

Depressive disorder and suicide in the older population: a literature review of suicide prevention in this age group

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ABSTRACT

Introduction: Depression affects 8-12% of the population. This figure increases to 20% for older people. Risk factors for depression in older people include: social isolation, poverty and bereavement.

Worldwide, the highest rate of suicide is seen in those over the age of 75. The older population often opt for more violent methods, and have a higher chance of completing a suicide attempt.

Method: A literature review carried out in November 2014 of studies researching the success of various suicide prevention interventions.

Results: Three older age suicide prevention programs were compared. One used a telecommunications intervention, one a community based approach and the last a multifaceted program with GPs acting as ‘gatekeepers’, referring appropriate patients. All the studies proved successful, reducing suicide rates by 74% on average. However the success was limited to women.

Discussion: Older women are more open to interventions such as these and more likely to seek help than men. More research is needed to find out how best to target high risk men.

Suicide prevention in older people is a neglected area. The Department of Health’s suicide prevention strategy, published in 2012, continues to focus on suicide prevention in younger age groups.

More training may be needed to help physicians identify high risk individuals. The somatic manifestations of depression may be overlooked as ageing and hence patients not appropriately identified.

INTRODUCTION

Depressive disorder in older people

Depression affects 8-12% of the population in any year, and the World Health Organisation (WHO) predicts that by 2020 depression will be the second leading contributor to the global burden of disease¹.

The number of older people is increasing due to prolonged life expectancy and declining birth rates². Rates of depression among the older population are higher than the general population. In the UK it is currently estimated that 1 in 5 of those over the age of 65, and 2 in 5 of those in care homes are depressed¹. Cultural bias may suggest depression to be a natural feature of ageing. This may hinder the diagnosis of depression in the older age group; yet later life depression is a pathological condition warranting treatment³.

Many factors contribute to the high levels of depression among the older population; these include bereavement, worsening physical health, social isolation and poverty^{4, 5, 6, 7, 8}. It is suggested that men in particular have somewhat unrealistic expectations and limited strategies in place to deal with difficulties they may encounter in later life³. Furthermore, this generation grew up in an age in which mental health received even more stigmatisation than it does today, often viewed as a 'forbidden topic'. These ingrained attitudes remain, meaning many older people are more reluctant than their younger counterparts to admit feelings of depression and seek help^{9, 10}.

Depression in older people can be difficult to identify due to the wide overlap between symptoms associated with ageing and poor physical health, and the somatic manifestations of depression such as low energy, reduced appetite and a disturbed sleep cycle^{3, 5}. The Geriatric Depression Scale (GDS) is a 30 item questionnaire often used to diagnose depression in older people^{11, 12}. The GDS was created in 1983 and the questions tailored for older people. The questions are phrased in an understandable manner and do not address somatic complaints. To also accommodate for a degree of cognitive decline, the answers require a simple yes or no response¹². The GDS has also been adapted to a 15 item short form, to compensate for fatigue and poor concentration¹².

Suicide in older people

Suicide is a complex thought process, beginning as an initial idea and progressing through planning behaviour up to an attempt. Importantly however, this pathway can be interrupted at any stage and suicidal ideation does not inevitably result in suicidal actions^{2, 8, 13}. Each year over one million people worldwide die by suicide, and in England the suicide rate is 10 per 100,000 people⁴ (4,513 suicides in England in 2012¹⁴).

Suicide is the most common cause of death for men under the age of 35 in England^{1, 15}. However WHO claims on a worldwide level, the highest rates of suicide are seen in those over the age of 75^{4, 8, 16}. With the number of seniors in the world's population increasing significantly, by 2020 suicide is expected to be the tenth most common cause of death in the older population^{8, 16}.

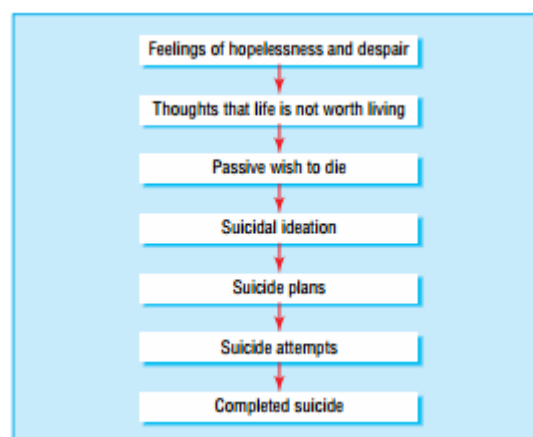


Figure 1- model of suicidality¹³

Case study: Mr A is a 70 year old male who has never been known to mental health services. He was admitted to A&E following a potentially lethal overdose of oxycodone tablets. He left a suicide note describing how he could no longer cope with his deteriorating physical health and loneliness. The note was posted through his neighbour’s letter box; his neighbour however uncharacteristically returned back to the house late that evening, found Mr. A’s note and contacted the emergency services. Mr. A was taken to A&E in a state of reduced consciousness.

