The relation between social isolation and increasing suicide rates in the elderly

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Abstract

Purpose – Suicidal attempts and thoughts are particularly relevant to the health of the elderly and can impact not only the individual, but family, friends and spouses as well. This topic is important for the gerontological research community, particularly as it relates to social isolation and the feeling of loneliness, common in this population group. The purpose of this paper is to investigate new knowledge about the relationship between an increased risk of suicide in the elderly and social isolation or loneliness.

Design/methodology/approach – An extensive search was conducted to find relevant studies to answer the research question. Database research was done in PubMed and PsycINFO for relevant studies within the last 10 years. The title and abstract of relevant articles were screened before the full-text was acquired.

Findings – In PubMed 163 studies were identified, and in PsycINFO 66 studies were identified. After a thorough screening, nine studies were found to be appropriate for this study.

Originality/value – It is not clear which risk factor leads to an increase in suicidal thoughts and attempts, however most studies contemplated loneliness and isolation as a covariant. A causal link between the concepts is not simple. Nevertheless, loneliness and isolation seem to be relevant factors for suicidal ideations.

Keywords Suicide, Loneliness, Risk factors, Social isolation, Aged, Suicidal ideations

Paper type Literature review

Introduction

Suicide is an important and grave concern in every country. The World Health Organization (WHO) considers suicide a global issue and estimates that 800,000 people die by suicide each year (WHO, 2017). In 1998, suicide “was the cause of 1.8% of the world’s 54 million deaths” (Ojagbemi et al., 2013). Across all age groups, American surveys reported over 42,000 suicide attempts per year (Steele et al., 2017). And while suicide is an issue of great importance and concern for all age groups, it is of particular concern for the elderly as the likelihood for a suicide attempt is two to three times higher for those who are 75 years or older when compared to younger demographic groups (Ojagbemi et al., 2013).

The risk factors for a suicide attempt are diverse and are often attributed to a reaction to a life-crisis. Although the data show that suicide occurs almost equally in high- and low-income groups, it has been shown that other factors, such as abuse, social isolation and violence, are related to a higher likelihood of suicide attempts amongst individuals (WHO, 2017). For the elderly, cerebrovascular diseases have been found to be a higher risk factor for women (Chan et al., 2014), but there are still few theoretical explanations for the empirical data that shows the higher risk factors for suicide attempts for the elderly (Stanley et al., 2016).

Suicide attempts, or suicidal behavior, is an important topic for the gerontological scientific community. This paper will explore the link between suicide in the elderly and feelings of solitude or loneliness, how they are connected, how strong the association between the two is, and what current research is available on the topic.
Theoretical background

Why is it important to talk about suicide and the reasons behind committing suicide?

To begin with, it is important to clarify which terms are used to describe this phenomenon, including: suicide, loneliness, social isolation and solitude. Suicide is defined as an act of self-homicide; “the act of killing oneself deliberately, initiated and performed by the person concerned in the full knowledge or expectation of its fatal outcome” (WHO, 2017). The terms loneliness, social isolation and solitude will be further discussed below.

In her paper, Schaller (2008) describes different variables in relation to suicidal behavior. In addition to personal factors, the author describes environmental determinations which burden the individual and may be high risk factors for suicide. Specifically, exclusion and solitude are factors cited that may promote suicidal behavior in the elderly (Schaller, 2008). Solitude was also looked at as a potential risk factor for suicidal thoughts in a study by Endo et al. (2017). In this study with more than 17,000 participants, researchers investigated the preference for solitude in students. Solitude was identified as a risk factor for suicidal thoughts, specifically in adolescents (Endo et al., 2017). In this study found that the prevalence of solitude increased with age, and it also found that the prevalence of social isolation was greater with boys. Importantly, this study did not look at data on suicide attempts or actions, but rather looked at suicidal thoughts or ideation. It also focused on adolescents, rather than elderly participants (Endo et al., 2017).

In a systematic review conducted over a 25-year period, Mezuk et al. (2014) examined the data of suicide attempts in facilities for older people, especially long-term care units. They identified that suicidal thoughts are common amongst residents of long-term care facilities. Two notable factors for suicidal risk in this study were social isolation and loneliness. Other factors included depression, health problems and functional decline (Mezuk et al., 2014). Similarly, results from a study of Australian nursing homes by Murphy et al. (2018), identified 142 suicides committed between the years 2000 and 2013, where loneliness was identified as one of the major life stressors which led to suicide among the residents. Moreover, loneliness is said to be a predictor for suicidal ideation by Chang et al. (2017).

