

# Suicide in Old Age: Causes, Risk Factors, and the Profile in Türkiye

## Yaşlılık Döneminde İntihar: Nedenleri, Risk Faktörleri ve Türkiye Profili

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### ABSTRACT

Aging is an irreversible physiological process, with the period of 65 years and older defined as old age. Suicide, a deliberate act of ending one's life, is a complex global public health issue with multifaceted psychological, biological, social, cultural, and economic dimensions. This study aims to examine the risk factors associated with suicide in the elderly population and provide an overview of elderly suicides within the context of Türkiye. The World Health Organization (WHO) categorizes older adults into young-old (65–74), middle-old (75–84), and oldest-old (85+) groups, noting that mortality rates due to suicide increase significantly with advancing age. Key risk factors identified include depression, often underdiagnosed and presenting atypically in this demographic, social isolation, loneliness, chronic physical illnesses, and experiencing significant losses such as bereavement or loss of social status. The most common methods of suicide among Turkish elderly are hanging and firearms, with chronic disease being the most frequently cited reason. The findings underscore the critical need for a multifaceted prevention approach. This includes strengthening social support networks to combat isolation, improving accessibility and detection of mental health services within primary care settings, and implementing targeted, community-based suicide prevention programs. Addressing these factors through updated assessment tools, public awareness campaigns, and supportive government policies is essential for mitigating suicide risk in the growing elderly population.

**Keywords:** Elderly, suicide, elderly suicide, risk factors

### ÖZ

Yaşlanma, geri döndürülemez fizyolojik bir süreç olup 65 yaş ve üzeri dönem yaşlılık olarak tanımlanmaktadır. Kişinin yaşamını kasıtlı olarak sonlandırma eylemi olan intihar, psikolojik, biyolojik, sosyal, kültürel ve ekonomik boyutları olan karmaşık bir küresel halk sağlığı sorunudur. Bu çalışma, yaşlı nüfusta intihar ile ilişkili risk faktörlerini incelemeyi ve Türkiye bağlamında yaşlı intiharlarına genel bir bakış sunmayı amaçlamaktadır. Dünya Sağlık Örgütü (DSÖ) yaşlı yetişkinleri genç-yaşlı (65–74), orta-yaşlı (75–84) ve en yaşlı (85+) gruplarına ayırmakta ve intihara bağlı ölüm oranlarının ilerleyen yaşla önemli ölçüde arttığına dikkat çekmektedir. Belirlenen temel risk faktörleri arasında, bu demografik grupta sıklıkla tanı konulamayan ve atipik prezentasyon gösteren depresyon, sosyal izolasyon, yalnızlık, kronik fiziksel hastalıklar ve eş kaybı veya sosyal statü kaybı gibi önemli kayıplar yer almaktadır. Türkiye'deki yaşlı bireylerde en yaygın intihar yöntemleri asma ve ateşli silah kullanımı olup, en sık belirtilen neden kronik hastalıklardır. Bulgular, çok yönlü bir önleme yaklaşımının kritik ihtiyacını vurgulamaktadır. Bu, izolasyonla mücadele için sosyal destek ağlarının güçlendirilmesini, birinci basamak sağlık hizmetleri içinde ruh sağlığı hizmetlerine erişimin ve tespitin iyileştirilmesini ve hedeflenmiş, toplum temelli intihar önleme programlarının uygulanmasını içermektedir. Güncellenmiş değerlendirme araçları, halkı bilinçlendirme kampanyaları ve destekleyici hükümet politikaları aracılığıyla bu faktörlerin ele alınması, büyüyen yaşlı nüfustaki intihar riskini azaltmak için esastır.

**Anahtar sözcükler:** Yaşlılık, intihar, yaşlı intiharı, risk faktörleri

## Introduction

Aging is a physiological process that covers all irreversible, functional and structural changes that occur over time at the level of cells, tissues and systems of the organism (Çunkuş et al. 2019). The aging process starts with birth and is completed by undergoing a series of changes until death. Aging is not a fixed process and varies among people. The last part of this process is called old age. The onset of old age varies from society to society and even within the same society over the years, gender, education level, economic conditions, physiological and psychological age may show personal differences. In the 'Aging and Health Report' published by the World Health Organization (WHO) in 2015, aging in the biological sense was defined as a situation in which many diseases occur and the risk of death increases with a decrease in physiological reserve capacity and individual capacity in general as a result of the gradual accumulation of molecular and cellular damage, but it was stated that these changes show individual differences (WHO 2015). In the United Nations (UN) report 'Ageing World Population: 1950-2050' report, it was reported that fertility rates decreased and life expectancy increased, which led to a faster increase in the population aged 65 and over compared to other age groups (WHO 2013). Although the elderly are prone to many mental illnesses, it is known that suicide rates are high in this group (Sadek et al. 2024).