He was reluctant to accept medical help; he refused observations and became aggressive when staff tried to administer intravenous medication. It was eventually deemed he lacked capacity due to suicidal ideations, and was treated against his will.

When told the overdose could have been lethal he responded saying, ‘I know I will die, leave me alone, I want to die’. Mr. A stated he was not regretful of his actions and wished it had have been successful. He said ‘I am in pain; I am failing all over the place. I have just had enough. I am 70, all my friends are gone’.

Mr. A had type 2 diabetes and suffered with diabetic neuropathy which caused him a great deal of pain. He was concerned that he has recently gained weight and claimed all of his friends had passed away. There were no protective factors identified for Mr. A. He had contact with his GP a year previously regarding low mood but received no treatment for this.

Mr. A was assessed under the Mental Health Act and detained under section 2 due to risk to self; he was admitted to an old age psychiatric ward for further assessment.

A further worrying point regarding suicide in older people surrounds the ratio between attempts to completed suicides^{11, 17}. The ratio of attempts to completions is worryingly high, estimated at around 4:1 respectively, compared to the much lower ratios seen in the general population of 8-15:1, down to only 200:1 for the young¹⁷. Studies have also shown older people often use more lethal and violent methods than the young, which is in keeping with their high attempt to completion ratio^{11, 16, 17}. Data from the United States (US) displayed

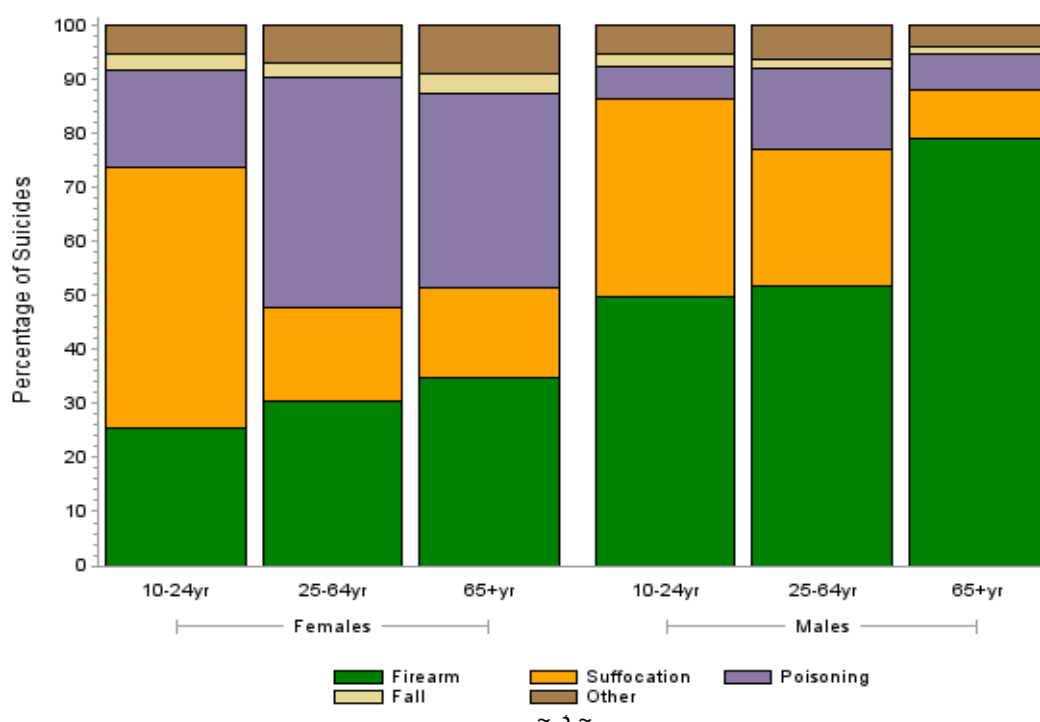


Figure 2- data from the US showing the different methods of suicide used by men and women of different age ranges¹⁸

graphically, compares the different methods of suicide used by different age groups¹⁸.

As the graphs show, for both sexes, the use of firearms, the most violent of the methods listed, increases with age. The figure for men over the age of 65 is most shocking, with firearms used as a means of suicide for 79.1% of this category. This could represent the fact that many of these men will have been involved the Vietnam War and hence are likely to be comfortable with operation and ownership of such equipment. Yet nevertheless, as shown in other studies, it demonstrates an increased tendency towards the use of more lethal methods, than younger age groups¹⁸.