Generally, research on suicide distinguishes between isolation and loneliness. While loneliness is defined “as a personal and a social state with a variety of possible causes” (Victor and Sullivan, 2015), isolation refers to a more physical issue, i.e., a lack of regular contact with other people – it can also be understood as solitude. These understandings of loneliness, solitude and isolation formed the foundation of the following literature review.

Methods

To answer the question, “Do social isolation and loneliness in the elderly lead to increased suicide rates?” a literature review was conducted using PubMed and PsycINFO.

All articles were identified using their titles and abstracts. Searches were conducted for studies on the topic of committing suicide, or suicidal thoughts and ideations in the elderly, with one of the examined criteria in the study being loneliness, solitude, or social isolation. Articles which did not target people over 60 years of age were excluded, as were reports about methods and instruments to identify loneliness or suicidal ideations, suicide risk or similar keywords.

The literature review was conducted in May 2018 and began with a search for relevant keywords (see Table I). A more detailed outline of the databases, research strategies, and combined keywords can be found in Table II. The PubMed search produced 163 results, of which 27 were determined to be critical for the research question after reviewing the abstracts. The PsycINFO search also produced 163 results. Filters for article from “academic journals” and between “2010 and 2017” were applied, revealing 66 results critical for the research question.

A total of 19 studies were determined to have potential suitability for the research question. Of these 19 studies, ten were excluded because they did not make a direct contribution to answering the research question. One study was a methodology paper and another used an unclear methodology to measure the variable of loneliness. The other eight studies that were
excluded concerned either a younger population (under 60 years of age) or emphasized other variables that were not relevant to the research question.

Ultimately, nine full-text results were found that could be used to help answer the research question. Figure 1 shows the complete process of the literature search. The next section will present the results of this search.

Results

The first study to be discussed is Van Wijngaarden et al.’s (2015) qualitative study on the life context of people who were nearing the end of their life and were thinking about the option of assisted suicide. In this study, researchers conducted 25 in-depth interviews with participants who were over 70 years old and described different aspects of their phenomenological perspectives (Van Wijngaarden et al., 2015). In this study five factors were found. One of these factors was “a sense of aching loneliness,” described as a feeling of loneliness, expressed by every participant, that could be consciously or involuntarily occurring (Van Wijngaarden et al., 2015).

The Ibadan Study of Aging (ISA), was a longitudinal study on the mental and physical health status of 2,152 elderly people in Nigeria, where the researchers examined predictors for suicide ideations and suicide attempts (Ojagbemi et al., 2013). To measure suicidal ideation, the authors used the 3rd Composite International Diagnostic Interview (CIDI 3.0) tool, developed by the WHO. The data analysis was completed using logistic regressions analyses. The cohort had a similar distribution between males (46.2 percent) and females (53.8 percent). The mean age was 75.06 years (SD 9.2 years). The results of this study found that 99 persons had thoughts about suicide, 20 persons talked about suicide plans in the past, and six persons had a suicide attempt in their lifetime (Ojagbemi et al., 2013). Between suicidal behavior and other variables

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**Table I** Keywords

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<th>Block 1</th>
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<td>retired</td>
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<td>solitariness</td>
<td>suicide behaviour</td>
<td>ageing</td>
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<td>suicide behavior</td>
<td>aging</td>
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<td>loneliness</td>
<td>attempted suicide (PsycINFO)</td>
<td>elder people</td>
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**Table II** Database research

<table>
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<th>Full text = n</th>
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<td>163</td>
<td>27</td>
<td>18</td>
</tr>
<tr>
<td>PsycINFO</td>
<td>suicide OR suicide attempt OR suicide behaviour OR attempted suicide AND elderly OR ageing OR aging OR elder people OR elderly people OR older people OR retired OR geriatric AND social isolation OR isolation or solitariness OR solitude OR loneliness Filter only academic journals Period 2010 – 2018</td>
<td>66</td>
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(e.g. age, sex, education and income), this study did not find any correlations. The only association that was found was between participants who had lost their spouse and suicide risk. Amongst those who had lost their spouse the risk for attempted suicide was five times higher than amongst participants who were still married or whose spouse was still living. It can be assumed that the loss of a spouse increases the likelihood of isolation and, relatedly, loneliness. This may help to explain a correlation between the higher risk for suicide attempts in the elderly compared to younger people as the elderly will be more likely to have lost a spouse and thus experience the loneliness associated with such a loss (Ojagbemi et al., 2013). A further factor identified was the issue of income. In rural communities in Nigeria, the younger population often move to other places with more opportunities, resulting in a thinner social network and a higher risk for social isolation of older people who remain in the region (Ojagbemi et al., 2013).