Suicide, which is defined as the deliberate killing of an individual, is seen as a behavioural pattern with many psychological, biological, social, cultural and economic dimensions (Carlo et al. 2019, Tekin Epik 2020). Suicide is generally used to refer to the concept of completed suicide. However, suicidal behaviour also includes concepts such as suicide threat, suicidal ideation and suicide attempt. Suicide attempt, which is all acts in which a person intentionally tries to kill himself/herself and fails, can be affected by people's status in society, their perspective on events and the value judgements of society. Suicide threat can mean that the person tries to give a message to his/her environment about killing himself/herself (Baskak and Aslantürk 2022).

The general suicide rate of elderly people worldwide constitutes approximately 1 in 5 of preventable deaths (Ridwan et al. 2022). The World Health Organisation (WHO) divides elderly people into three age groups as young-old (65-74), middle-aged-old (75-84) and oldest-old (85+), and suicide-related mortality rates increase with increasing age (WHO 2021). Although the risk factors for suicide may also differ in these age groups, many studies have analysed all elderly people under a single heading (Ridwan et al. 2022).

Factors such as marital status (single, widowed or living separately), living alone, poor social support, low educational level, financial difficulties, retirement, family conflicts, loss of family members, bereavement, history of psychiatric illness, physical illness or chronic health problems, past suicide attempts, more suicide attempts, anxiety disorders, unipolar depression, substance use, more life stress in childhood, exposure to suicide, unresolved legal affairs, history of legal problems increase the risk of suicide in young-older people (Kim et al. 2021, Ridwan et al. 2022). Therefore, when examining older adults, it is vital to consider the differences between these age groups to improve suicide risk assessment and provide targeted intervention. Compared to other age groups, the clinical symptoms of depression, which has an increasing incidence especially in the elderly and is at the top of the risk factors, can be difficult to identify because it includes biological, psychological and social aspects, often associated with changes in lifestyle and impaired functional capacity (Silva and Bocchi 2020).

This study aims to examine suicide risk factors in elderly people and the effects of these risk factors in Türkiye. According to Turkish Statistical Institute (TurkStat) data, the rate of young population in Türkiye has decreased over the years and the society has started to age gradually. As of 2023, the rate of young population decreased to 15.1%, the lowest level in history (TurkStat 2023). This demographic change makes it necessary to address the risk factors for the mental health of older people more comprehensively. By evaluating the differences in risk factors according to age groups, it is aimed to better understand the biological, psychological and social dimensions of root causes such as depression. In this direction, updating assessment tools for early detection of suicide risk in elderly people and developing risk factor-specific measurement methods stand out as an important necessity. In addition, it is aimed to strengthen preventive and protective mental health services, to expand psychosocial support mechanisms and to establish community-based intervention strategies that will facilitate individuals to cope with the

difficulties they face in old age. It is expected that the findings obtained will contribute to the development of multidisciplinary approaches to reduce the risk of suicide in elderly people and to the structuring of mental health policies.

## Profile of the World's Elderly Population

The proportion of the elderly population is increasing rapidly worldwide, leading to significant changes in social, economic and health systems. According to the 2022 World Population Report published by the United Nations (UN), it is estimated that the population aged 65 and over will be 761 million worldwide by 2022. This rate corresponds to approximately 10 per cent of the global total. It is estimated that this number will more than double to 1.6 billion by 2050 and constitute 16 per cent of the total number of elderly people (United Nations 2022).

