical prostatectomy, and cryotherapy. Radiation therapy tends to have far fewer side effects (about 50% fewer) than radical prostatectomy surgery. Definitive treatment may

have side effects such as erectile dysfunction and urinary incontinence.

With conservative treatment, urinary control can be improved by increasing the strength, endurance and coordination of the pelvic floor muscles. Pelvic floor muscle training (with electrical stimulation) improves urinary incontinence after prostatectomy.

The comorbidities present in most of the elderly individuals show the necessity and importance of a multidisciplinary approach to these individuals.

Typically recommended exercises:

1. Head and neck exercises
2. Upper extremity exercises
3. Trunk control exercise
4. Lower extremity exercises
5. Diaphragmatic breathing exercise

16. Chronic Kidney Failure

Various anatomical and physiological changes occur in the kidney with aging. These changes due to aging in the kidney, which has a very important function in systemic hemodynamics, weaken the adaptability of the kidney; Many kidney diseases, especially the deterioration of fluid balance and the development of acute kidney injury, are observed more easily and frequently in elderly patients.

It is defined as the presence or persistence for at least 3 months of structural, imaging or laboratory findings indicating kidney damage, with or without a decrease in the physiological filtration rate of the kidney for at least 3 months. The risk of cardiovascular

disease increases with age, when comorbidities are considered. Chronic renal failure is accompanied by serious complications, so careful follow-up is necessary. To prevent the possible negative consequences of dialysis, secondary problems that arise afterward can also be prevented. Exercise that can be generally recommended to prevent problems that can occur as a result of chronic renal failure and to protect kidney health is as follows:

1. Increasing respiratory muscle strength with Triflo
2. Toe lift exercise
3. Going up and down on stairs
4. Biking
5. Posture exercises

17. Depression

Depression is the most common mood disorder in the elderly. With aging, brain volume decreases due to a decrease in cerebral blood flow, number of nerve cells and synapses. While the prevalence of depression is 5-8% in the population, it is between 15-20% in the population over 65 years of age. This rate is between 25-40% of the elderly living in nursing homes. Especially over the age of 80, the symptoms may be different. In elderly patients, somatic (physical) and cognitive symptoms are more prominent than emotional symptoms of depression. Elderly people who do not describe depression may talk about not being able to feel anything or losing their interest and ability to enjoy. The fact that the elderly did not describe emotional symptoms led to the use of concepts such as “depression without sadness”.

Unfortunately, the treatments for such a common problem are not that advanced. Existing drugs have been developed in younger

groups but the mechanisms of depressive processes in the aging brain have not been adequately studied and are assumed to be the same as in young people. The elderly are much more sensitive to the side effects of drugs and the elderly respond to these drugs later. Considering the role of exercise in the body's general well-being and physiological processes, the exercises that can be recommended in general are:

1. Stretching exercises combined with breathing
2. Jumping on the trampoline
3. Strengthening exercise with resistance
4. Gardening
5. High-intensity aerobic exercise (running, swimming, etc.)

18. Myocardial Infarction (Heart Attack)

Myocardial infarction (MI) is a serious condition that occurs as a result of decreased or interrupted blood flow to the coronary arteries. Necrosis of myocardial cells develops in as little as 15 minutes following coronary occlusion.

According to the TEKHARF (Heart Disease and Risk Factors in Turkish Adults) study in Turkey, CAD is observed in 1/5 of people between the ages of 60 and 69, and in one out of every four people aged 70 and over. The most common cause of myocardial infarction is occlusion of the coronary arteries due to atherosclerosis. Other reasons include; coronary embolism, coronary artery anomalies, increased blood viscosity, and excessive increase in myocardial oxygen demand.

The most important reason is the formation of atherosclerosis and it often occurs as a result of many years under the influence of

various factors. Risk factors that cause atherosclerosis are often; family history of CAD, age, gender or genetic predisposition, hypertension, smoking, low physical activity, obesity, stress and high serum lipid level.

In some of the patients; It often manifests itself with atypical symptoms such as indigestion, fatigue, restlessness, dyspnea, tachypnea, burning, numbness, and heaviness in the chest, arm, and shoulder. Exercises that can be recommended in general to keep heart and circulatory health at an optimal level and to gain resistance against diseases:

1. Stretching exercises combined with breathing
2. Moderate-intensity resistance training
3. Riding an elliptical
4. Gardening
5. Balance exercises (tai chai, yoga, etc.)