In the Swedish Gerontological Study of Aging, researchers looked at factors which lead to suicide attempts in the elderly. They interviewed 103 people over the age of 70 who were in hospitals after a failed suicide attempt and this group was compared with a control group (Wiktorsson et al., 2010). In this study, age and sex were balanced (age 79.7; female, 55.0 percent) Similar to the ISA, it was shown here that most suicide attempts occurred when the participant did not have a partner, or if they were living alone. Another factor that was identified was psychiatric history. More than half of the participants who made a suicide attempt had a psychiatric history and two-thirds had been diagnosed with major depression, compared to the control group where only one-tenth had a psychiatric history. Feelings of hopelessness and loneliness were also identified as factors: 58.4 percent of the patients reported feelings of hopelessness and 60 percent reported feelings of loneliness, compared with the control group, where only 17.6 percent reported feelings of either hopelessness or loneliness (Wiktorsson et al., 2010).

Though not everybody with suicidal thoughts commits or even attempts suicide, the question arises as to which factors operate to prevent suicide? This question interested Huang et al. (2017) who explored it in their study. In this qualitative study, the authors used an interview guide and structured questionnaire to understand suicide ideation in 32 participants over 65 years of age.
In 49.6 percent of cases, loss of respect, or support, of family members was one reason for suicide ideation. Feelings of loneliness were also found to occur in a stable family structure when the participant had a lack of connection within the family which led to suicidal ideations (Huang et al., 2017). For 16 participants, chronic disease was a reason for contemplating suicide. Across these 16 participants, 87.5 percent had a depressive diagnosis. The limitation of this study was the small number of participants, especially when compared to the Survey of Health, Aging, and Retirement in Europe (SHARE), a study which included 6,791 participants over 75 years of age from 12 European countries. SHARE is a multinational study with more than 45,000 participants from 15 different European countries concerning people over 50 years (Saias et al., 2012). The following studies looked at participants from different data waves of SHARE, which is the reason for the different number of participants in both studies despite data coming from the same source.

With the aid of a multi-regression analysis, Stolz et al. (2016) examined individual and social risk factors in the elderly for passive suicidal ideation using participants from data waves four and five of SHARE. An important feature of this study is that it offers a cross-national perspective which is important to inform national strategies for the prevention of suicide. Countries with a higher number of elderly people at a possibly higher risk of loneliness may need different preventative strategies than countries where there are lower risks of loneliness in elderly populations (Stolz et al., 2016). Of the participants, 12.0 percent had the desire to die. The data showed that in countries with better integration of the elderly, the likelihood and wish to die was lower than in countries without this development. Two of the countries with a high risk for passive suicidal ideation were France and Belgium (Stolz et al., 2016).

Saias et al. (2012) also used data from the European SHARE study to examine the relationship between suicidal ideation and social-environmental factors, such as loneliness and lack of participation. The researchers utilized the data of 11,440 participants over the age of 64 years from the 2006–2007 (second) data wave from SHARE. In this sample, 6.9 percent of men and 13.0 percent of women had the ideation of death. Losing a spouse was one of the significant risk factors for death ideation. In a bivariate analysis, researchers could show that the wish for death decreased when the individual participated in the community, and thus those that participated in the community had less suicidal thoughts (Saias et al., 2012). This study begins to reveal how influential participation is to avoid suicidal ideation.

Lack of participation and loneliness are not the same concept, but they are related, shown in a study from Guyana in South America. In this study, the authors examined the correlation between suicidal thoughts and risk factors in adolescent students, in contrast to the other studies which focused on the elderly. The results found that 18.4 percent of 1,197 participants had serious suicidal ideations during the last 12 months. This was not found to be the case in participants who had a solid social and family network (Rudatsikira et al., 2007). It should be noted that these results cannot simply be applied to elderly people, but it does give us an important reference for the connection between the feeling of loneliness and suicidal thoughts which is why it has been included here.

Gunzelmann et al. (2016) conducted a study with 2,527 participants in 258 different areas of Germany, that looked at suicidal thoughts in elderly people in relation to loneliness and hopelessness. The authors chose 795 participants over the age of 60 years. From these 795 participants, 371 were male (46.7 percent) and 424 were female (53.3 percent), with the mean age of participants being 69.91 years (SD 7.17) (Gunzelmann et al., 2016). The authors utilized different questionnaires for the measurements of hopelessness and loneliness. Of the entire collective group, 3.6 percent were found to have a higher risk of committing suicide. The participants with a higher risk of committing suicide were more likely to live alone and without a partner than those with a lower risk of suicide. The probability of experiencing hopelessness was higher in the group of participants over 80 years, compared to the group of 60-year-olds. Differences between women and men were not found (Gunzelmann et al., 2016).