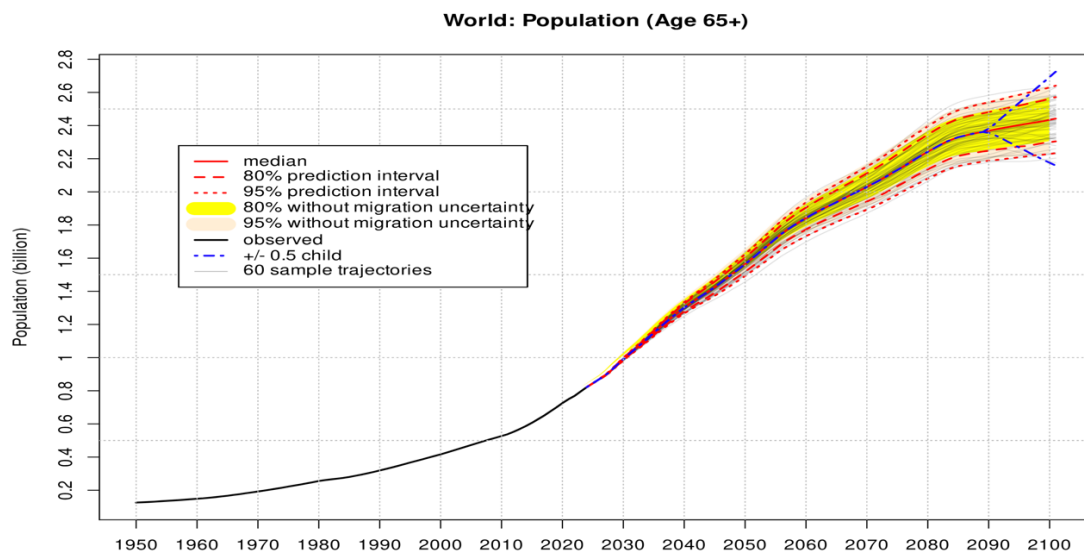


Figure 1. Projected growth curves of the population aged 65 and over worldwide (United Nations 2024)

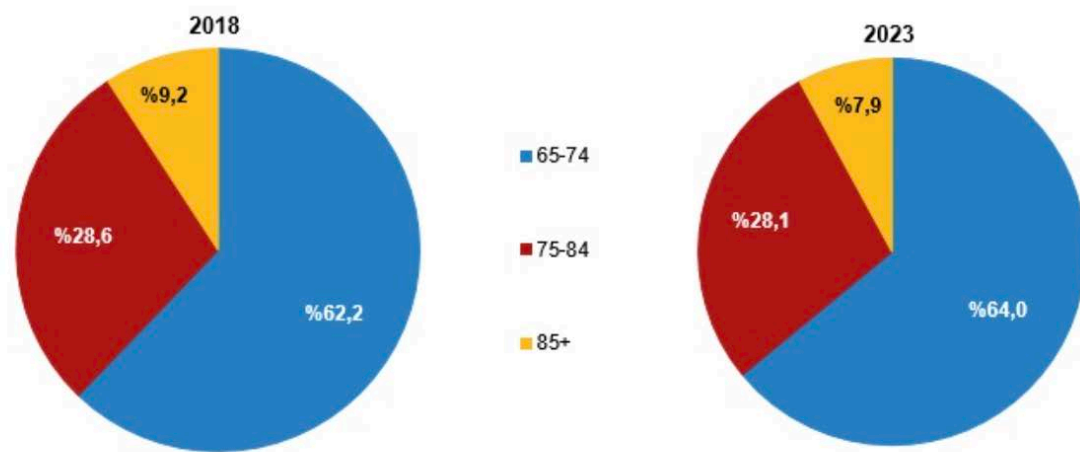


Figure 2. Trends in the proportion of elderly population in Türkiye between 2018 and 2023 (TurkStat 2023)

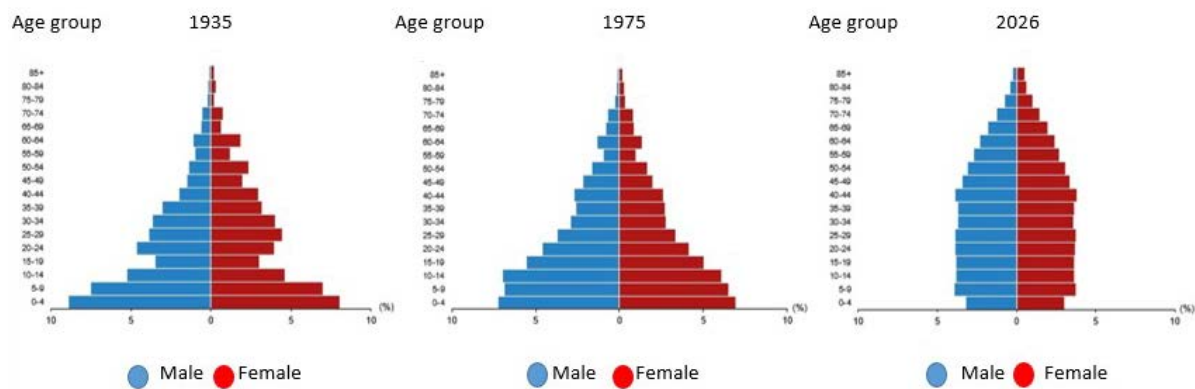
## Profile of the Elderly Population in Türkiye

The profile of the elderly population in Türkiye has undergone significant changes in recent years. Factors such as the ageing trend in Türkiye's overall population structure, increasing life expectancy and declining

fertility rates have led to a significant change in the number and demographic characteristics of the elderly population. According to TurkStat's 2023 data, the proportion of the elderly population (aged 65 and over) in Türkiye has reached 10.2 per cent and is expected to increase gradually. Compared to previous years, the proportion of elderly population increased from 8.8 per cent in 2018 to 10.2 per cent in 2023. These data reveal that the ageing population structure in Türkiye is becoming increasingly evident and that social, economic and health services for the elderly need to be restructured (TurkStat 2023).