19. Alzheimer's Disease

Alzheimer's Disease is a disease of the brain that causes progressive loss of all cognitive functions, primarily memory, and is characterized by microscopic abnormal protein deposition in the brain. Dementia means "progressive loss of memory, language, arithmetic, decision-making, attention, and other cognitive functions." Every Alzheimer's patient has dementia, but not every dementia patient has Alzheimer's. Because there are dozens of other diseases that cause dementia. Alzheimer's Disease is the most common type of dementia. For this reason, the terms Alzheimer's disease and dementia are often and sometimes mistakenly used interchangeably.

The number of Alzheimer's patients is estimated to be around 250 thousand in our country, and this number is expected to increase with the increase in the elderly population. The incidence of Alzheimer's Disease increases with advancing age, but it should be known that Alzheimer's Disease is not an inevitable result of normal aging. In the normal aging process, there are some structural changes in the brain, but there is no significant loss in cognitive/mental abilities. In Alzheimer's Disease, there is a distinct "difficulty in learning new information". Alzheimer's Disease is not a mental illness, but psychiatric symptoms are added during the course of the disease, so it may be similar to a psychiatric patient.

The following disorders are seen in Alzheimer's Disease;

1. Memory problems
2. Difficulty thinking and reasoning
3. Difficulty in decision-making,
4. Difficulty in finding words,
5. Difficulty in arithmetic operations,
6. Personality and behavioral changes,
7. Getting lost
8. Difficulty performing functions that were previously easy to do

Alzheimer's Disease should be considered as a multi-faceted, multi-interactive "Bio-Psycho-Social" event that causes great sadness and distress to the patient, patient's family, caregiver and all social environment and its treatment and care should be handled by a "Multidisciplinary Team", with a multi-perspective approach in a broad sense. The first step in prevention strategies is to eliminate the risk factors that we have mentioned before.

Modifiable risk factors: low education level, smoking, prevention of physical inactivity, prevention from depression, hyperten-

sion, diabetes and obesity are recommended. *In light of this information, exercises that can be suggested in general to prevent Alzheimer's:*

1. Aerobic exercises
2. Balance and coordination exercises (tandem walking, side stepping)
3. Strengthening Exercises
4. Stretching exercises
5. Breathing exercises

20. Obesity

Obesity is a growing epidemic in developed countries and has been an increasing problem in our elderly population. Obesity in older adults is accompanied by an undesirable burden of chronic disease, metabolic complications, and a worsening quality of life. More importantly; In older adults, obesity exacerbates the age-related decline in physical function that leads to frailty and disability. Current treatment designed for weight loss in the elderly includes lifestyle intervention (diet, exercise, and behavioral changes), pharmacotherapy, and surgery. Current findings suggest that weight loss therapy prevents or delays functional decline and medical complications and improves the quality of life in obese older adults. However, clinicians prescribing weight loss therapy for older adults should consider the adverse effects on the patient's muscle and bone mass.

The prevalence of medical conditions generally associated with obesity (such as hypertension, diabetes, dyslipidemia, and cardiovascular disease) increases with age.

Elderly people who are physically active and have a thin abdo-

minal circumference are less likely to develop insulin resistance and type 2 diabetes mellitus. With this; obese older adults have a higher prevalence of dyslipidemia and hypertension. In general, it is stated that people who are obese have lower health-related quality of life than those who are not obese. However, compared to men, obese women have a lower quality of life.

Studies have shown that lifestyle changes, weight loss and physical activity reduce cardiovascular mortality and morbidity, while sedentary lifestyle and inactivity increase cardiovascular mortality and morbidity. The risk of cardiovascular disease was found to be low in physically active individuals, regardless of the presence of cardiovascular risk factors. When physical activity is combined with diet, the positive effect of exercise on other cardiometabolic risk factors such as lipid values, hypertension and diabetes increases synergistically.

A multidisciplinary approach is required to prevent obesity and to provide weight control.