It is well-known that people in later life stages have a higher risk of committing suicide, but is there a difference between the age groups when it comes to the correlation between suicide and loneliness? This was one of the questions looked at by Bennardi et al. (2017). In their longitudinal
study with 2,392 individuals, they showed that the feeling of loneliness is connected with a higher degree of suicidal ideation in those 60 years of age and older. This correlation was not found in participants from younger age groups.

This final study offers some perspective on men’s health specifically, and the link with social isolation and loneliness. Although there are assumptions that women have a higher risk of depression than men, this study shows how depression can make men more solitary and socially isolated (Milligan et al., 2015). Milligan et al. (2015) found that in England and Wales, over four million men are older than 65 years and 25 percent of them suffer from depression, and therefore have a higher suicidal risk. Further, according to estimates, older men who are divorced or never married have a greater risk of depression or suicide (Milligan et al., 2015). Men’s health and suicide in men may also have a high significance in other countries and the causes of suicidal behavior should be examined at different levels and according to sex in order to draw more accurate conclusions.

Conclusion

The results of these studies show that loneliness and isolation are increasing problems for the elderly and that they become more relevant the older a person becomes. Further, the results show that loneliness can be a risk factor for suicidal thoughts and attempts. Generally, risk factors for suicide attempts can be categorized in three parts: mental risk factors; biological risk factors; and social risk factors (Schaller, 2008; Linneman and Leyhe, 2015). This literature review focused on social risk factors, specifically the connection between suicide and loneliness as a risk factor. The purpose of this study was to uncover whether loneliness leads to an increased suicide rate. After reviewing the relevant literature, the answer is unclear.

Important research articles relating to the research question were found in a literature search, which found 14 studies and contributions to the theme of suicide and loneliness or solitude. Not every study described the connection between both variables, and in most cases, loneliness, solitude or isolation were a covariant or one of a number of variables. The results showed a correlation between loneliness or solitude and depression or suicide. For example, in the ISA, loneliness was not a direct variable but the authors concluded a correlation between loneliness and suicidal ideation by using “loss of a spouse” to suggest loneliness (Ojagbemi et al., 2013). For elderly people, a partnership is important, and a significant loss can be a risk factor for suicide, which was also confirmed Wiktorsson et al. (2010). Based on these studies, loneliness seems to be an important factor for suicidal ideations. However, German researchers found no direct connection between loneliness and suicide. Rather, hopelessness was a significant factor for a higher risk for suicide in this study (Gunzelmann et al., 2016). The SHARE Study was able to find a link between the desire to die and loneliness across several countries (Saas et al., 2012; Stolz et al., 2016). The only study examined in this paper which researched adolescent students, the Guyana Study, found that a good social tie can be a preventive factor. However, this study is limited in its transferability to an older age group (Rudatsikira et al., 2007).

These results show a causal link between suicidal thoughts and loneliness which cannot be simplified. In order to better understand how solitude and isolation relate to suicide, it is necessary to conduct further variable research and data analysis.

Limitations

The present work is not without limitations. First, it cannot be said that all relevant studies on the subject have been found and reviewed. Studies in the field of gerontological research from a period between 2010 and 2018 were included in this paper. However, it is possible that relevant studies dealing with the subjects of suicide and loneliness may not all be found in gerontological research. Nevertheless, it is possible to draw conclusions based on the studies and theoretical backgrounds used.

There is still a gap between the question of whether loneliness leads to an increased suicidal risk. It is also unclear how the authors of the studies used here have interpreted the concept of
loneliness, especially as different measuring instruments were used. Also, it is unclear how or if these studies have chosen to separate the concepts of loneliness and isolation (Victor and Sullivan, 2015). Future studies should make a clearer distinction between loneliness and isolation and use instruments with a high validity to measure these constructs. Longitudinal studies are needed to avoid the bias that occurs in cross-sectional studies. A transcultural perspective will also strengthen this research as it cannot be ruled out that the results obtained are culture-dependent. Further transnational research may shed a different light on the results.

Ultimately, it can be concluded that research on suicide and loneliness is an important issue which requires further study, particularly as it pertains to the elderly.

References


Further reading


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