The profile of the elderly population is analysed from various perspectives such as demographic characteristics, health and socioeconomic factors. Studies show that the elderly population in Türkiye is mostly concentrated in rural areas. The proportion of women in the elderly population is higher than that of men. Chronic diseases are common among the elderly and this has a significant impact on health services and care needs. It is known that a large proportion of the elderly population is retired and living on pensions. Therefore, it is an important necessity to improve social security systems and services for the elderly (TurkStat 2023). While the youth population rate in the world is determined as 15.5 per cent by 2023, Türkiye's youth population rate is determined as 15.1 per cent. This situation reveals that Türkiye's youth ratio is below the world average and the changes in the demographic structure of the country continue (TurkStat 2024).

**Population pyramid, 1935,1975,2026**



**Figure 3. Trends in the age structure of Türkiye's population in 1935, 1975 and 2023 (TurkStat 2024)**

## Risk Factors for Suicide in Elderly People

Suicide is a lifelong global public health problem. According to the World Health Organisation, approximately 800,000 people die by suicide every year. This statistic means that one person commits suicide every 40 seconds. Suicidal behaviour is a complex and multifaceted phenomenon that does not depend on a single cause and is formed by the combination of factors at different levels such as personal characteristics of the individual, family relationships and social conditions. This situation arises from the interaction of psychological, social and environmental difficulties experienced by the individual and is usually caused by the joint effect of various factors (WHO 2024).

Suicide in elderly people is caused by the complex interaction of psychological, social and biological factors specific to the aging process (Artan and Solmaz 2020). These factors are discussed one by one below.

### Psychological Factors

Mental problems are the strongest determinants of suicide risk in elderly people (Boğan 2024). Depression, dementia, bipolar disorder and alcohol/substance use disorders are among the main factors that trigger suicidal behaviour in elderly people. In addition, having attempted suicide in the past stands out as an important indicator of risk. Emotional states such as hopelessness, feelings of worthlessness, loneliness and helplessness are other factors that increase suicidal tendency (Avci et al. 2017, Maier et al. 2021). In a

retrospective study conducted in Northern Italy, it was emphasised that chronic diseases and mental illnesses strongly affect suicidal behaviour (Carlo et al. 2019). Suicide distribution is considered as a product of the transmission of painful life events as well as biological and psychological factors. In particular, people with chronic diseases or who have lost their physical strength often experience deep psychological suffering, which significantly increases the risk of suicide. Psychological and biological changes, theoretical inadequacies and the presence of common health problems facilitate the development and shaping of depressive symptoms. This suggests that both biological and psychosocial assessments are critical to prevent suicide in older people (Carlo et al. 2019). As age progresses, individuals become more fragile both physically and psychologically. The elderly have to carry the burden of having difficulty in fulfilling their daily functions, along with chronic diseases that lead to risk factors such as depression. Older people may also often have undiagnosed illnesses or untreated depression as a result of the trauma of losing a spouse or family member. It is also recognised that there are many older adults who feel that 'life is no longer worth living' because they have lived long enough or have the impression that their life is already complete. Lack of regular social interaction or loneliness may exacerbate depression and increase the risk of suicide in older adults. Any self-harming behaviour in older age can potentially result in completed suicide. However, these elderly people may show fewer pre-symptoms and may conceal depressive and/or suicidal thoughts (Aslan and Hocaoglu 2014, Ridwan et al. 2022). When we look at the research on this subject, it is emphasised that not all depressed people make suicide attempts, and a subtype of depression dominated by feelings of hopelessness called 'hopelessness depression' is emphasised. Depression in the elderly is often introverted, some sleep and appetite changes, behaviours of not wanting to talk much about their feelings and thoughts, and a depressive state expressed as a 'silent death' can be observed. (Aslan and Hocaoglu 2014).