Typically recommended exercises:

1. Moderate-to-high intensity Aerobic exercises
2. Strength training
3. Flexibility exercises
4. Stretching exercises
5. Balance exercises

21. Stroke

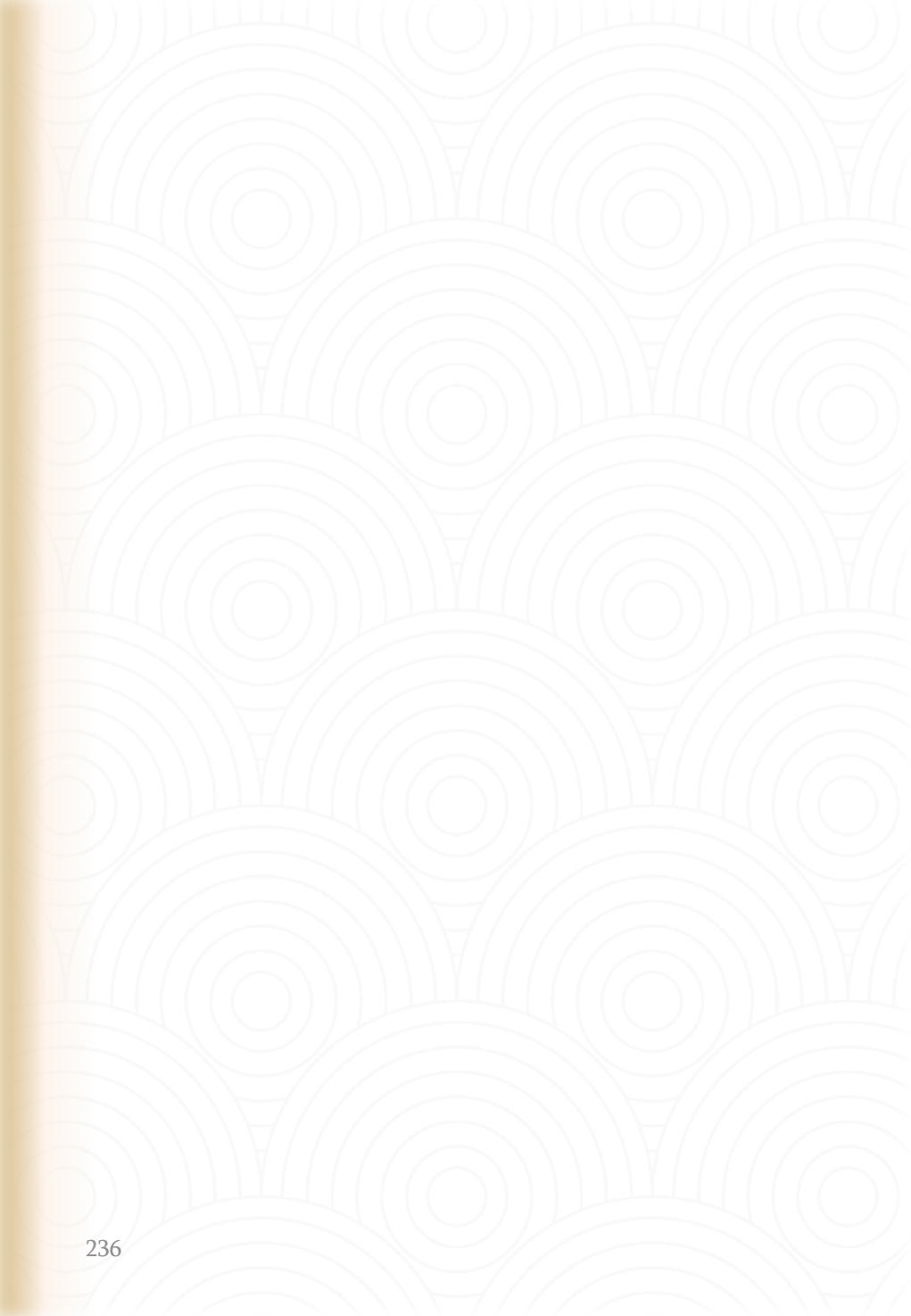
Cerebrovascular accident (CVO) is recognized as the most common serious neurological disease. It ranks third as the cause of death after heart diseases and cancer, and ranks first in terms of morbidity. The incidence of the disease increases with