As the numbers of suicides in older people is set to increase in the coming years, research into how best to prevent older age suicide is needed. This study aims to review the available literature regarding older age suicide prevention programs and compare the success of different interventions. The aim is to enable conclusions to be drawn regarding suicide prevention programs, and produce clinically relevant results.

METHOD

A literature review was carried out. The University of Liverpool's online database provided access to articles from sources including: the British Journal of Psychiatry, Science Direct, PsycARTICLES and Wiley Online Library, all of which provided useful results.

The search was carried out in November 2014. The terms used for this search were: 'older', 'elderly', 'depression', 'suicide' and 'prevention'. All language and years of publication were included. Only articles published in peer reviewed journals were deemed suitable.

All studies focused on suicide prevention specifically in the older population. 65 years and older was used as the arbitrary cut off for inclusion in this review¹⁹. The primary outcome of the trial had to be reductions in actual number of suicides; this was to make comparison between the successfulness of different interventions less subjective.

The search yielded a number of results, and relevant articles were reviewed to assess their suitability for inclusion.

RESULTS

Three articles fitted wholly with the specified criteria. Each presented different and interesting approaches to older age suicide prevention programs.

De Leo et al carried out a study on older age suicide prevention in Northern Italy. This study centred on a telecommunications service provided to 18,461 participants over an eleven year period²⁰. This service was referred to as 'Tele Help-Tele Check'. Participants were recruited via referrals from General Practitioners (GPs) or social workers. Service users were provided with an alarm device, which triggered a pre-established support network- 'Tele Help'. The 'Tele Check' element consisted of welfare monitoring and emotional support provided from trained staff via twice weekly telephone conversations. Furthermore, users were provided with a 24 hour phone number to access help in an emergency. The study compared suicide rates in users of the 'Tele Help-Tele Check' service, compared to suicide rates in the corresponding general population in Veneto²⁰.

In this study, the intervention cohort had 6 suicides observed over eleven years. This is significantly fewer than the expected figure of 20.86, meaning the mortality was only 28.8% of expected²⁰. As a secondary outcome, the researchers found a significant reduction in the

requests for GP home visits and hospital admissions by service users. The greatest success was in women, with the observed rate being 5.99 times lower than expected, however women were overrepresented in this study, making up 84% of the population²⁰.

Chan et al produced a study on suicide prevention in Hong Kong²¹. This was a government funded scheme and patients were enrolled from October 2002 to May 2007. The study was multifaceted, operating at two levels: primary care and old age psychiatry services. The pathway involved 'gatekeepers' i.e. GPs, who were trained in identifying at risk cases. Each identified patient was assigned a care manager, who arranged an urgent psychiatric review, and offered follow up as clinically indicated. The care manager was in regular phone contact with the patient and contactable in an emergency. The study compared the suicide rate in the intervention cohort to a pre-intervention cohort, both of which consisted of patients with an index suicide attempt. Each patient was followed for two years²¹.

This study had a second part comprising analysis of population mortality statistics. The authors collected data on the number of suicides occurring in people over 65 from 1986-2007 using Hong Kong Government mortality statistics derived from the Coroner's Court. On analysis they separated results by gender and age: 'young-old' (65-84 years), and 'old-old' (85 years and over)²¹.

The intervention group consisted of 351 suicide attempters, and the pre-intervention group were a historical cohort from a previous study on late life suicide consisting of 66 suicide attempters aged over 65²¹. The pre-intervention group had no liaison with 'gatekeepers' and did not have the care management component. In the pre-intervention group there were 5 observed suicides equating to 7.58%, and in the intervention cohort there were 7 suicides equating to 1.99%, meaning the two year mortality was much lower in the intervention group. The authors also looked at rates of attempted suicides in the two groups and found no significant difference. However, they acknowledged that if suicide attempts were not worthy of clinical attention, then in both cohorts they were likely to be underreported²¹.

The second part of the study, looking at population level data, found that the suicide rate only dropped significantly in women aged 85 and over from 2002 onwards. No statistically meaningful downward trend was observed in any of the other age or gender categories²¹.

As the pre-intervention cohort was historical, in this study there was limited control of baseline characteristics. The pre-intervention group included significantly more people with risk factors for suicide such as: living alone, GDS score ≥ 8 and an ICD-10 diagnosis of depressive disorder. The authors state however that the baseline differences were not significant when analysed via Poisson regression, but the difference in rate of suicide between the two cohorts was significant²¹.