'Reasons for keeping on living' is an important concept in understanding suicidal thoughts in elderly people. In their study, Lutzman and Sommerfeld found that physical illnesses and meaning in life affected suicidal thoughts among men aged 65 years and older; especially in the younger-older group (65-74 years), meaning in life affected these thoughts in people who reported more physical illnesses, but this relationship was not found in the group aged 75 years and older. It emphasises the importance of interventions targeting 'meaning in life' in reducing suicidal thoughts in elderly people (Lutzman and Sommerfeld 2023). It shows that in the prevention of suicidal thoughts in elderly people, not only medical support to reduce the negative effects of physical diseases, but also psychosocial approaches that develop a sense of 'meaning in life' should be addressed in an age-specific manner. In a meta-analysis of studies conducted with depression scales in Türkiye, no significant difference was observed between depression and age group (Karadağ and Sölpük 2018). On the other hand, the suicide rate in Türkiye was found to be highest in the 75 and over age group (7.43 per 100,000 on average) (Alptekin and Duyan 2019). In a study conducted by Zubaroğlu Yanardağ and Say Şahin (2019), it was found that the anxiety levels ( $2.31 \pm .46$ ) of the elderly people participating in the study were higher than their depression levels ( $2.16 \pm .53$ ). Considering that the scales used in the study are a 4-point scale, it is seen that the average scores obtained for both anxiety and depression are at a moderate level (Zubaroğlu Yanardağ and Say Şahin 2019). Based on these findings, it can be said that the anxiety and depression levels of the elderly people participating in the study are at a moderate level. Although these data show that there is no significant relationship between depression and age, these studies show that other factors, especially anxiety and insomnia, which pose a risk for suicide in old age, are also effective in the increase in suicide rate as age increases. In a systematic review of suicidal behaviours in older age groups, it was emphasised that antidepressants have a limited effect in reducing suicide attempts and attempts, but this treatment should be carefully monitored and administered with appropriate dosage management. This finding points to the importance of careful planning of psychological support and treatment in elderly people (Laflamme et al. 2022).

## Social Factors

During the aging period, factors such as physiological decline, decrease in production capacity, retirement, chronic illness, staying in a nursing home cause individuals to experience difficulties in material and spiritual areas. Rapid changes in every field during the aging process also affect the social

structure and cause the elderly to face physical, mental, social and cognitive problems. This situation prepares the ground for perceiving old age as a social problem. Older people, who were once valued as “wise people” in society, have lost their social status and entered a period of powerlessness and need for help (Akbaş et al. 2020). Social factors, especially the lack of family support, are seen to be both a facilitator for the onset of the disease and a factor that negatively affects the response to treatment in many psychiatric and organic pathologies. In addition, the loss of a relative affects the individual (both as a social and psychological factor). These include factors such as marital status (single, widowed or separated), social loneliness, and living alone (Oon-Arom et al. 2019, Jones and Pastor 2020, Lutzman 2021). There are some criteria that indicate well-being in later life. These include participation in social and leisure activities, hobbies and frequency of interpersonal interactions outside the family, indicating well-being, although this may be limited by physical pain. Previous research shows that subjective perception of health and the number of chronic diseases are also predictors of loneliness in old age. Objective and perceived social isolation has been associated with emotional disorders, especially anxiety and depression among the elderly. Decreased social connectedness, suicidal thoughts and non-fatal suicidal behaviors have been associated with suicide risk in later years. Marriage is known to be a protective factor, while being divorced, widowed or single increases the risk of depression, other mental problems and suicide. In a study by Lutzman et al. (2021), it was found that poor social ties and feelings of loneliness and physical pain increased the risk of suicide, especially in single older men. This finding draws attention to the importance of developing strategies to combat loneliness and strengthen social support mechanisms. (Lutzman 2021). In our country, it was shown that people who were divorced or never married committed suicide more frequently between 2007 and 2016 (Alptekin and Duyan 2019). Although the rates of living alone in elderly people vary according to countries due to cultural factors, it has been reported that the US data are close to ours, although up to 5% of the elderly live alone in Middle Eastern and North African countries (such as Afghanistan, Mali and Algeria) (Ausubel 2020). In our country, suicide rates in elderly people increase as we move to the west, with the highest rates in the Marmara region and the lowest rates in Eastern and Southeastern Anatolia (Baskak and Aslantürk 2022). This situation suggests that it may be related to the fact that the habit of living in extended families is more common in our country as we move to the east. These data suggest that living alone is an important factor for elderly suicide cases in our country. Social isolation and loneliness are among the important social factors that increase the risk of suicide in elderly people with disabilities. The problems of social isolation and loneliness in the elderly deepen when combined with disability. Especially the dependence of disabled elderly people on their caregivers, limited social interaction areas and difficulties in participating in social life are among the main factors that increase social isolation. A qualitative study conducted by Şen and Üstün reveals that disabled elderly people intensely experience feelings of loneliness, helplessness and powerlessness (Şen and Üstün 2024). Cultural activities can be among the important factors affecting the suicide risk of elderly people. In a study conducted in China, the 8.7% decrease in elderly suicide rates with the increase in family associations during the Chinese calendar New Year reveals the protective effect of increased social communication during this period. It was reported that the protective effect was more pronounced especially in regions where daily family friendship was low (Fang et al. 2023). This emphasizes the positive impact of social ties and social support mechanisms in the cultural context on the mental health of older people.