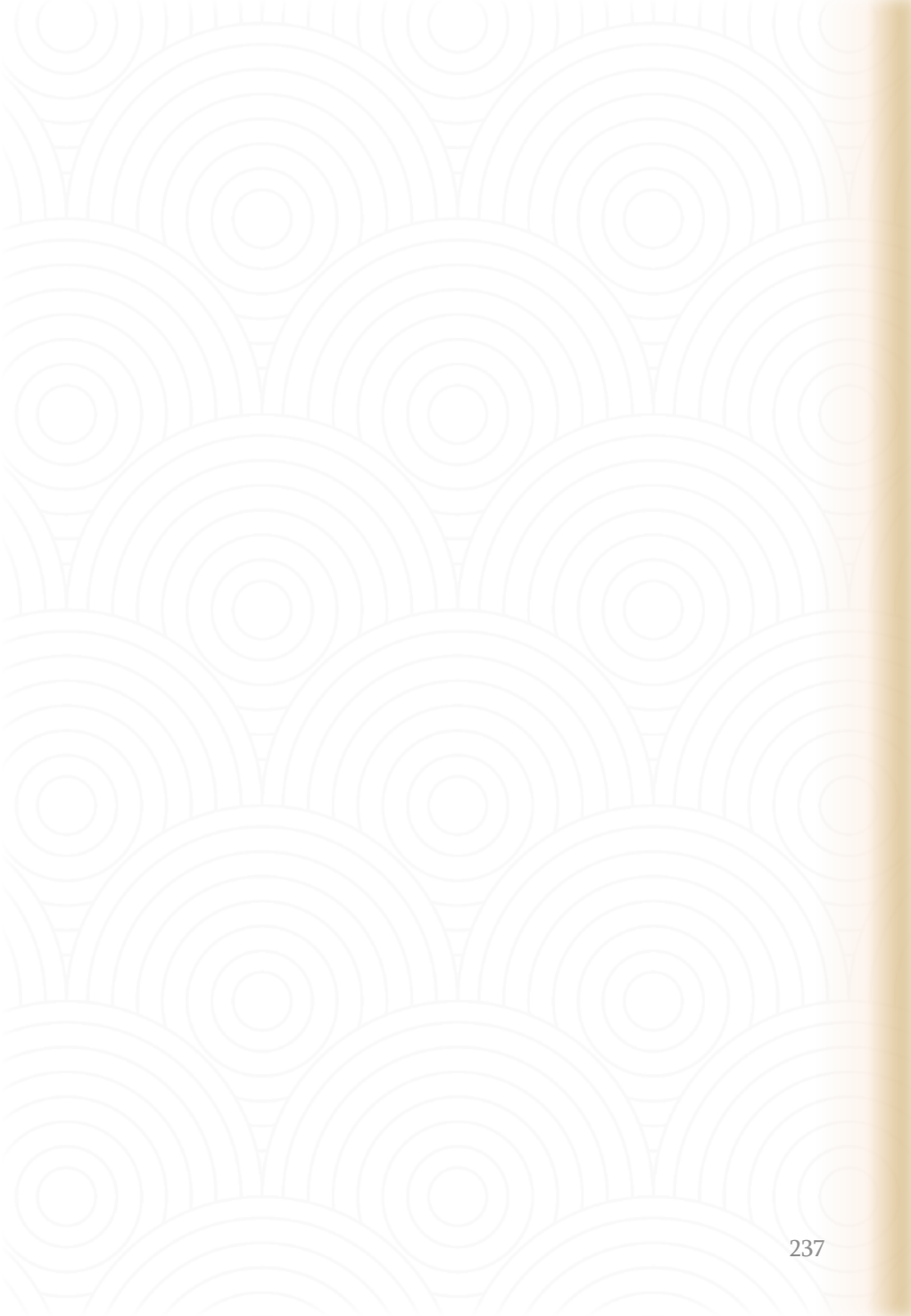
age at the same rate. Ischemic heart diseases, hypertension, diabetes and cognitive disorders have negative effects on functional status. For this reason, it is very important to know the risk factors and protection from risk factors in geriatric patients. Especially in elderly patients, accompanying systemic factors, complications that may develop after a stroke, and lack of motivation of patients may adversely affect the rehabilitation process. Therefore, preventing or minimizing the complications that may occur with the physiological process of old age is of great importance in terms of the prognosis of rehabilitation.

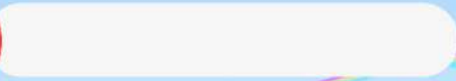
Post-stroke complications in our patients were shoulder pain and subluxation in 49.0%, speech disorder in 29.8%, urinary dysfunction in 27.1%, complex regional pain syndrome in 18.5%, bowel dysfunction in 16.5%, DVT in 10.5%, 4.6% had dysphagia, 1.9% had pressure ulcer and 5.9% had depression findings. No pulmonary thromboembolism was observed during the follow-up of the patients. Since more than one mechanism is affected in the treatment of the disease, multidisciplinary work is required in its treatment. Special training and exercise strategies are applied in stroke rehabilitation.

However, there are exercises that can be recommended in general for the protection and prevention of vascular health are:

1. Moderate-intensity resistance training
2. Elliptical riding
3. Balance exercises
4. Flexibility exercises
5. Aerobic exercises







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