Suicide among Older Adults

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Key Highlights:

- Although suicide attempts are more frequent among adolescents and young adults, completed suicide rates are higher among older adults, which poses a serious public health concern.
- A major risk factor of suicide in older adults is having an underlying psychiatric illness, notably a depressive disorder, which often goes undiagnosed and untreated in older adults due to lack of appropriate screening in primary care settings and reluctance to visit a mental health specialist.
- A diagnosis of a physical illness associated with loss of independence (e.g., malignancy) is associated with elevated suicidal risk in older adults, notably within 3 years of the diagnosis.
- Social factors particularly relevant to older patients including retirement, grief, social isolation, and financial strain, are associated with increased suicidal risk.
- Preventative strategies include improving detection and referral for affective disorders, maximizing resilience and enhancing social support for older adults. Innovative technology-based platforms have emerged as effective strategies to monitor mood and suicidal thoughts, while providing support and treatment options in this population (i.e., mental health consultation, counseling, etc.).

Introduction

According to the National Center for Health Statistics (NCHS), nearly 45,799 American individuals died by suicide in 2020, which is a 30% increase compared to the year 2000 [(1)]. The Center for Disease Control (CDC) reported that 12.2 million adults in the United States considered suicide in 2020; 3.2 million planned it, and 1.2 million attempted suicide [(2)]. Suicide has a substantial public health impact, and can be preventable. Although suicide attempts are more frequent among adolescents and young adults, completed suicide rates are higher among older adults. Older adults are not a homogeneous group: the "youngest old" are between the ages of 65 and 74; the "middle aged" are between the ages of 75 and 84; and the "oldest old" are over the age of 85. The CDC (2020) reports that men over the age of 75 had the highest suicide rate (40.5 per 100,000) compared to other age groups [(3)]. We will review the risk factors of suicide among older individuals, as well as preventative strategies in this population.

Risk factors

Among all predictors of suicide in older adults, psychiatric disorders emerge as the most robust and most common. Psychiatric illness is present in 71-97% of elder suicides, with affective disorders being the most common, in particular major depression [(4)]. Unfortunately, affective disorders are often underdiagnosed and undertreated in primary care settings. Other mental disorders associated with high suicide risk are bipolar disorder, anxiety disorders, neurocognitive disorders/dementia and alcohol use disorder [(5)]. Individuals with dementia had an increased risk of suicide within one year following diagnosis compared to those without dementia. While patients with severe dementia are usually protected against suicide given their inability to organize a suicidal plan, those with early dementia may maintain capacity to carry out a suicidal plan due to better cognition and insight into their illness [(6)].

Other predictors of suicide in older adults include physical illnesses, notably within three years of diagnosis, and when associated with loss of independence. Elevated suicide risk has been associated with lung cancer, gastrointestinal cancer, breast cancer, genital cancer, bladder cancer, lymph node cancer, epilepsy, cerebrovascular diseases, cataracts, heart diseases, chronic obstructive pulmonary disorders (COPD), gastrointestinal disease, liver disease, arthritis, osteoporosis, prostate disorders, male genital disorders, and spinal fractures within three years of diagnosis compared to individuals without these conditions [(7)]. Also, social factors including grief, social isolation and financial constraints are risk factors for suicide by triggering depression or other psychiatric disorders.

The method of suicide varies according to gender, country, and culture. Hanging, pesticide self-poisoning, and firearms are the most common methods irrespective of country-specific patterns; in western countries poisoning is the most common in older adult women, and firearms are the most common for older adult men [(8)].

A previous suicidal attempt was associated with an almost 20-fold increase in the odds of another suicidal attempt [9]. Male gender, greatest severity of lifetime suicidal ideation, and deficits in cognitive control independently predicted fatal/near-fatal suicidal behavior in older adults, while introversion, history of suicide attempt, and earlier age of onset of depression predicted less lethal suicidal behavior [10]. In comparison to suicide attempts in younger persons, attempts in older adults are more deliberate and more likely to succeed. Although females are shown to have a greater number of suicidal attempts, males have higher rates of completed suicide. Older adults often have underlying health conditions which reduce odds of survival in comparison to suicidal attempts in younger persons [8].

Preventative strategies

The first approach involves the diagnosis and treatment of psychiatric disorders to prevent suicidal behavior. Research indicates older adults typically communicate to their general practitioner their suicidal thoughts within one month prior to the attempt, and only 20% of older adults would have consulted a psychiatrist [11]. Hence, there is a need to train primary care physicians about diagnostic criteria and management of affective disorders in older adults, in addition to implementing a systematic screening system for suicidal thoughts and behaviors with an appropriate referral. The Saint Louis University (SLU) AMSAD depression scale is a short (5-item) screening and diagnosis tool for older adults with or without dementia [12, 13], which is recommended to general practitioners for use in busy clinical settings (*Figure 1*). Other preventive strategies include phone hotlines, risk assessment tools, and preventing access to common methods of self-injury (e.g., loaded firearms, illegal drugs, bridges, high places, etc.). Increasing accessibility to counseling services is also key. Among psychotherapy techniques, cognitive behavioral therapy (CBT) has been found to be the most effective in older adults, either by targeting the suicidal thoughts directly or the symptoms of anxiety and depression [14].

AM SAD	Question	Frequency (Points)			Points scored
A (Appetite)	Within the past 2 weeks, how many times have you experienced **unexplained change in appetite?**	Never (0)	One day (1)	More than one day (2)	
M (Mood)	Within the past 2 weeks, how many times have you experienced **unexplained lowered mood on a day to day basis?**	Never (0)	One day (1)	More than one day (2)	
S (Sleep)	Within the past 2 weeks, how many times have you experienced **unexplained disturbed sleep?**	Never (0)	One day (1)	More than one day (2)	
A (Activity & Energy)	Within the past 2 weeks, how many times have you experienced **less energy or not being interested in performing your usual daily activities?**	Never (0)	One day (1)	More than one day (2)	
D (Death or worthlessness)	Within the past 2 weeks, how many times have you experienced **feelings of worthlessness or guilt or that your life is not worth living?**	Never (0)	One day (1)	More than one day (2)	

Fig. 1 The Saint Louis University AMSAD assessment tool for depression in older adults with or without dementia [12, 13].

Another essential pillar of suicide prevention in older adults is providing social support and companionship. The CDC identified promoting connectedness at personal, family, and community levels as a key strategy to prevent suicidal behavior at all ages, and in particularly older adults who more commonly suffer from social isolation [4]. Remote interventions have been frequently used during the COVID-19 pandemic. Through online support groups, web chatting, and increased virtual awareness campaigns, communities have rallied volunteers to assist older individuals in strengthening social networks, and providing psychoeducation and referral information. Telecommunication studies have shown that face-to-face contact may not be required for successful mental health care interventions. In vulnerable, older adults who may be struggling with transportation and/or mobility issues, telephone outreach programs are promising strategies for providing social support, improving resilience, managing mental health problems, and preventing suicidality. Tailored web-based, interactive programs focusing on positive aging, quality of life, social skills, sense of belonging, reasons for living, hope, meaning in life, religiosity/spirituality, and even humor are innovative and promising ways to prevent suicide in older adults [15].

In a qualitative pilot study, older adults reported being motivated to use digital technology to support their mental health, promote self-reliance, avert loneliness, and improve their mood. Applications and websites must however

address accessibility and universal, simple design features to maximize their usability, in order to reach as many older users as possible, rather than assuming prior knowledge in this population [16].

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