## **Factors Related to Physical Health**

Chronic physical illnesses in older adults may cause psychiatric symptoms to be less noticeable and remain in the background. This leads to a higher likelihood of being diagnosed with chronic minor depression or dysthymic disorder rather than major depressive disorder in older adults. However, these diagnoses are often overlooked. This situation, which is associated with the aging process, may be due to the fact that psychiatric symptoms are perceived as a natural part of aging or that older people are hesitant to express their symptoms. (Aslan and Hocaoglu 2017). This can lead to the progression of untreated depression and increased feelings of hopelessness in elderly people. In particular, chronic physical illnesses and lack of social support significantly increase the risk of suicide in older adults. Therefore, early diagnosis and treatment of depression and other psychiatric disorders in older adults plays a vital role in reducing the

risk of suicide. Health professionals should adopt a multidisciplinary approach considering these risks and it is critical to provide holistic care for the psychosocial needs of elderly people (Aslan and Hocaoglu 2014).

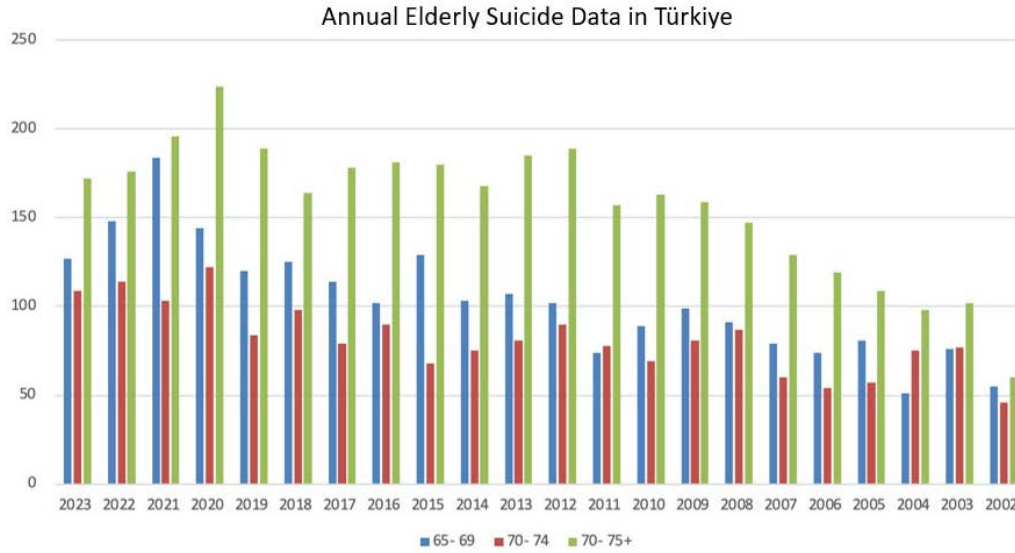
Alzheimer's disease, vascular dementia, Parkinson's disease and cerebrovascular events can lead to cognitive and emotional impairment and increase the risk of suicide in older adults. While Alzheimer's disease and vascular dementia are characterized by cognitive deficits that may lead to depression and suicidal tendencies, Parkinson's disease may increase this risk through motor and emotional symptoms. In particular, it is known that 30-50% of Alzheimer's patients develop major depressive syndrome and suicide risk increases (Duru 2009). Similarly, Parkinson's disease is among the neurological diseases that increase the risk of suicide due to depression and dementia development in advanced stages. The size of the lesion and loss of functionality after cerebrovascular events have been shown to be positively associated with depression. It is also reported that anterior lesions increase the risk of depression. (Robinson and Jorge 2016). Therefore, early diagnosis and appropriate treatment of such neurological diseases in elderly people is critical in reducing the risk of suicide. It is very important for healthcare professionals to regularly assess the cognitive and emotional status of patients with a multidisciplinary approach and provide the necessary psychosocial support (Chen et al. 2021).