Oyama et al researched the success of a suicide prevention program in Yuri Town, in rural Japan²². Asian communities such as in Japan and Hong Kong have ageing populations and high rates of old age suicide, making them good populations on which to base such research. The study was based on a community orientated approach to suicide prevention. It consisted of three separate components: mental health workshops, group activity programs and encouragement of self-screening using the GDS. Participants were shown how to identify signs of low mood and when to consult services. The group activity programs meant participants were encouraged to meet and interact with people in similar situations to themselves. The results of the study were compared to a local area chosen for its similar rates of unemployment and income levels²².

Success in this study was seen exclusively in women. In this gender category there was a 76% reduced rate of suicide compared to that of the similar population. The results for men remained almost completely unchanged²².

DISCUSSION

The three interventions described all proved to be successful, with reductions in the rate of suicide averaging at 74%. The telecommunications study also noted a reduction in the need for hospital admissions and GP visits. This is important for considering the economic viability of such interventions. However, the study by Chan et al, looking at the success of the intervention on a population level, noted the only significant reduction was in women over 85²¹. This suggests the study would need to be on a larger scale to impact all age and gender categories.

This literature review produced studies that met the inclusion criteria for this report, and which interestingly studied older age suicide prevention from different perspectives. However, research specifically on old age suicide prevention is a much neglected area⁸. Had this search been carried out on suicide prevention in younger adults, it would have yielded a much higher number of results⁸. There needs to be more research, and larger studies, focusing on older age suicide prevention. Thus more conclusions could be drawn from a wider evidence base, and old age psychiatry services would be better equipped to prevent older age suicides in the future.

The Department of Health's strategy for suicide prevention in England published in 2012, acknowledges suicide in older people to be a problem, particularly in men over 75. It also states how the problem is set to increase in the future. The first suicide prevention strategy in England, published a decade earlier, had notable success and suicide rates were at their lowest level for 150 years in 2007, prior to the economic difficulties⁷. Following on from the first suicide prevention strategy, despite the rates for men under 35 years having fallen, the Department of Health plan to keep their efforts focused on this age group. This is due to the number of life years lost with each suicide in a young person.

Across the board, the suicide prevention strategies discussed all had notably more success with women. Haste et al, 1996, stated high risk women are more likely than men to consult their GP before committing suicide²¹. A study by Canetto et al, 1997, also found that women with personal difficulties employ a self reflective coping style, whereas men are more likely to opt for distraction techniques²⁰. This suggests women would be more receptive and open to services such as those which require active participation. Unfortunately the results do not allow any assumptions to be made about the success of such schemes in men. In England, of the older population, males over 75 have the highest rates of suicide. More research is needed to identify how best to target and engage specifically with this high risk group.

The suicide prevention programs mentioned, on the whole focus on reducing the risk factors for suicide. The development of positive ageing, coping and resilience strategies are relatively unexplored potentials for older age suicide prevention interventions⁸.

There is little in the literature about the correlation between how the media report suicide in older people, and the subsequent impact it can have. This would be an interesting area for future research. It could be beneficial to see mental health discussed more openly among this age group who place particular stigmatisation on the topic. Removing this taboo and encouraging media platforms that target this age group to openly discuss issues such as

depression or suicide could encourage the older generation to admit feeling low in mood or having suicidal ideations, and seek help.

One study of older age suicides in the US found that 70% of victims presented to primary care services within one month of their death^{3, 11}. This suggests primary care providers may be somewhat ineffective at identifying depression and suicidal ideation in older people³. The study by Chan et al with trained 'gatekeepers' e.g. GPs, identifying people at risk who could benefit from intervention proved successful²¹. If more formal training was available for physicians, in particular GPs, this opportunity to prevent suicide could be better utilised and patients in need referred quickly to the appropriate service.

There is little in the literature about substance misuse and its link to suicide in older people. Substance misuse was seldom listed as a risk factor for suicide in older people, and it was often stated to be more of concern in younger people. However alcohol and substance misuse, particularly in the high risk male category, is a concern. Often overlooked and underreported, it would be beneficial for more research to be carried out in this area to clarify the strength of the correlation²³.

CONCLUSION

The three older age suicide prevention programs all attempted to reduce the rates of older age suicide in different ways. All of the interventions produced promising results, especially for women.

When considering the number of life years lost and the reaction of society to the news of an untimely death, it is partly understandable that the Department of Health continue their efforts on suicide prevention in younger people. It is however very important that this is not to the detriment of the care of the older members of our society- many of whom are dealing with severe depression, poverty and bereavement, and very often coping alone. As aforementioned, the number of older age suicides is set to increase. To ignore and not address this issue is wrong. There is a lack of research in this area and scope for more work to be done. This report has however shown that suicide prevention strategies in older people can produce very promising results.

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