The disease brings many mental and social problems such as mental health, social life, family relationships, physical activity and hobbies, work life, financial income and future concerns (Baskak and Aslantürk 2022). For this reason, health problems that increase with increasing age appear as an important cause of suicide for the elderly (Alptekin and Duyan 2019, Ridwan et al. 2022). Especially chronic diseases are known to trigger depression, which is seen as one of the most important reasons leading to suicide (Maier et al. 2021, Kim et al. 2021). Kim et al. reported that the reason for suicide in 37.8% of elderly people was physical diseases (Kim et al. 2021). In a study examining elderly suicides in our country between 2002 and 2018, it was observed that elderly people committed suicide mostly due to their diseases (Baskak and Aslantürk 2022). These data show that deterioration in health status has an important place among the causes of suicide among elderly people in our country. In a study evaluating the risk of suicide in elderly people hospitalized for physical illnesses, 24% of the elderly were found to be at high risk for suicide. The risk of suicide was found to be higher especially in people in the 60-74 age group, who lived alone, used alcohol, had weak religious beliefs, received cancer treatment, had been diagnosed with the disease for a long time, had a history of hospitalization in a psychiatric clinic, and were at risk for conditions such as anxiety and depression (Avci et al. 2017). In a systematic review, it was emphasized that regular physical activity is an important intervention tool for suicide prevention in older adults due to its positive effects on both physical health and mental well-being. This finding suggests that promoting physical activity plays a critical role in increasing the living space available to older adults and reducing the risk of suicide (Laflamme et al. 2022). Chronic diseases are recognized as an important determinant of suicidal ideation in older men. One study found that the presence of physical illness moderated the relationship between meaning of life and suicidal ideation. It was observed that meaning of life decreased suicidal ideation, especially in younger and older groups reporting higher levels of physical illness (Lutzman and Sommerfeld 2023). Physical pain is an important risk factor that increases suicidal thoughts in older people. Lutzman et al. found that the effect of physical pain on suicidal ideation was related to feelings of loneliness and level of social integration. It is known that older adults, especially those who are lonely and less socially integrated, have a high risk of suicide due to physical pain (Lutzman et al. 2021).

## **Elderly Suicides in Türkiye**

Based on data from the TurkStat, the annual suicide distribution of people in the 65-69, 70-74 and 75 and over age groups between 2002 and 2023 is analyzed and shown in Figure-4 below. In 2023, 127 people in the 65-69 age group, 109 people in the 70-74 age group and 172 people in the 75 and over age group committed suicide. An analysis of the data shows that the number of suicides has increased significantly over the years, especially in the 65-69 and 75+ age groups. This increase shows that the proportion of elderly population in Türkiye is increasing over time and the demographic structure is changing. It is noteworthy that the number of suicides in the 75+ age group reached its highest level with 224 in 2020 (TurkStat 2024b).

According to TurkStat data, the most common cause of suicide among people aged 65 and over is chronic diseases. In addition, unknown reasons also stand out. Economic difficulties, especially financial hardship and business failure, are among the reasons for suicide among older people, while family discord and problems with emotional relationships also have a certain impact. Among the general population, men have higher suicide rates than women for all reasons. In particular, men are more likely to commit suicide due to illness, financial difficulties and business failure. These data show that health problems and economic insecurity are important factors that increase the risk of suicide among older people. In addition, men are more affected by socioeconomic and psychosocial factors than women (TurkStat 2024b).



**Figure 4. Changes in the number of suicides among the elderly in Türkiye between 2002 and 2023 (TurkStat 2024b)**

### Characteristics of Suicidal Behavior in Elderly People

According to TurkStat data, the most common method of suicide among people aged 65 and over is hanging. The use of firearms and jumping from a height are among the other preferred methods. Looking at the overall suicide rates, suicide by hanging is the most common method in other age groups as well. Men are more prevalent in suicide cases both among the elderly and in the general population. Moreover, the diversity of suicide methods is more limited among the elderly compared to other age groups (TurkStat 2024 b).

Studies on suicide risk in elderly people living in nursing homes show that loneliness, social support and psychological resilience are determinants in this process. A study conducted in China found that loneliness increased suicidal thoughts, but high levels of resilience and social support reduced this effect. Support from family members and nursing home staff was an important protective factor on the psychological well-being of older adults (Zhang et al. 2021). On the other hand, the mental health of nursing home staff also plays a critical role in the care process of older people. A study conducted in Ireland found that nursing home staff experienced high levels of post-traumatic stress symptoms, moral injury and low mood during the COVID-19 pandemic. A significant proportion of staff reported suicidal thoughts (Brady et al. 2022). These findings emphasize the importance of creating comprehensive care plans to effectively manage the health needs of elderly people in nursing homes and reduce preventable deaths.

### Strategies for Suicide Prevention in the Elderly

Older adults with mental health problems often prefer to see primary care physicians rather than a mental health specialist and find it more comfortable to talk about their mental state with these physicians. Data show that 77% of people who committed suicide utilized primary health care services in the year before



death and 45% in the month before death (Spottswood et al. 2022). However, the relationships between people at risk of suicide and healthcare professionals are of great importance; while a compassionate and careful approach facilitates patients to share their suicidal thoughts, excessive reactions may prevent these disclosures (Richard et al. 2019, Spottswood et al. 2022). Therefore, physicians working in primary health care should receive training to recognize suicidal thoughts early and implement evidence-based prevention strategies. The prevalence of suicidal thoughts in elderly people varies between 1% and 10%, and these thoughts are associated with serious consequences such as poor quality of life and completed suicide. In this context, it is vital that primary health care services assume a more effective role in identifying and preventing suicide risk in older adults (Raue et al. 2014).

In recent years, it has become very important to develop suicide prevention strategies for the elderly. Although these strategies differ from society to society, it is known that they should include certain standards in this regard. Today, suicide rates in the elderly population continue to increase alarmingly worldwide. Therefore, it is important to develop effective strategies to reduce suicidal tendencies and improve the quality of life of the elderly (Aslan and Hocaoglu 2014, Park et al. 2020, Cho et al. 2021).

Among the factors that cause the elderly to withdraw from social life, the end of active work life and decreased mobility caused by health problems stand out. This situation may cause a sense of social exclusion, especially in the elderly living alone, which may increase the risk of depression and suicide (Laflamme et al. 2022, Baskak and Aslantürk 2022). Strengthening support and social connections for the elderly in the community is important in this sense. Research shows that social isolation and loneliness increase the risk of suicide among older people. Therefore, programs and activities that encourage social interaction among the elderly should be organized. In addition, older people should be encouraged to be in regular contact with family, friends and neighbors and to have a reliable support network from which they can receive support.

Depression, anxiety and other mental health problems are common among the elderly, which may increase the risk of suicide. Therefore, it is important to provide appropriate and accessible mental health services for older persons. Health systems should facilitate mental health services for the elderly, encourage mental health professionals to receive specialized training for the elderly, and raise awareness of older people on mental health issues (Szanto et al. 2020).

The Organization for Economic Cooperation and Development (OECD) 2024 report emphasized that the causes of suicide are complex and that mental health problems as well as shocks such as pandemics and financial crises can increase the risk of suicide (OECD 2024). In the report, suicide rates vary across countries. It analyzed the change in standardized suicide rates per 100,000 population in an OECD country between 1980 and 2021. In 2020 (or in the last year), more than 154,000 deaths were reported, which corresponds to approximately 11 suicides per 100,000 population (OECD 2024). The active role of governments in this area includes important factors such as raising public awareness and providing early detection and intervention opportunities. In addition, identifying risk factors and protective factors specific to age groups also stands out as an important step. The WHO report published in 2021 emphasizes that suicide continues to be a global public health problem and results in a large number of deaths worldwide every year. It was stated that countries should develop comprehensive strategies at national level to reduce suicide rates and that these strategies should include important steps such as improving access to mental health services, providing community-based supports, reducing stigma related to suicide and implementing early intervention methods. WHO also states that it is important for different sectors to cooperate in suicide prevention efforts (WHO 2021b).

One of the most important strategies is to conduct awareness-raising campaigns to recognize and prevent risk factors. Some factors in the lives of the elderly may increase the risk of suicide. These factors include chronic diseases, physical limitations, financial difficulties, losses and decline in quality of life. Families and their communities should be informed about how to recognize elderly people at risk of suicide, how to prevent risk factors and how to approach them. In this process, opportunities for the elderly and their families to receive psychosocial support should be increased (Alptekin and Duyan 2019, Park et al. 2020, Cho et al. 2021).

## Protective Factors Related to Suicidal Behavior in Elderly People

There are various protective factors to prevent suicidal behavior in elderly people. These factors play an important role in reducing the risk of suicide by strengthening individuals' ties with life. These can be listed as follows;

1. **Treatment of Psychiatric Disorders:** Effective treatment of psychiatric disorders such as depression is critical in reducing suicide risk. Depression in the elderly is often undiagnosed and untreated (Szanto et al. 2020).
2. **Strengthening Social Ties:** Preventing social isolation is an important factor that reduces the risk of suicide in older adults. Regular communication with family and friends, participation in social activities and community support programs reduce the risk of suicide by strengthening the social ties of elderly people (Aslan and Hocaoglu 2014).
3. **Supporting Physical Health:** Management of chronic diseases and prevention of physical disability improves the quality of life of older adults and reduces the risk of suicide. Regular health checks and appropriate medical care play an important role in this process (Duru 2009).
4. **Crisis Intervention Initiatives:** Providing professional support in crisis situations (e.g., loss of a loved one, financial difficulties) is effective in reducing the risk of suicide. Crisis intervention programs and counseling services can be supportive in this process (Aslan and Hocaoglu 2014).
5. **Strengthening Reasons for Survival:** Supporting individuals' survival and coping beliefs can reduce suicidal thoughts. Responsibility towards family, moral/religious barriers and beliefs about the meaning of life can help older people avoid suicidal behavior (Eskiyurt and Özkan 2020).

## Conclusion

In conclusion, recommended strategies to reduce suicidal tendencies in the elderly include strengthening social support and connections, preventing social isolation and facilitating access to mental health services. International developments should be followed for the development of national suicide prevention programs. As a result of these developments, national programs should be developed. These programs should ensure the identification of protective risk factors as well as the reasons for survival.

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